

# 4

## Unit Synopses



# UNIT SYNOPSES

This section provides synopses of the units offered in the 'Academic Programs' section of this Handbook.

The synopses are presented in alpha-numeric order according to their codes.

## Unit Coding and Numbering

The unit code is of the format XXX999. The first two characters indicate the faculty or school administering the unit. The third character indicates the level of the course in which the unit is normally taught.

## Unit Coding

AA	Academy of the Arts
AL	Accounting Legal Studies
AR	Architecture, Interior and Industrial Design
AT	Arts
AY	Accountancy
BN	Built Environment and Engineering
BS	Business
CE	Civil Engineering
CH	Chemistry
CN	Construction Management
CO	Communication and Organisational Studies
CP	Cultural and Policy Studies
CS	Computing Science
CU	Curriculum and Professional Studies
EA	Early Childhood
ED	Education
EE	Electrical and Electronic Engineering
EP	Economic and Public Policy
ES	Geology
FN	Finance
HL	Health
HM	Human Movement Studies
HR	Human Resource Management and Labour Relations
HU	Humanities
IF	Interfaculty Courses
IS	Information Systems
IT	Information Technology
JS	Justice Studies
LA	Language and Literacy Education
LE	Learning and Development
LP	Legal Practice
LS	Life Science

LW	Law
LX	Cross-Institution
MA	Mathematics
MD	Mathematics, Science and Technology Education
ME	Mechanical and Manufacturing Engineering
MJ	Media and Journalism
MK	Marketing, Advertising and Public Relations
NS	Nursing
OP	Optometry
PH	Physics
PS	Planning, Landscape Architecture and Surveying
PU	Public Health
SB	Social, Business and Environmental Education
SC	Science
SS	Social Science
SV	Surveying

## Level Indicators

X	= Certificate, Associate Diploma, Diploma
B	= Degree
P	= Graduate Diploma
N	= Masters Degree
R	= Doctoral
A	= Associate Diploma (all schools except Engineering)*
T	= Associate Diploma in Engineering*
S	= Special Units

\* Codes to be phased out as existing QUT courses are reaccredited.

## Prerequisite and Co-requisite Units

For definitions of the terms prerequisite and co-requisite unit(s), refer to Rule 1.8.2 of the Student Rules, Policies and Procedures in this Handbook.

**■ AAB001 RESEARCH PROJECT**

Students undertake a substantial piece of supervised research after academic advisement. This might include practical work and associated seminars.

Course: AA40

Credit Points: 48

**■ AAB002 GRADUATE SEMINAR**

A seminar series for Honours students involving presentations by guests; staff discuss current research interests and students report on issues arising in their own thesis work.

Course: AA40

Credit Points: 12

**■ AAB021 ADVANCED RESEARCH METHODS**

Familiarisation with a range of (mostly) quantitative methodological tools. Methodologies selected tend to meet the students requirements.

Course: AA40

Credit Points: 12      Contact Hours: 3 per week

**■ AAB023 ADVANCED READINGS IN AUSTRALIAN ART**

Examination of contemporary issues about Australian art practice and context; articulation of the Australian situation with international trends.

Course: AA40

Credit Points: 12      Contact Hours: 3 per week

**■ AAB051 ARTS IN SOCIETY**

Images of the artist in various cultures; artistic modes (music, dance, drama, visual arts); functions of the arts (ritual, celebration, revolt); the role and place of the arts in contemporary Australian society.

Courses: AA11, AA21, AA51, AA71

Credit Points: 12      Contact Hours: 3 per week

**■ AAB052 SIGNS & MEANINGS**

Concepts of the sign advanced by Saussure and Peirce; how signs are organised into codes or rule-governed systems dependent on agreement amongst their users; how they rest upon a shared cultural background; how signs interact with the cultural and personal experience of the user (Barthes' notions of connotation, myth and symbol; Jacobson's metaphor/metonymy dichotomy); the function of ideology particularly in relation to the ideas advanced by Raymond Williams and Barthes.

Courses: AA21, AA71, ED50

Credit Points: 12      Contact Hours: 3 per week

**■ AAB100 COMPOSITION 1**

Introduction to the domain of composition, providing a sound grounding in approaches to dance making: developing a personal movement language and an investigation of how dance presents/creates meaning.

Course: AA11

Credit Points: 8      Contact Hours: 3 per week

**■ AAB101 DANCE KINESIOLOGY & ALIGNMENT**

The anatomical structure and alignment techniques, their function and application to increase dance technique facility and lessen dance injuries.

Course: AA11

Credit Points: 12      Contact Hours: 3 per week

**■ AAB104 MUSIC**

Elements of music: beat, accent, rhythm and phrasing; nineteenth and twentieth century musical styles; notation, score reading, vocal and improvisation studies.

Course: AA11

Credit Points: 8      Contact Hours: 3 per week

**■ AAB106 DANCE ANALYSIS & HISTORY 2**

Introduction to the analysis of dance through a concentration on the dance as text; a study of various historical contexts of dance as art. Focus on modern/contemporary dance.

Course: AA11

Credit Points: 12      Contact Hours: 3 per week

**■ AAB109 PRACTICUM**

Consolidation of the student's knowledge and skills in direct artistic experience in real contexts.

Course: AA11

Credit Points: 12

**■ AAB111 DANCE RESEARCH**

Practical training in scholarly methods and professional skills in research.

Course: AA11

Credit Points: 8      Contact Hours: 2 per week

**■ AAB112 HISTORY OF AUSTRALIAN THEATRE DANCE**

A study of the development of dance as an art form in Australia in the twentieth century.

Course: AA11

Credit Points: 8      Contact Hours: 3 per week

**■ AAB113 WRITINGS ON DANCE**

Strategies for reading and writing exposition and argument with emphasis on clarity of expression and presentation of thought.

Course: AA11

Credit Points: 12      Contact Hours: 2 per week

**■ AAB114 DANCE IN AUSTRALIAN SOCIETY**

The ritual, artistic and social functions of dance in contemporary Australian society.

Course: AA11

Credit Points: 12      Contact Hours: 3 per week

**■ AAB115 PROFESSIONAL DEVELOPMENT STUDIES**

Preparation for the dance industry; preparation of curriculum vitae and funding applications; auditions; contracts; press relations and management.

Course: AA11

Credit Points: 8      Contact Hours: 2 per week

**■ AAB116 DANCE IN THE COMMUNITY**

Introductory studies of dance in the community; the role of dance in the community; procedures for establishing a dance project; basic program planning; teaching approaches for community dance.

Course: AA11

Credit Points: 12      Contact Hours: 3 per week

**■ AAB117 DANCE IN EDUCATION**

The philosophy of the arts in education, particularly dance; role and profile of an arts educator; investigation of domains involved in arts learning.

Courses: AA11, ED22

Credit Points: 12      Contact Hours: 3 per week

**■ AAB118 DANCE INDEPENDENT STUDY**

Students are required to design and carry through a major program on their own initiative after negotiation and consultation with lecturing staff.

Course: AA11

Credit Points: 16

**■ AAB121 CONTEMPORARY TECHNIQUE 1**

The basic contemporary dance vocabulary; study of Graham, Cunningham or Limon Technique; reference to development of strength, flexibility and placement



of spine and limbs; basic combinations of movements; analysis of dance sequences. **Designated Unit.**

**Course:** AA11

**Credit Points:** 16      **Contact Hours:** 7.5 per week

■ **AAB122 CONTEMPORARY TECHNIQUE 2**

Technical work: off-balance turns and rapid changes of weight, level and direction; exploration of rhythm; emphasis on performance of sequence work. **Designated Unit.**

**Course:** AA11

**Prerequisite:** AAB121

**Credit Points:** 16      **Contact Hours:** 7.5 per week

■ **AAB123 CLASSICAL TECHNIQUE 1**

Review and consolidation of the fundamental technique and its application designed to reinforce and develop an appropriate range of technical skills within the four tier practical level system. **Designated Unit.**

**Course:** AA11

**Credit Points:** 16      **Contact Hours:** 6 per week

■ **AAB124 CLASSICAL TECHNIQUE 2**

Consolidation of technique; study of variety of selected approaches to classical ballet and development of appropriate range of technical skills within the four-tier practical level system. **Designated Unit.**

**Course:** AA11

**Prerequisite:** AAB123

**Credit Points:** 16      **Contact Hours:** 6 per week

■ **AAB125 DANCE ANALYSIS & HISTORY 1**

Introduction to the analysis of dance through a concentration on the dance as text; a study of various historical contexts of dance as art. Focus on ballet.

**Course:** AA11

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **AAB126 COMPOSITION & PRODUCTION TECHNIQUES**

The conceptual base of the medium and of the heuristic principles governing the making of dance; exploration of more formal dynamic, temporal and spatial structures, deemed historically appropriate as a means of structuring movement and conveying a choreographer's intention; elements of theatre production; lighting, sound and costume.

**Course:** AA11

**Prerequisite:** AAB100

**Credit Points:** 16      **Contact Hours:** 5 per week

■ **AAB151 CONTEMPORARY TECHNIQUE 1**

The basic contemporary dance vocabulary (contraction, release, etc.); reference to development of strength, flexibility and placement of spine and limbs.

**Course:** AA11

**Credit Points:** 12

■ **AAB152 CONTEMPORARY TECHNIQUE 2**

Continuation of AAB102. Basic combinations of movements; analysis of dance sequences.

**Course:** AA11

**Prerequisite:** AAB121

**Credit Points:** 12

■ **AAB153 ADVANCED PERFORMANCE 1**

Attainment of outstanding practical skills combining use of aesthetic quality and artistry.

**Course:** AA11

**Prerequisites:** Grade of 6 or 7 in AAB121 and AAB123.

**Credit Points:** 20

■ **AAB154 ADVANCED PERFORMANCE 2**

Continuation of AAB153.

**Course:** AA11

**Prerequisite:** AAB153

**Credit Points:** 36

■ **AAB155 ADVANCED ANALYSIS: BALLET**

The skills involved in the aesthetic appreciation and analysis of the masterworks of ballet.

**Course:** AA11

**Prerequisite:** AAB106

**Credit Points:** 12

**Contact Hours:** 3 per week

■ **AAB156 ADVANCED ANALYSIS: MODERN DANCE**

The aesthetic appreciation and analysis of the masterworks of modern/contemporary dance.

**Course:** AA11

**Prerequisite:** AAB106

**Credit Points:** 12

**Contact Hours:** 3 per week

■ **AAB157 ADVANCED ANALYSIS: COMPARATIVE STUDY**

The skills involved in the aesthetic appreciation and analysis of the masterworks of ballet or modern/contemporary dance used to engage in a comparison of features of specific dances chosen for detailed study.

**Course:** AA11

**Prerequisites:** AAB155, AAB156

**Credit Points:** 12

**Contact Hours:** 1 per week

■ **AAB158 ADVANCED COMPOSITION 1**

Exploration of how dance creates meaning: the aesthetic questions that have emerged out of the last major choreographic movement; an exploration of possible future directions.

**Course:** AA11

**Co-requisite:** AAB155

**Credit Points:** 8

**Contact Hours:** 5 per week

■ **AAB159 ADVANCED COMPOSITION 2**

Contact improvisation and its use as a basis for the development of partner work; the range of traditional and non-traditional forms available to the choreographer when working with groups of varying sizes.

**Course:** AA11

**Co-requisite:** AAB156

**Credit Points:** 12

**Contact Hours:** 5 per week

■ **AAB160 ADVANCED COMPOSITION 3**

The links between technology and dance in the areas of light and sound – the principal elements of dance design; a major individual project that involves the application and integration of a range of technology.

**Course:** AA11

**Prerequisites:** AAB158, AAB159

**Credit Points:** 12

**Contact Hours:** 5 per week

■ **AAB161 DANCE IN THE COMMUNITY 1**

In depth studies in teaching dance: program planning and teaching approaches for specific dance groups.

**Course:** AA11

**Credit Points:** 16

**Contact Hours:** 3 per week

■ **AAB162 DANCE IN THE COMMUNITY 2**

Students are required as a group to initiate, devise, develop and produce a dance within the community with the emphasis on management skills.

**Course:** AA11

**Prerequisite:** AAB161

**Credit Points:** 16

**Contact Hours:** 3 per week

■ **AAB163 DANCE IN THE COMMUNITY 3**

Students are required to individually initiate, devise, develop and produce a dance project within the community with the emphasis on the creativity and production of the project.

**Course:** AA11

**Prerequisite:** AAB162

**Credit Points:** 16

**Contact Hours:** 3 per week

■ **AAB164 DANCE ELECTIVE**

Students are required to select topics for further study in consultation with the course coordinator.

**Course:** AA11

**Credit Points:** 8

### ■ AAB202 ACTING 1

Psychological and non-psychological approaches to acting and the actor's preparation techniques; Stanislavski-based approaches to realism, elimination of bad habits and theatrical dishonesty; Brecht-based approaches to issues-based theatre and their presentational styles. Lectures, tutorials and rehearsals involving selected extracts from modern plays, with in-house performances. Exploration of appropriate actor's exercises.

Courses: AA21, ED22, ED50

Credit Points: 12 Contact Hours: 4 per week

### ■ AAB203 ACTING 2

Focus on Shakespeare; work on verse, small scenes and soliloquies. **Designated Unit** (for AA21 Acting Strand).

Courses: AA21, ED22 Prerequisite: AAB202

Credit Points: 12 Contact Hours: 4 per week

### ■ AAB204 VOICE & MOVEMENT 1

Body awareness; sense of space; breathing; expression and articulation; text and context; research.

Courses: AA21, ED50

Credit Points: 12 Contact Hours: 4 per week

### ■ AAB205 VOICE & MOVEMENT 2

Awareness through movement; freeing the natural voice; development of holistic response to text; exploration of physical and emotional levels in characterisation; review of research relative to the study of voice and movement; alternative teaching styles; comparative analysis and personal synthesis.

Courses: AA21, ED50

Credit Points: 12 Contact Hours: 4 per week

### ■ AAB206 STAGECRAFT 1

Scenery construction; stage properties: budget and purchasing, hiring and borrowing, categorisation, storage and use; stage lighting: electricity, rigging and focusing of lanterns, maintenance and repairs, operating principles; stage costumes: hire of costumes, pattern styling, use of sewing machine, fabric construction to create costumes.

Course: AA21

Credit Points: 12 Contact Hours: 4 per week

### ■ AAB207 STAGECRAFT 2

Theatre sound: sound effects, live and recorded, stage sound equipment. Stage management: coordinating and enhancing theatre production. Basic lighting design: use of colour and lighting angles, painting with light, computer controlled equipment, stage lighting organisation and documentation. Theatre administration: funding applications; front-of-house organisation, systems of ordering, purchasing, petty cash.

Course: AA21

Credit Points: 12 Contact Hours: 4 per week

### ■ AAB208 ELEMENTS OF DRAMA

Minimal drama: fiction plus tension; three dimensions of expression: light/dark, movement/stillness, sound/silence; three elements of dramatic form: space, time, communication; symbols and meaning; distance from the action; communicating ideas.

Courses: AA21, ED50

Credit Points: 12 Contact Hours: 4 per week

### ■ AAB211 DEVELOPMENT OF THEATRE 1

Origins of theatre: Greek drama/theatre; medieval theatres in Europe; theatre in Asia; theatre of the English Renaissance; theatre of the Italian Renais-

sance; royal theatre of France and of England; England's popular theatre of the nineteenth century.

Course: AA21

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB212 DEVELOPMENT OF THEATRE 2

Realism; naturalism; symbolism/expressionism; epic theatre; absurd; current theatre; South East Asian theatre; Australian theatre before and after World War II; community theatre.

Courses: AA21, ED50

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB213 DIRECTING

Functions of the director from casting to rehearsal to performance; organisation procedures and relationship to other production staff; the director's role as intermediary between text, actor and audience; differing definitions of that role; personal style; seminars on contemporary directors.

Course: AA21

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB214 DRAMA PROCESS

Workshops involving individual, face-to-face and group role play; participant enrolment, leader-in-role and intervention; identification with role; negotiation, devising and consequent decision-making; dramatic tension and resolution; structuring for the theme and for the dramatic moment; distancing devices; reflection, re-enactment and remaking.

Courses: AA21, ED50

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB215 THEATRE DESIGN

Establishing the scene; staging alternatives; lighting and scenery; costume design; scale models; drawings.

Course: AA21

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB216 PLAYWRITING

Dramatic structure: tension, climax and resolution; focus and audience distance; fitting an appropriate style to a dramatic theme; the relationship between action, theme and character; developing a scenario; imagery: the relationship between the visual and the linguistic; dramatic writing, dialogue and staging.

Course: AA21

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB217 ARTS RESEARCH & EVALUATION 1

Accessing and collation of pertinent resources, critical observation techniques; case study methods.

Course: AA21

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB218 ARTS RESEARCH & EVALUATION 2

Study of a major play in production or a project involving performance from one frame of reference.

Course: AA21

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB219 PROFESSIONAL STUDIES

Theatre and Australian society; funding and status of Australian theatre; different manifestations: professional, amateur, community; historical patterns; models of initiatives in theatre; designing for a community need; preparing a curriculum vitae; job applications, meeting procedures.

Course: AA21

Credit Points: 12 Contact Hours: 3 per week

## ■ AAB220 THEATRE STUDIES OPTION

Specialised work in one of the theatre studies areas: directing, design, playwriting or theatre in education, or a related area by negotiation.

Course: AA21

Credit Points: 12

## ■ AAB225 PRACTICUM 1

Students have an opportunity to practise as artists within a specific community and to participate in an artistic/advocacy project in the community. Elective unit studies influence the emphasis of the practicum, which involves one of the three main communities identified: artistic, public, institutional.

Courses: AA21, ED50

Credit Points: 12

## ■ AAB226 PRACTICUM 2

See AAB225.

Course: AA21

Prerequisite: AAB225

Credit Points: 12

## ■ AAB227 PRACTICUM 3

See AAB225.

Course: AA21

Prerequisite: AAB226

Credit Points: 12

## ■ AAB233 VOICE & MOVEMENT 3

The psychological and physiological underpinning of voice and body work required by actors; development of voice and speech fluency; development of physical awareness and corporeal skills required to begin character work. **Designated unit.**

Course: AA21

Prerequisite: AAB205

Credit Points: 12 Contact Hours: 6 per week

## ■ AAB234 VOICE & MOVEMENT 4

The application of a range of text and physical styles; the use of performance space; continual development of the actor's physical and vocal skills; video and film techniques. **Designated unit.**

Course: AA21

Prerequisite: AAB233

Credit Points: 12 Contact Hours: 6 per week

## ■ AAB235 VOICE & MOVEMENT 5

Development of an audition portfolio; voice and movement work for the camera.

Course: AA21

Prerequisite: AAB234

Credit Points: 12 Contact Hours: 6 per week

## ■ AAB236 VOICE & MOVEMENT 6

Work in productions; consolidation of skills required in the Voice and Movement program.

Course: AA21

Prerequisite: AAB235

Credit Points: 12 Contact Hours: 3 per week

## ■ AAB246 MUSIC & DANCE

Physical skills including: elongation of the spine; movement from the centre; alignment; articulation; opposition; lift and placement; basic combinations of locomotor movements; elements of dance; style, performance skills. Aural comprehension and notation of rhythm and pitch; vocal technique; principles of style.

Course: AA21

Credit Points: 12 Contact Hours: 3 per week

## ■ AAB247 ACTING 3

Philosophies of theatre and their relation to performance; exercises, research and practical work on selected texts. Introduction to acting for the camera. **Designated Unit.**

Course: AA21

Prerequisite: AAB203

Credit Points: 12 Contact Hours: 6 per week

## ■ AAB248 ACTING 4

Research, rehearsal and performance.

Course: AA21

Prerequisite: AAB247

Credit Points: 12

Contact Hours: 6 per week

## ■ AAB250 THEATRE PRODUCTION

Specific major tasks of acting, stage or management or administration duties for two or more productions by the drama program, requiring a high level of personal responsibility.

Course: AA21

Credit Points: 36

## ■ AAB261 THE ARTS ENVIRONMENT

Introduction to the context for arts management; economics of the arts; formation of national and state arts policy; interplay amongst arts organisations and related fields of endeavour like the media, the education system, business and recreation.

Course: AA21

Credit Points: 12

Contact Hours: 3 per week

## ■ AAB262 ARTS FINANCE

Planning and monitoring the use of money in the arts, including the preparation of funding submissions in non-profit situations.

Course: AA21

Credit Points: 12

Contact Hours: 3 per week

## ■ AAB263 ARTS MARKETING

General principles of marketing; the marketing plan; applications in performing arts situations; planning, targeting, costing and implementation up to point of sale contact in the front of house.

Course: AA21

Credit Points: 12

Contact Hours: 3 per week

## ■ AAB264 ARTS EVENTS PROMOTION

Publicity, public relations and advertising in the arts context. Practical skills for low-budget operations.

Course: AA21

Credit Points: 12

Contact Hours: 3 per week

## ■ AAB265 ISSUES IN ARTS MANAGEMENT

Fundraising and sponsorship; law and the arts; issues and current issues, eg. multiculturalism, tourism.

Course: AA21

Credit Points: 12

Contact Hours: 3 per week

## ■ AAB266 ARTS EVENTS PLANNING

Opportunity for students to apply the theory and practice learnt in other units to production situations; the planning and initial preparations for productions being undertaken in theatre, or other arts disciplines.

Course: AA21

Credit Points: 12

Contact Hours: 3 per week

## ■ AAB289 PRODUCTION TECHNIQUES 1

Lighting - rigging and focussing; operation of manual and basic memory control systems; operator paperwork; basic colour theory. Sound - recording and editing effects; set up of basic theatre sound system; playback techniques; operator paperwork. Set construction: interpreting working drawings; costing and material selection; safety procedures.

Course: AA21

Prerequisites: AAB206, AAB207

Credit Points: 12

Contact Hours: 6 per week

## ■ AAB290 PRODUCTION TECHNIQUES 2

Lighting design theory; procedures and planning; practical application of theory; communication in the production team; current practice.

Course: AA21

Prerequisite: AAB289

Credit Points: 12

Contact Hours: 6 per week

**■ AAB291 PRODUCTION TECHNIQUES 3**

Sound design theory; procedures and planning; practical application of theory; communication in the production team; current practice.

Course: AA21

Prerequisite: AAB289

Credit Points: 12

Contact Hours: 6 per week

**■ AAB292 STAGE MANAGEMENT 1**

Stage management planning and procedures from the pre-production period to the performance season. Communication in the production team.

Course: AA21

Prerequisites: AAB206, AAB207

Credit Points: 12

Contact Hours: 6 per week

**■ AAB293 STAGE MANAGEMENT 2**

Wardrobe management and stage props management. Elementary theatre design, working drawings/patterns, construction techniques, maintenance.

Course: AA21

Prerequisites: AAB206, AAB207

Credit Points: 12

Contact Hours: 6 per week

**■ AAB294 STAGE MANAGEMENT 3**

Advanced practical stage management exercises: tour planning and management; stage management across performance disciplines; score reading.

Course: AA21

Prerequisite: AAB293

Credit Points: 12

Contact Hours: 6 per week

**■ AAB302 CHILDREN'S PLAY TO PERFORMANCE**

The function of children's dramatic play, role-taking and fantasy in social development from ages 1 to 18.

Course: AA21

Credit Points: 12

Contact Hours: 3 per week

**■ AAB303 THEATRE IN EDUCATION**

The characteristics of theatre-in-education and participatory theatre forms; skills in group leadership, negotiation of ideas and forms, planning and conducting drama events; dynamics of leadership: management of space, time, energy levels and group rhythms.

Courses: AA21, ED50

Credit Points: 12

Contact Hours: 3 per week

**■ AAB304 FORMING KNOWLEDGE**

The approaches to art taken by major aestheticians; the characteristics and significance of the aesthetic field; the way the arts contribute to the development of mind and knowledge; modes of knowing, propositional knowledge and tacit understanding.

Courses: AA21, ED50

Credit Points: 12

Contact Hours: 3 per week

**■ AAB305 ADVANCED DRAMA PROCESS**

The nature of experiential drama; pace and time; shape and externals; reflection and refraction; evaluation; devising process drama.

Courses: AA21, ED22, ED50

Credit Points: 12

Contact Hours: 3 per week

**■ AAB321 ADVANCED DESIGN 1**

Research project on the origins and development of design and theatre; practical design involvement in a drama production.

Course: AA21

Prerequisite: AAB215

Credit Points: 12

**■ AAB322 ADVANCED DESIGN 2**

The philosophy and practice of a specific designer; assignment to a production as designer or assistant designer.

Course: AA21

Prerequisite: AAB321

Credit Points: 12

**■ AAB324 ADVANCED DIRECTING 1**

Research project on the origins and development of the role of the director; practical work assisting the director of a production.

Course: AA21

Prerequisite: AAB213

Credit Points: 12

**■ AAB325 ADVANCED DIRECTING 2**

The philosophy and practice of a major director; assignment to a major production as assistant director or directing own production.

Course: AA21

Prerequisite: AAB324

Credit Points: 12

**■ AAB327 ADVANCED PLAYWRIGHTING 1**

Secondment to a major production within or outside the University as dramaturg (researcher and interpretative consultant). Scriptwriting project.

Course: AA21

Prerequisite: AAB216

Credit Points: 12

**■ AAB328 ADVANCED PLAYWRIGHTING 2**

Study of a selected scriptwriting style. A major playwrighting project in any dramatic medium.

Course: AA21

Prerequisite: AAB327

Credit Points: 12

**■ AAB329 INDEPENDENT STUDY: DRAMA**

Students devise an outline of study and/or action after negotiation and consultation with lecturing staff and carry out the approved program with regular tutorial consultation. This unit is available for advanced work in design, directing or playwrighting.

Course: AA21

Credit Points: 24

**■ AAB410 ART CURRICULUM DESIGN & DEVELOPMENT**

Major art curriculum approaches as found in the literature and a variety of art syllabus support documents. Analysis of art curriculum planning models; design and development of art programs for schools; production of art resources to support curriculum.

Course: ED26

Credit Points: 12

Contact Hours: 3 per week

**■ AAB411 DRAMA ACROSS THE CURRICULUM**

Process models of drama applied to curriculum; drama methods, dramatic contexts and power in the classroom; content analysis and planning; implementation of lesson sequence based on dramatic action; preparation of curriculum materials. Compulsory study school for external students.

Course: ED26

Credit Points: 12

Contact Hours: 3 per week

**■ AAB412 ART CURRICULUM STUDIES 1**

Students develop planning and teaching skills in selected curriculum areas. Content includes: the nature of the curriculum area/discipline; its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

Course: ED50

Prerequisite: 48 credit points in each relevant discipline area.

Credit Points: 12

Contact Hours: 3 per week

**■ AAB413 ART CURRICULUM STUDIES 2**

Extends upon AAB412; curriculum development within the context of contemporary policies, frameworks and agencies; principles of measurement,

assessment and evaluation; teaching and learning strategies; directions in curriculum development.

Course: ED50 Prerequisite: AAB412

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB414 DRAMA CURRICULUM STUDIES 1

Students develop planning and teaching skills in selected curriculum areas; the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

Course: ED50

Prerequisite: 48 credit points in each relevant discipline area.

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB415 DRAMA CURRICULUM STUDIES 2

Extends on AAB414; curriculum development within the context of contemporary policies, frameworks and agencies; principles of measurement, assessment and evaluation; teaching and learning strategies; directions in curriculum development.

Course: ED50

Prerequisite: AAB414

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB421 FOUNDATION ART STUDIES

Participation in the process of solving broad ranging visual problems through developing ideas, recording information and forming solutions to visual problems; seeks to develop genuine enquiry and the attainment of appropriate levels of competence of techniques, materials and resources to bring ideas to fruition.

Course: ED50

Credit Points: 12 Contact Hours: 4 per week

### ■ AAB444 VISUAL ARTS OF ASIA

As a reflection of the maker's culture, the visual arts of Asia provides one means of understanding these diverse cultures. Historical backgrounds, philosophical beliefs and trade have influenced the symbolism, forms, techniques and uses of these various artefacts. Development of an understanding and awareness of non-western art forms.

Course: ED26

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB447 DRAWING

Examination of established systems of drawing by historical reference and exploration of materials; methods by which shape and volume can be determined by drawing techniques; the line as a means of expression and communication; methods and techniques for creating solid form by the use of various media; perspective; rendering; perceptual organisation and expressive effects; use of drawing for teachers who require visual expression and delineation within their areas. Incompatible with Art major at Diploma of Teaching (Secondary Art) level.

Course: ED26

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB449 EDUCATIONAL DRAMA

Practical introduction to educational drama techniques: teacher-in-role, enrolment of students, dramatic exercises, analogies, simulations; fieldwork project; planning, teaching and evaluating a simple program. Incompatible with tertiary studies in drama or substantial experience in teaching drama.

Course: ED26

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB455 COMPUTER GRAPHICS 1

An introduction to the processes and possibilities for computer-generated imaging. Undertaking of projects to develop understanding of the relationship between the historical, cultural, aesthetic and productive aspects of computer-generated art forms.

Courses: ED26, ED50

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB456 COMPUTER GRAPHICS 2

Advanced level study enabling students to utilise core understandings and pursue specialised computer graphic applications in image enhancement, animation, presentation or video interaction.

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB457 SCULPTURE 1

Students will be expected to observe, question and explore issues to reach solutions that will reflect an individual imagination. Knowledge and skills that apply to sculpture will be pursued.

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB458 SCULPTURE 2

Enables the student to explore issues to reach advanced solutions; individual imagination. Knowledge and skills that apply to works will be incorporated.

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB459 VISUAL ARTS DESIGN 1

The fundamentals of design thinking and practice; undertaking of projects within and outside the studio to provide understanding of the relationship between the historical, cultural, aesthetic and productive aspects of design strategies and applications; development of a personal philosophical basis for design practice; professional attitudes and innovative and reflective thinking; research into the knowledge and resources available to design practice.

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB460 VISUAL ARTS DESIGN 2

Advanced exploration of design thinking and practice. Undertaking of selected projects enhancing core understandings and enabling the student to develop specialist knowledge and understanding in an elected domain of design practice.

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB502 CHIEF PRACTICAL STUDY 3

Consolidation and extension of studies from AAB501; performance seminar, participation in performance activities; open recitals.

Course: AA51

Credit Points: 16 Prerequisite: AAB501 Contact Hours: 2 per week

### ■ AAB505 ENSEMBLE STUDIES C3

Group tuition on an orchestral instrument; further development of performing technique. Directed ensemble activities: membership of instrumental or vocal ensemble, and one other elective ensemble.

Course: AA51

Credit Points: 12 Contact Hours: 6 per week

### ■ AAB511 TWENTIETH-CENTURY MUSIC 3

Theatre and concert music from 1950 to the present day. Electronic and computer music, aleatoric and minimalist techniques; the return to tonality.

Course: AA51

Credit Points: 8 Contact Hours: 4 per week

### ■ AAB514 MUSIC STUDIES 3

Development of special skills and knowledge in one of the following: choral arranging and conducting, instrumental arranging and conducting, popular music composition; advanced conducting; introduction to non-western music; professional studies.

Course: AA51

Credit Points: 8 Contact Hours: 2-4 per week

### ■ AAB515 MUSIC STUDIES 4

Development of special skills and knowledge in one of the following: choral arranging and conducting, instrumental arranging and conducting, popular music composition; advanced arranging; introduction to non-western music; independent study; studio music teaching.

Course: AA51

Credit Points: 8 Contact Hours: 2-4 per week

### ■ AAB517 SYSTEMS OF PART WRITING 2

Chromatic harmony; nineteenth- and early twentieth-century writing techniques.

Course: AA51

Prerequisite: AAB516

Credit Points: 12 Contact Hours: 2 per week

### ■ AAB520 LITERATURE & ANALYSIS OF MUSIC 3

Romantic and impressionist music; development of research and analytical skills; forms studied include: the lied, symphony, orchestral music, instrumental and keyboard music, and music drama.

Course: AA51

Prerequisite: AAB519

Credit Points: 8 Contact Hours: 4 per week

### ■ AAB521 MUSIC ELECTIVE 1

Development of special skills and knowledge of the following: choral arranging and conducting; instrumental arranging and conducting; introduction to non-western music.

Course: AA51

Credit Points: 12 Contact Hours: 2-4 per week

### ■ AAB522 MUSIC ELECTIVE 2

See AAB521.

Course: AA51

Credit Points: 12 Contact Hours: 2-4 per week

### ■ AAB554 POPULAR MUSIC COMPOSITION 4

Continued use of MIDI systems in a personal composition project, focusing on multi-media presentational forms; time management and collaborative work; live performance project.

Course: AA51

Prerequisite: AAB553

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB556 PROFESSIONAL STUDIES

Music and Australian society; different manifestations of music: professional, amateur, community; historical patterns; music technology as an industry; pathways to established and new careers in music.

Course: AA51

Prerequisite: AAB051

Credit Points: 12 Contact Hours: 2 per week

### ■ AAB561 PRACTICAL STUDIES A1

Development of strong and reliable technique, interpretation and performance skills on the chief practical instrument or voice; performance seminar; participation in a large directed ensemble.

Course: AA51

Credit Points: 12 Contact Hours: 5 per week

### ■ AAB562 PRACTICAL STUDIES A2

Continuation of AAB561 with added emphasis on interpretation, analysis and appropriate public presentation in performance. Designated Unit.

Course: AA51

Prerequisite: AAB561

Credit Points: 12 Contact Hours: 5 per week

### ■ AAB563 AURAL & WRITTEN MUSICIANSHIP 1

Writing techniques: diatonic harmony, choice of chords, dominant 7th, harmonisation, melodic decoration, contrapuntal techniques; Aural perception: rhythmic, harmonic and melodic decoration, recognition or intervals, diatonic chords, imitation and sequence; sight-singing: singing in unison; homophony in minor keys, two-part counterpoint.

Course: AA51

Credit Points: 12 Contact Hours: 4 per week

### ■ AAB564 AURAL & WRITTEN MUSICIANSHIP 2

Continuation of AAB563; development of advanced skills in music writing, contrapuntal and diatonic harmony.

Course: AA51

Prerequisite: AAB563

Credit Points: 12 Contact Hours: 4 per week

### ■ AAB566 PRACTICAL STUDIES B1

Membership of two performing ensembles. Keyboard musicianship: students with limited keyboard facility undertake weekly individual tutorials designed to improve personal capabilities on keyboard. Group Second Study: students exempted from keyboard musicianship undertake studies on a second instrument or voice in a small group tutorial situation.

Course: AA51

Credit Points: 12 Contact Hours: 5-6 per week

### ■ AAB567 PRACTICAL STUDIES B2

Membership of two performing ensembles. Keyboard musicianship: students requiring further development of their facility on keyboard undertake weekly individual tutorials designed to reach an acceptable exit level on keyboard at the end of first year. Group Second Study: students exempted from further studies in keyboard musicianship undertake new or continuing studies in a second instrument or voice in small group tutorials.

Course: AA51

Prerequisite: AAB566

Credit Points: 12 Contact Hours: 5-6 per week

### ■ AAB569 COMPOSITION & TECHNOLOGY 1

Introduction to music computers, synthesisers, MIDI sequencing, music publishing, recording studio techniques and keyboard musicianship.

Course: AA51

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB570 COMPOSITION & TECHNOLOGY 2

Introduction to the principles and practices of popular song composition and arrangement and norms of the genre. Continuation of keyboard musicianship and advanced music publishing.

Course: AA51

Prerequisite: AAB569

Credit Points: 12 Contact Hours: 3 per week

### ■ AAB571 PRACTICAL STUDIES A3

The study of a range of solo repertoire on a chief practical instrument or voice; repertoire is chosen appropriate to students' developing technical and interpretative skills, and encompasses a variety of styles and/or periods of music; performance seminar; participation in rehearsals and concerts in a large directed ensemble. Designated unit.

Course: AA51

Prerequisite: AAB562

Credit Points: 24 Contact Hours: 5 per week

### ■ AAB573 AURAL & WRITTEN MUSICIANSHIP 3

Aural perception: auditory memorisation, sight singing and playing of diatonic and chromatic melodies; chord sequence recognition. Written musicianship: diatonic and chromatic harmony; nineteenth- and early twentieth-century writing techniques.

Course: AA51 Prerequisite: AAB564  
Credit Points: 12 Contact Hours: 4 per week

### ■ AAB574 AURAL & WRITTEN MUSICIANSHIP 4

Continuation of AAB573, with emphasis on complex chromatic harmony and late twentieth-century writing techniques.

Course: AA51 Prerequisite: AAB573  
Credit Points: 12 Contact Hours: 4 per week

### ■ AAB575 MUSIC FROM 1600-1750

Music from the late Renaissance to early Classical periods; development of research and analysis skills; special emphasis on fugue, binary, ritornello and sonata forms of the period.

Course: AA51  
Credit Points: 12 Contact Hours: 4 per week

### ■ AAB576 MUSIC FROM 1750-1900

Classical and Romantic music including symphony concerto, sonata, orchestral music; instrumental and vocal music of the period.

Course: AA51 Prerequisite: AAB575  
Credit Points: 12 Contact Hours: 4 per week

### ■ AAB579 PRACTICAL STUDIES B3

Group tuition on an orchestral instrument as a second study; development of performing technique; membership of two ensembles appropriate to the instrumental or vocal skills of the student.

Course: AA51 Prerequisite: AAB567  
Credit Points: 12 Contact Hours: 5-6 per week

### ■ AAB580 PRACTICAL STUDIES B4

Continuation of AAB579.

Prerequisite: AAB579  
Credit Points: 12 Contact Hours: 5-6 per week

### ■ AAB583 COMPOSITION & TECHNOLOGY 3

Composing techniques for film, television and the media using MIDI systems and computer/video time-code formats, including semiotic analysis of music for film.

Course: AA51 Prerequisite: AAB570  
Credit Points: 12 Contact Hours: 3 per week

### ■ AAB584 COMPOSITION & TECHNOLOGY 4

Continuation of AAB583, with emphasis on the production of broadcast quality material for the audio and visual music/entertainment industry.

Course: AA51 Prerequisite: AAB583  
Credit Points: 12 Contact Hours: 3 per week

### ■ AAB587 MUSIC IN WESTERN CIVILIZATION

The place of music in Western civilization from the beginnings of polyphony to the present day. Survey of music repertoire, styles and forms with emphasis on established masterworks from the repertoire.

Course: AA51  
Credit Points: 12 Contact Hours: 4 per week

### ■ AAB701 THE MAKING OF MODERNISM

The birth of modern art from French Impressionism to the eve of the World War 2; the major movements and their theoretical underpinnings.

Course: AA71

Credit Points: 12 Contact Hours: 4 per week

### ■ AAB702 FOUNDATION MEDIA STUDIES 1

Familiarisation with resources available within and outside the University: exhibition spaces, working environments, institutions, art-making facilities, printed and visual resources; individual and group projects introducing a variety of visual art problems.

Course: AA71  
Credit Points: 36 Contact Hours: 12 per week

### ■ AAB703 FOUNDATION MEDIA STUDIES 2

Development of a visual dialogue through a series of projects within and outside the studio with a view to understanding relationships between the theoretical and practical aspects of art and developing a philosophical basis for professional attitudes and original thinking; research into the knowledge and resources available; development of the ability to evaluate aesthetic qualities in the student's own work.

Course: AA71 Prerequisite: AAB702  
Credit Points: 24 Contact Hours: 12 per week

### ■ AAB704 ART SINCE 1945

Major developments in the visual arts since 1945 with a particular examination of post-modernism; the role of the artist in contemporary society; the role of the media/art critic in shaping contemporary art practice.

Course: AA71  
Credit Points: 12 Contact Hours: 3 per week

### ■ AAB705 PRACTICUM 1

Four weeks work experience in visual arts related locations such as public and commercial galleries, conservation, State Library, Queensland Museum.

Course: AA71  
Credit Points: 12

### ■ AAB706 PRACTICUM 2

Shared responsibility by graduating students for all aspects of their graduation exhibition.

Course: AA71  
Credit Points: 12

### ■ AAB707 ADVANCED MEDIA STUDIES 1

Students are expected to research their own personal directions, formulate and develop self-generated enquiry and demonstrate the acquisition of working methods, skills and knowledge required for the successful realisation of their concepts. Students present a program to the course coordinator which indicates specific studies in the two-dimensional or three-dimensional areas or a combination of these.

Course: AA71 Prerequisite: AAB703  
Credit Points: 24 Contact Hours: 12 per week

### ■ AAB708 ADVANCED MEDIA STUDIES 2

Students present a plan of studies based on their own specific interest; rigorous questioning of concept and artefact is required with the level of realisation and the ways in which media are used reflecting a high level of achievement. Further workshops in areas where the acquisition of skills is essential.

Course: AA71 Prerequisite: AAB707  
Credit Points: 24 Contact Hours: 12 per week

### ■ AAB709 ADVANCED MEDIA STUDIES 3

Students are expected to work independently demonstrating sound habits of research and sustained studio practice; skills developed in AAB703 and AAB707 should enable concepts to be expressed with confidence; intensive studio work to draw together the

students' interest in the visual arts in general and their specific study in particular.

**Course:** AA71 **Prerequisite:** AAB708  
**Credit Points:** 24 **Contact Hours:** 18 per week

#### ■ AAB710 ADVANCED MEDIA STUDIES 4

Independent work in preparation for an exhibition.

**Course:** AA71 **Prerequisite:** AAB709  
**Credit Points:** 24 **Contact Hours:** 12 per week

#### ■ AAB711 AUSTRALIAN ART

Development of Australian art since its human settlement 40,000 years ago; the visual arts since European settlement, contemporary Western and Aboriginal art.

**Courses:** AA71, ED26, ED50  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ AAB712 CONTEMPORARY ART ISSUES

Current practices in the visual arts are addressed by analysing and interpreting original works on exhibition, in stockrooms and in studios. By means of lectures, discussions and analysis of artworks and readings, the individual's awareness of the conceptual, historical and philosophical contexts concerning artists and the artworks are heightened.

**Courses:** AA71, ED26  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ AAB713 RESEARCH METHODS SEMINAR

Training in the research and writing of a theoretical/historical dissertation. Compulsory elective for students intending to undertake Honours studies.

**Course:** AA71  
**Credit Points:** 12

#### ■ AAB714 PROFESSIONAL STUDIES

Studio workshop management; business principles; legal principles; promotion and marketing.

**Course:** AA71  
**Credit Points:** 12 **Contact Hours:** 4 per week

#### ■ AAB720 EXTENDED MEDIA STUDY 1

Extension of studio work in conjunction with AAB708.

**Course:** AA71  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ AAB721 EXTENDED MEDIA STUDY 2

Extension of studio work in conjunction with AAB709.

**Course:** AA71  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ AAB722 EXTENDED MEDIA STUDY 3

Extension of studio work in conjunction with AAB710.

**Course:** AA71  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ AAB724 RENAISSANCE STUDIES

An investigation of aspects of western European art between 1500 and 1600. Topics include the historiography of the Renaissance, art and humanism, the development of perspective, iconography, patronage, portraiture, the status of the artist. These topics are considered through a study of painting, sculpture, architecture and appropriate literary sources.

**Course:** AA71  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ AAB726 INTRODUCTION TO ART HISTORY

The theories and methods of art history; the processes of art production and exhibition; views of art, historical

interpretations and contemporary theories about art as cultural codes and semiotics.

**Course:** AA71  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ AAB727 ABORIGINAL ART

A study of the traditional ways in which Aboriginal artists evoke their understanding of the universe and its foundation in the dreaming; their relationship to land, places, animals and other people, the meaning of their art and beliefs in contemporary society.

**Course:** AA71  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ AAB729 SIGNS & MEANINGS 2

The development of the concept of the sign from structural to post-structural discourses, with an emphasis on the relationship between systems of discourse and aesthetic activity from the various positions of critical theory.

**Course:** AA71 **Prerequisite:** AAB052  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ AAB902 VISUAL ARTS 1

These studies are structured to develop students' expressive and critical abilities through the exploration of visual problems within the parameters of available media. Based on the two broad clusters of two-dimensional and three-dimensional media, students resolve some predetermined visual problems through conventional and/or divergent responses. These responses employ traditional and contemporary media.

**Course:** ED50  
**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ AAB903 VISUAL ARTS 2

Greater familiarisation with selected media allows students to initiate, enhance and develop their own visual appreciation and responses. A key feature of this unit is the development of imagery suitable to the media selected. Detailed investigation of material processes, historical responses and contemporary approaches to visual stimuli and problems is undertaken.

**Courses:** ED41, ED51 **Prerequisite:** AAB902  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ AAB904 VISUAL ARTS 3

Develops the students' detailed understanding and technical competencies of their selected media through a combination of structured and student initiated programs. The fields of critical analysis and personal imagemaking are fostered and enhanced. Contemporary trends and issues in the selected media are a major feature of this unit.

**Courses:** ED41, ED51 **Prerequisite:** AAB903  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ AAB905 DRAMA EDUCATION

Through workshop and practical fieldwork students acquire a basic knowledge of the functions, scope and sequence of children's dramatic play. The growth of pro-social ability through role-taking in naturalistic social settings from ages 1-15 is observed and analysed. This background is contextualised through a practical exploration of a range of appropriate approaches to drama in the classroom.

**Course:** ED41  
**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ AAB907 MUSIC EDUCATION 2

The study of the music curriculum at a more advanced level. Familiarity with the philosophy, objectives, content strategies and evaluation techniques of selected programs gives students a broad base on



which they can design their own music programs. Creativity and practical skills develop through issues raised in studies of selected programs.

**Course:** ED41 **Prerequisite:** AAB906  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ AAB909 PERFORMING ARTS 2

Students explore specific elements of the dramatic-playing mode; planning and leading of dramatic genres based around improvisatory approaches; students conduct a series of improvisation for their peers. Particular skills in the shaping of drama include those of leader-in-role, participant enrolment, negotiation, distancing devices and means of reflection.

**Courses:** ED41, ED51  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AAB910 PERFORMING ARTS 3

The performance of a major choral work; analysis interpretation, style, techniques of conducting and rehearsing. Students select an historical topic for research and develop further techniques on composition or solo/ensemble performance.

**Course:** ED41 **Prerequisite:** AAB909  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AAB911 EXPLORING MUSIC 1

Aural awareness, literacy and musicianship through vocal skills both solo and ensemble.

**Course:** ED51  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AAB912 EXPLORING MUSIC 2

Instrumental music forms with emphasis on recorder ensembles as a means of developing composition and arranging skills, and an awareness of stylistic developments. Conducting, rehearsing and performing techniques will be developed.

**Course:** ED51 **Prerequisite:** AAB911  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AAB913 EXPLORING MUSIC 3

This unit involves a series of lectures on score reading, sight-singing, ensemble singing techniques, rehearsal and conducting skills. Aural training and music writing techniques will be developed through a series of graded experiences throughout the semester.

**Course:** ED51 **Prerequisite:** AAB912  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AAB914 VISUAL & PERFORMING ARTS CURRICULUM 1

An in-depth study of either dance and drama, music or the visual arts; the place of the arts in a balanced curriculum; defining the arts; differences and commonalities; the arts and knowledge; the arts and integration across the primary curriculum.

**Course:** ED51  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AAB915 VISUAL & PERFORMING ARTS CURRICULUM 2

An in-depth study of either dance and drama, music or the visual arts; the place of the arts in a balanced curriculum; resourcing the arts; assessment and the arts; the arts and students with special needs; artists and education; the arts in a multicultural society.

**Course:** ED51  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AAB916 ADVANCED VISUAL & PERFORMING ARTS CURRICULUM ELECTIVE

The curriculum of dance, drama, music or visual arts to an advanced level; designing and implementing

programs in one of the disciplines for the primary school; action research in the classroom to monitor and evaluate an arts curriculum project.

**Course:** ED51  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AAB917 THE ARTS & THE WHOLE CURRICULUM

Using the arts in the primary school to integrate and synthesise cultural and historical movements, facts and values; models for planning and delivering an integrated curriculum driven by arts processes; forming multi-disciplinary teams to design, implement and evaluate a curriculum project in schools.

**Course:** ED51  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AAB918 ARTS FOUNDATION STUDIES

Foundation experiences introducing the art forms of dance, drama, music and the visual arts; the purposes and functions of the arts in society; practical workshops in each discipline; visits to galleries and theatres in a range of community contexts.

**Course:** ED51  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AAN001 ARTS RESEARCH METHODS 1

Research in the arts; defining the research tradition; qualitative research; emerging arts research processes; reporting of research findings.

**Course:** AT22  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AAN002 ARTS RESEARCH METHODS 2

An application of the understandings gained in Arts Research Methods 1 to a selected area. Normally, the student will produce an interpretive analysis in a written presentation of 5,000 words.

**Course:** AT22  
**Credit Points:** 12 **Contact Hours:** 2 per week

### ■ AAN003 AESTHETIC CODES IN CONTEMPORARY SOCIETY

Theories of art within the discipline of aesthetics. Five key questions are addressed, against a background of contemporary western society.

**Courses:** AT22, AA40  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AAN004 GRADUATE SEMINAR

A seminar series for Honours and Masters students involving presentations by guests; in addition, staff discuss current research interests, and students report on issues arising in their own thesis work.

**Courses:** AT22, AA40  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AAN005 ADVANCED ARTS PROJECT

This unit may be preparatory to the major research project of the Masters course. The project may be articulated with the final major project, in order to establish the initial framework of the major project, and involve technical and conceptual guidance from the relevant supervisor as required. Length of written presentation (or alternative format) to be determined in consultation with the supervisor.

**Course:** AT22  
**Credit Points:** 24

### ■ AAN006 INDEPENDENT STUDY

Independent work of an artistic or scholarly nature which is of limited scope compared with the research project. The student devises an outline of study and/or action in consultation with a staff supervisor. Artistic outcomes would normally be expected to be to the

standard of public showing. Written presentation requires a minimum of 6,000 – 10,000 words, or equivalent if other media/reportage is used.

**Course:** AA40

**Credit Points:** 12

#### ■ AAN101 ADVANCED DANCE ANALYSIS

Students make an in-depth study of the life and work of a chosen choreographer.

**Course:** AT22

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAN102 ADVANCED COMPOSITION

The links between technology and dance in the areas of light and sound; the principle elements of dance design. Students are expected to implement a major individual project that involves the application and integration of a range of technological devices/processes.

**Course:** AT22

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAN200 DRAMATURGY

Students investigate the roles of dramaturgy in western theatre. Major practical exercise as production dramaturg on a current production.

**Course:** AA40

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAN201 CONTEMPORARY AUSTRALIAN PLAYWRIGHTS

Students study a number of current Australian playwrights; seminar papers focus on each writer, with input from directors, actors and writers.

**Course:** AA40

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAN202 TEXTUAL ANALYSIS

Students apply analytical frameworks to dramatic texts. This includes: interaction of various codes within a dramatic text, historical and cultural factors, additional codes operating in a film version of a play text, and the semiotic codes in dramatic performance.

**Course:** AA40

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAN203 DRAMA AS SOCIAL ACTION

A range of theories of cultural production; the interpretation of meanings from a dramatic art work; works of leading theatre directors, playwrights and companies are viewed and analysed to determine their aesthetic, moral and cognitive value; links with political values.

**Course:** AT22

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAN204 DRAMA & THE NATURE OF LEARNING

Cross-discipline studies from education, developmental psychology, philosophy and theatre; the place of creativity in art and learning.

**Course:** AT22

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAN205 EPISTEMOLOGICAL FOUNDATIONS OF DRAMA

A re-evaluation of the origins and foundations of educational drama; drama and the new education movement; progressive education and modernism in art; learning through drama; towards an enabling drama aesthetic.

**Course:** AT22

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAN501 MUSIC HISTORY, LITERATURE & ANALYSIS

Study of the history and stylistic development of romantic and impressionist music in its social and cultural context; analytical studies (dealing particularly with stylistic characteristics and compositional processes) of a range of representative works.

**Course:** AT22

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAN502 INSTRUMENTAL ARRANGING

Development of arranging skills, using music of various styles; theory of arranging; practical arranging (small group); arrangement performance for large group (orchestra or band).

**Course:** AT22

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAN700 CONTEMPORARY DEBATES ON THE NATURE OF ART

Contemporary trends in the visual arts, nationally or internationally. The effect of the information revolution, technology and changing modes of world government and their economic/marketing implications. The relationship between modernism and post-modernism. The development of new conventions and values. A broad sense of post-structuralist critical tools employed in visual analysis.

**Course:** AA40

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAP421 DANCE CURRICULUM STUDIES 1

Provides a theoretical context and considers practical applications in curriculum planning and teaching and learning strategies; examines the roles of the teacher in the community and the profession.

**Course:** ED32

**Prerequisite:** AAP420

**Co-requisite:** EDP451

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAP422 DRAMA CURRICULUM STUDIES 1

See AAP421.

**Course:** ED32

**Prerequisite:** AAP420

**Co-requisite:** EDP451

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAP423 MUSIC CURRICULUM STUDIES 1

See AAP421.

**Course:** ED32

**Prerequisite:** AAP420

**Co-requisite:** EDP451

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAP424 VISUAL ARTS CURRICULUM STUDIES 1

See AAP421.

**Course:** ED32

**Prerequisite:** AAP420

**Co-requisite:** EDP451

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ AAP428 MUSIC CURRICULUM STUDIES 1A

A specialist extension study in curriculum for students planning a career as a primary, secondary or instrumental music specialist in schools; materials and appropriate methods of teaching related to music in the wider school curriculum outside the classroom.

**Course:** ED37

**Credit Points:** 12

#### ■ AAP429 DANCE CURRICULUM STUDIES 2

Development of understanding and skills for learning; assessment issues and techniques; philosophical concepts relevant to dance education.

**Course:** ED37

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ AAP430 DRAMA CURRICULUM STUDIES 2**

Advanced practical applications in assessment, curriculum planning and teaching/learning strategies in the relevant visual and performing arts area.

Course: ED32 Co-requisite: EDP451  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP431 MUSIC CURRICULUM STUDIES 2**

See AAP430.  
Course: ED32 Co-requisite: EDP451  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP432 VISUAL ARTS CURRICULUM STUDIES 2**

See AAP430.  
Course: ED32 Co-requisite: EDP451  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP433 MUSIC CURRICULUM STUDIES 2A**

See AAP428.  
Course: ED37  
Prerequisite: AAP428 Co-requisite: AAP431  
Credit Points: 12

**■ AAP501 ART CURRICULUM FOUNDATIONS**

The aims, content and agenda of historical and contemporary art education orientations; assumptions by movements in relation to art theories, child development, teachers' role and classroom practice; investigation of strengths and weaknesses, theory and practice and historical, social and intellectual influence on past and present art education philosophies.

Courses: ED22, ED32  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP502 ART EDUCATION PROGRAM DESIGN & PRACTICE**

Design and implementation of defensible art education programs at broad and specific school levels; the learning outcomes of art activities; classroom practice and evaluation across all levels of schooling.

Course: ED22 Prerequisite: AAP501  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP503 CLAY MATERIALS 1**

Develop ceramic knowledge, artistic concepts, and practical/technical skills; investigation of selected historical ceramic eras; understanding of the relationship between ceramics and the maker's culture; development of personal imagery and design.

Courses: ED22, ED26, ED50  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP504 CLAY MATERIALS 2**

Detailed specialisation in individually selected styles; emphasis on conceptual matters and imagery; expansion of ceramic knowledge and technical formats; investigation of contemporary trends, influences and issues in Australian ceramics.

Courses: ED22, ED50 Prerequisite: AAP503  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP505 FIBRE ARTS 1**

Historical and contemporary textile media; development of technical and conceptual textile knowledge; utilisation of fibre/textile materials and processes to develop both 2 and 3 Dimensional textile artefacts/objects; the relationship between textile arts and selected cultures; particularly in relation to fashion design, individual development of design, construction and decoration techniques and textile imagery.

Courses: ED22, ED26, ED50  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP506 FIBRE ARTS 2**

Continuation of AAP505; self-initiated projects in consultation with lecturer, are developed in this unit. Provides an overview of relationship between theory, practice and criticism.

Courses: ED22, ED50  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP507 PAINTING 1**

Introducing and developing an active awareness of both historical and contemporary issues in painting and drawing through studio practice and tutorials; the skills appropriate to the range of available media pursued in studio classes and professional practice.

Courses: ED22, ED26, ED50  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP508 PAINTING 2**

Further development of traditional and experimental imagery through studio workshops, discussions and professional practice.

Courses: ED22, ED50  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP509 PHOTOGRAPHIC MEDIA 1**

Photographic processes; aesthetic aspects of photography; history of art and photography; personal approaches to photography.

Courses: ED22, ED26, ED50  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP510 PHOTOGRAPHIC MEDIA 2**

Continuation of AAP509. Photographic techniques; innovative approaches to photography; history of photography; personal approaches to photography.

Courses: ED22, ED26, ED50  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP511 PRINTMAKING 1**

Relief printmaking: raised and incised blocks in lino; wood and glued materials; intaglio printmaking: etching, engraving, dry point and aquatint; planographic printmaking: lithography, monoprints and transfer prints; stencil printmaking; silk screening and photographic stencils; presentation of prints.

Courses: ED22, ED50  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP512 PRINTMAKING 2**

Continuation of AAP511. Motivational sources; creation and applications of techniques and media related to printmaking; exploration of related art areas.

Courses: ED22, ED50 Prerequisite: AAP511  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP530 CURRICULUM ANALYSIS & MODIFICATION**

Detailed study of six programs; teacher-devised programs; critical analysis; basic elements of curriculum design; design of programs in music for information and evaluation.

Course: ED22  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP531 ISSUES IN MUSIC EDUCATION**

Arts education in Queensland within P-10 framework; role of arts/music education; the process of learning; contributions made by history, sociology, psychology and philosophy to arts education.

Course: ED22  
Credit Points: 12 Contact Hours: 3 per week

**■ AAP532 APPLIED STUDIES**

Movement, voice and classroom instruments and literature; writing and arranging music for classroom

use; teaching strategies for voice, movement and instrumental music; conducting techniques.

**Course:** ED22

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ AAP533 BAROQUE & THE ROCOCO

Written and aural activities to improve musicianship; studies of Baroque and Rococo music literature, analysis, form, continuo; performance practice.

**Course:** ED22

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ AAP534 CLASSICAL & ROMANTIC MUSIC

Interpret and perform work from Viennese/Romantic eras; understand musical forms and theory of these eras; compose short works.

**Course:** ED22

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ AAP535 TWENTIETH CENTURY MUSIC

Twentieth century rhythms through dictation, composition, improvisation and performance; overtone series; tone clusters; sound mass and aleatoric procedures; perform material from the twentieth century.

**Courses:** ED22, ED26

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ AAX101 COMPOSITION 1

Discussion and theoretical understanding of dance composition; practical exploration of skills essential for dance composition including: establishment of approach or theme, style of movement, patterning of movement, phrasing of steps, selection and structuring of completed dance segments.

**Course:** AA10

**Credit Points:** 8      **Contact Hours:** 2 per week

### ■ AAX102 DANCE COMPOSITION 2

Discussion and investigation of dance forms; preparation and presentation of short solo and group sequences; practical experience in group dance through improvisation and set compositional studies; discussion and criticism of presented dance work, discussion of criteria for evaluation and assessment of dance works. Choreography of a work for public performance.

**Course:** AA10

**Credit Points:** 8      **Contact Hours:** 2 per week

### ■ AAX103 MUSIC 1

Musical basics through aural and written theories.

**Course:** AA10

**Credit Points:** 8      **Contact Hours:** 1.5 per week

### ■ AAX104 DANCE KINESIOLOGY & ALIGNMENT

Principles governing human stability and motion; ways muscles work to produce dance movement; machines of the body; movement and dance injuries.

**Course:** AA10

**Credit Points:** 12      **Contact Hours:** 3.5 per week

### ■ AAX105 DANCE STYLES 1

Study of folk dance, tap dance and jazz dance styles. Practical work includes: folk steps and dances from selected parts of the world; tap and jazz dance combinations and routines for performance.

**Course:** AA10

**Credit Points:** 8      **Contact Hours:** 2 per week

### ■ AAX106 DANCE STYLES 2

Development of dancing and singing skills; composition of dance routines for chorus; dramatic aspects of music comedy; tap dance combinations and routines, study of character and jazz styles; practical work

includes basic technique, step combinations, solo and group choreographic work.

**Course:** AA10

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ AAX111 REPERTOIRE & PRACTICE PERIOD 1

Study of selected repertoire pieces; rehearsal of individual aspects of the repertoire work; performance of all or part of the selected repertoire; preparation for rehearsals and performance; technique and dress rehearsals; critical evaluation during season and post-performance evaluation. **Designated Unit.**

**Course:** AA10

**Credit Points:** 12

### ■ AAX112 REPERTOIRE & PRACTICE PERIOD 2

Continuation of studies initiated in AAX111. **Designated Unit.**

**Course:** AA10

**Prerequisite:** AAX111

**Credit Points:** 16

### ■ AAX113 REPERTOIRE & PRACTICE PERIOD 3

Continuation of AAX112. **Designated Unit.**

**Course:** AA10

**Prerequisite:** AAX112

**Credit Points:** 16

### ■ AAX114 REPERTOIRE & PRACTICE PERIOD 4

Continuation of AAX113; preparation for the dance industry; curriculum vitae and funding applications. **Designated Unit.**

**Course:** AA10

**Prerequisite:** AAX113

**Credit Points:** 16

### ■ AAX115 DANCE HISTORY

Early development of dance technique; social and religious functions of dance; dance throughout the Renaissance period; the European and Russian contribution to classical ballet; the rise of modern dance in Europe and America; dance in Australia.

**Course:** AA10

**Credit Points:** 8      **Contact Hours:** 1.5 per week

### ■ AAX116 STAGECRAFT

Basic principles of stage production including make-up, stage lighting design and operation; sound recording and operation, costuming for dance including properties of fabric design and construction.

**Course:** AA10

**Credit Points:** 8      **Contact Hours:** 2 per week

### ■ AAX117 BALLET TECHNIQUE 1

The study of ballet technique within the four-tier practical levels system. Principles governing the technique; practical work includes barre work, adagio, pirouettes, allegro, pointe work and pas de deux. **Designated Unit.**

**Course:** AA10

**Credit Points:** 8      **Contact Hours:** 7.5 per week

### ■ AAX118 BALLET TECHNIQUE 2

Continuation of study initiated in AAX117. **Designated Unit.**

**Course:** AA10

**Prerequisite:** AAX117

**Credit Points:** 8      **Contact Hours:** 7.5 per week

### ■ AAX119 BALLET TECHNIQUE 3

Consolidation of technique; study of differing stylistic approaches to the ballet technique through the four-tier levels system. **Designated Unit.**

**Course:** AA10

**Prerequisite:** AAX118

**Credit Points:** 8      **Contact Hours:** 7.5 per week

**■ AAX120 BALLET TECHNIQUE 4**

Technique classes of advanced standard incorporating difficult exercise combinations, with an emphasis on performance quality and style within the four-tier levels system. **Designated Unit.**

**Course:** AA10 **Prerequisite:** AAX119  
**Credit Points:** 8 **Contact Hours:** 7.5 per week

**■ AAX121 CONTEMPORARY TECHNIQUE 1**

The study of contemporary dance techniques within the four-tier levels system. Practical work includes floor work, centre work and basic combinations to develop flexibility, strength and coordination; vocabulary of contemporary dance techniques. **Designated Unit.**

**Course:** AA10 **Prerequisite:** AAX119  
**Credit Points:** 8 **Contact Hours:** 7.5 per week

**■ AAX122 CONTEMPORARY TECHNIQUE 2**

Continuation of study initiated in AAX121. **Designated Unit.**

**Course:** AA10 **Prerequisite:** AAX121  
**Credit Points:** 8 **Contact Hours:** 7.5 per week

**■ AAX123 CONTEMPORARY TECHNIQUE 3**

Consolidation of technical knowledge: increased degree of difficulty in turning and jumping sequences; rapid changes of weight and off-balance work within the four-tier levels system. **Designated Unit.**

**Course:** AA10 **Prerequisite:** AAX122  
**Credit Points:** 8 **Contact Hours:** 7.5 per week

**■ AAX124 CONTEMPORARY TECHNIQUE 4**

Advanced technique classes incorporating difficult exercise combinations with rapid changes of weight, level, direction; performance quality and style. **Designated Unit.**

**Course:** AA10 **Prerequisite:** AAX123  
**Credit Points:** 8 **Contact Hours:** 7.5 per week

**■ ALB100 TAXATION DISPUTES**

The increasing role played by administrative law and policy in taxation law and practice; accountants who engage in the provision of tax advice, lodgement of returns and tax planning need an understanding of the underlying principles; accordingly, the unit examines the following: the nature and effect of taxation policy statements and rulings; the self assessment system and the administrative appeals process; the rights of practitioners and clients in relation to audits and investigations; the Australian Taxation Office.

**Course:** BS50 **Prerequisite:** ALB122  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ ALB101 COMMERCIAL LAW**

Commercial transactions: viz agency, bailment guarantees, cheques and other negotiable instruments, insurance and banking; aspects of partnerships and company law; especially for ED50 students.

**Courses:** ED50, BS50 **Prerequisite:** ALB107  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ ALB102 CONSUMER STUDIES**

The consumer in the Australian economy; the inter-dependent roles of the consumer, business and government; consumer behaviour; products and services; marketing; advertising; consumer protection.

**Course:** BS50  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ ALB103 FINANCIAL INSTITUTIONS – LAW**

The legal framework of banking and other financial transactions: legal constraints upon the operations of

financial institutions; bank-customer relationship; Cheque Act, Credit Act, liability for negligent advice.

**Course:** BS50 **Prerequisite:** ALB110 or ALN103  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ ALB104 INDUSTRIAL LAW**

The system of industrial law in Australia; the development and role of law in industrial relations; industrial relations legislation; common law; contract of employment and industrial torts.

**Course:** BS50 **Prerequisite:** HRB131  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ ALB105 INTERNATIONAL BUSINESS LAW**

Examines the law governing the establishment and conduct of international business; business structures, international contracts, competing legal jurisdictions, codes of conduct; an introduction to the taxation consequences of international business.

**Course:** BS50 **Prerequisite:** ALB110 or ALN103  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ ALB106 LAW & COMMUNICATION**

Outlines the legal system; legislation and its interpretation; legal reasoning; limits on freedom of expression: torts, crimes, defamation, obscenity; laws affecting the media; contempt of court.

**Course:** BS50  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ ALB107 LEGAL ENVIRONMENT OF BUSINESS**

The rights and major statutory laws affecting an individual's legal responsibilities upon attaining the age of 18; current legislation affecting family relationships; the renting and/or buying of a house; relationships between employer and employee.

**Course:** ED50  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ ALB108 PUBLIC ADMINISTRATIVE LAW**

Nature and development of law; precedent; interpretation of deeds and statutes; torts; criminal law; constitutional law; foundations of administrative law; judicial review of administrative action, natural justice, ultra vires; common law remedies; legal position of the Crown and government instrumentalities; Administrative Appeals Tribunal; the Ombudsman; the Federal Court; the Judicial Review Act; freedom of information; law and reform.

**Course:** BS50  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ ALB110 BUSINESS LAW**

Australian legal and constitutional system; sources of law, including doctrines and methodology of the law; statutory interpretation; a study of the law of contract; introduction to the law of torts with emphasis on the tort of negligence; aspects of consumer protection.

**Courses:** BS50, ED50, IF53, PU48  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ ALB111 COMMERCIAL & SECURITIES LAW**

Commercial transactions; specific types of contract: sales of goods, credit contracts, agency, bailment and insurance; aspects of the Trade Practices Act and negotiable instruments.

**Course:** BS50  
**Prerequisite:** ALB110 or ALN103  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ ALB120 COMPANY LAW & PRACTICE**

Advanced topics in company law including: protection of minority interests; dividend policy; insider

trading, takeovers and buy-backs, law relating to financially troubled companies.

**Course:** BS50 **Prerequisite:** ALB122  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALB121 INSOLVENCY LAW & PRACTICE

Insolvency and liquidation; a comparison of the tests of insolvency applicable to individuals, companies, partnerships and trusts respectively; rights of secured and unsecured creditors; duties and liabilities of liquidators, receivers, etc.; company shareholders' rights; distribution of property; liabilities of bankrupts, trustees and company officers.

**Course:** BS50 **Prerequisite:** ALB122  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALB122 LAW OF BUSINESS ASSOCIATIONS

The law relating to the establishment, operation and dissolution of business associations; the forms of business associations; partnerships, joint ventures, trusts, companies and voluntary associations. A focus on companies: share capital prospectuses, directors' duties, incorporation and registration requirements.

**Courses:** BS50, BS81  
**Prerequisite:** ALB110 or ALN103  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALB130 INDIRECT TAXATION

Taxes other than those imposed upon income: sales tax; customs and excise duties; stamp duty; payroll tax; land tax; training guarantee levy, superannuation guarantee charge.

**Course:** BS50 **Prerequisite:** ALB122  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALB131 TAX PLANNING

Principles of tax practice; judicial, statutory and professional approaches to tax avoidance and evasion; structuring and restructuring business enterprises; tax planning for the employed person, current and retiring; implications of the Family Law Act.

**Course:** BS50 **Prerequisite:** ALB133  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALB132 TAXATION LAW

Statutory framework; assessable income, general and specific; capital gains; trading stock; allowable deductions, general and specific; levy of income tax: all entities; fringe benefits tax.

**Courses:** BS50, BS81 **Prerequisite:** ALB122  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALB133 TAXATION OF BUSINESS ENTITIES

Partnerships, trusts, superannuation funds and companies; concessional treatment afforded specific classes of taxpayer; international taxation: introduction to administration and avoidance provisions; introduction to business taxes which are not applied to income.

**Course:** BS50 **Prerequisite:** ALB132  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALN101 ADVANCED TAX PLANNING

Application of technical expertise in income tax and other revenue laws to specific tax planning situations including employment, retirement, investment, business and professional practice; the professional responsibilities of tax advisers.

**Courses:** BS70, BS87  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALN102 ADVANCED TAXATION

Analysis of specific and complex issues arising from the operation of the Income Tax Assessment Act and

related legislation. The issues are drawn from the following general areas:- Framework of the Australian taxation system and the interpretation of taxation legislation; Income and deductions; Tax accounting; and Taxation of business entities.

**Courses:** BS70, BS87  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALN103 BUSINESS LAW & ETHICS

Introduction to business law and to morality in the business context. Interpretation of statutes, law of torts, contract law, industrial law and the utility of business structures; morality and how it works as an aspect of the business community; the origins of moral belief, and the motives which lead people to abide by what they believe to be morally right and to persuade others to do likewise. The functioning morality in society drawing on psychological, sociological and philosophical perspectives with special emphasis on business aspects of morality.

**Courses:** BS73, BS81  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALN104 COMMERCIAL LAW HONOURS

The law, policy and practice of financial disclosure; students have the opportunity to obtain a detailed understanding of the rules governing the preparation and audit of financial information whether for annual accounts, experts' reports, or for use in prospectuses or take-overs. It examines the respective theories governing accountants, auditors' and directors' liabilities. Sources of law considered include the Corporations Law, the Australian Stock Exchange listing rules, accounting standards and the Common Law.

**Courses:** BS60, BS87  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALN105 INDIRECT TAXATION

Examination of tax relevant to the conduct of a business other than taxes directly imposed on a taxpayer's income and capital gains. Specific taxes covered include sales tax, payroll tax, land tax, stamp duty, customs, excise duties, the training guarantee levy and the superannuation guarantee charge.

**Courses:** BS70, BS87  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALN106 INTERNATIONAL TAXATION

Application of Australian income tax law and practice to situations and transactions with an international element; root principles of jurisdiction, residence and source; substantive taxing provisions governing residents and non-residents; tax planning arrangements and applicable anti-avoidance legislation.

**Courses:** BS70, BS87  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALN107 LIQUIDATIONS & RECEIVERSHIPS

The law and practice of corporate insolvency; comparisons between schemes of arrangement and reconstruction, receiverships and liquidation. Topics include: the rights of secured and unsecured creditors; rights of members and employees; duties and obligations of scheme administrators, receivers and liquidators; collection and distribution of assets; public examination; actions against company officers.

**Courses:** BS70, BS87  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ALN109 SPECIAL TOPIC – COMMERCIAL LAW

Examination of issues in business law, company law and taxation areas. In particular, company takeovers, issues of management law, disclosure of information

and the new conceptual framework for accounting and professional liability.

Course: BS87

Credit Points: 12 Contact Hours: 3 per week

### ■ ALN110 TAXATION POLICY HONOURS

The Australian taxation system as it has evolved under the policy-making powers of the Australian Government. Generally accepted principles governing the formation of taxation policy are analysed and then reviewed in the light of the various tax reform initiatives adopted by the Government as a result of the recommendations of committees of enquiry into the taxation system over the past two decades. The current reform agenda is critically assessed.

Courses: BS60, BS70, BS87

Credit Points: 12 Contact Hours: 3 per week

### ■ ALN300 INSOLVENCY & RECONSTRUCTION (PY)

Examination of the law and practice of corporate insolvency; comparisons between schemes of arrangement and reconstruction, receiverships and liquidation; the rights of secured and unsecured creditors; rights of members and employees; duties and obligations of scheme administrators, receivers and liquidators; collection and distribution of assets; public examination; actions against company officers.

Courses: BS70, BS87

Credit Points: 12 Contact Hours: 3 per week

### ■ ALN301 TAXATION 1 (PY)

Prepares candidates enrolled in the Institute of Chartered Accountants Professional Year for the examination and workshops in the taxation module. Topics as prescribed by the Institute are covered in cursory fashion or in depth according to the particular knowledge level requirements specified.

Courses: BS70, BS87

Credit Points: 12 Contact Hours: 3 per week

### ■ ALN302 TAXATION 2 (PY)

A study program for candidates enrolled in the advanced taxation module of the Institute of Chartered Accountants Professional Year. Topics prescribed by the Institute are covered in sufficient depth to meet the requirements as specified in the module.

Courses: BS70, BS87

Credit Points: 12 Contact Hours: 3 per week

### ■ ALP101 EMPLOYMENT LAW

Understanding of institutions, doctrines and methodology of general and industrial law; analysis of employment relationships; common law contract of employment; workers' compensation; legal liability for industrial action; the structure of Federal and Queensland industrial relations laws.

Course: BS74

Credit Points: 12 Contact Hours: 3 per week

### ■ ALP102 AUSTRALIAN INDUSTRIAL LAW

An introduction to industrial law; detailed study of law relating to trade unions and employer organisations; current developments in industrial law.

Course: BS74

Credit Points: 12 Contact Hours: 3 per week

### ■ ALX101 AUSTRALIAN INDUSTRIAL LAW

Conciliation and arbitration laws; the Federal laws on dispute resolution, the Labor Court, special tribunals, State systems; functioning and regulation of industrial organisations and trade unions; laws relating to strikes and industrial disputes.

Course: BS10

Credit Points: 12 Contact Hours: 3 per week

### ■ ARB140 INTRODUCTORY DESIGN 1

Mechanical drawing techniques; topics include: contour, texture and tone; depth perception, optical illusions and the principles of perspective; techniques of perspective drawing; the organisation of the visual field and the gestalt 'laws of pragnanz'; pattern in two and three dimensions; visual interest and attention; visual dynamics; principles of scale drawing.

Courses: AR48, BN30

Credit Points: 16 Contact Hours: 8 per week

### ■ ARB141 THE HUMAN ENVIRONMENT 1

The dimensions and movement of the human body, and of its perceptual systems, as an essential preliminary to the design of all artefacts for human use. Topics include: static and dynamic anthropometry; human sensory systems; ergonomics; applications of anthropometrics and ergonomics to design.

Course: BN30

Credit Points: 4 Contact Hours: 2 per week

### ■ ARB146 INTRODUCTION TO INTERIOR TECHNOLOGY 1

Basic mechanics and the physical, thermal, and optical properties of materials; physics of light, optics, photometry, laser, holograms; thermal properties of materials and components; solar energy and its application; physics of sound, hearing, and environmental acoustics; electricity and electrical circuits.

Course: BN30

Credit Points: 6 Contact Hours: 2 per week

### ■ ARB147 HISTORY OF THE BUILT ENVIRONMENT 1

See PSB016.

Course: BN30

Credit Points: 6 Contact Hours: 3 per week

### ■ ARB151 DESIGN TECHNOLOGY & SOCIETY

Applied technologies and how they relate to industrial products and systems. Topics include: social and technological change in an historical context; the industrial society and the role of the designer; new technologies and social change; appropriate technologies and their implication design.

Course: BN30

Credit Points: 2 Contact Hours: 1 per week

### ■ ARB161 LIGHT & COLOUR STUDIES

Colour vision, colour harmony and contrast, mixing and the application of colour, examination of a range of contemporary theories relating to the use of colour in design; and introduction to the study of the qualitative effects of lighting on form and colour in interiors. The physiological-psychological basis for colour relations and the range of techniques used to apply these theories in the design professions.

Course: BN30

Credit Points: 8 Co-requisite: ARB140 Contact Hours: 3 per week

### ■ ARB185 TECHNOLOGY 2

Promote understanding and development of a basic knowledge of construction principles; building as a system; loads on buildings; performance of structural units; load bearing and skeletal construction systems.

Course: AR48

Credit Points: 6 Contact Hours: 3 per week

### ■ ARB191 THE HUMAN ENVIRONMENT 1

The dimensions and movement of the human body as a perpetual system for human use; static and dynamic anthropometry; human sensory systems; introduction

to ergonomics; applications of anthropometrics and ergonomics to design.

**Courses:** AR41, AR48, BN30

**Credit Points:** 4      **Contact Hours:** 2 per week

■ **ARB192 THE HUMAN ENVIRONMENT 2**

Human needs and the influence of selected interpersonal and physical variables on human behaviour; the characteristics and dynamics of group behaviour, communication process types, and networks; concepts of power, leadership and conflict; observations of behaviour, research methods, interpretation and presentation of research; environmental stressors and their mediation by individual differences.

**Courses:** AR41, AR48

**Credit Points:** 4      **Contact Hours:** 2 per week

■ **ARB193 DESIGN 1**

Design theory: design definition; perception; elements and principles of design; effects of colour, texture, contour, pattern; human dimensions; anthropometrics, elements of aesthetics. Graphics: descriptive geometry; architectural graphics and rendering; freehand drawing and sketching. Design projects: two-dimensional and three-dimensional objects; personal working and living space.

**Course:** AR41

**Credit Points:** 8      **Contact Hours:** 5 per week

■ **ARB194 DESIGN 2**

See ARB193.

**Course:** AR41

**Credit Points:** 14      **Contact Hours:** 7 per week

■ **ARB195 TECHNOLOGY 1**

Materials: manufacture, supply, storage and application in buildings of timber and wood products, paints and clay products, concrete, ferrous and non-ferrous metals, plastics. Construction: simple, single-storey buildings, footings and floors, wall and roof framing, load bearing masonry, roofing, cladding.

**Courses:** AR41, AR48

**Credit Points:** 4      **Contact Hours:** 2.5 per week

■ **ARB196 TECHNOLOGY 2**

See ARB195.

**Courses:** AR41, AR48

**Credit Points:** 6      **Contact Hours:** 2 per week

■ **ARB197 HISTORY OF ARCHITECTURE & ART 1**

The development of the artificial environment and its relationship to ideas, technology, architecture and the fine arts from the earliest times to the present.

**Courses:** AR41, AR48

**Credit Points:** 2      **Contact Hours:** 1 per week

■ **ARB198 HISTORY OF ARCHITECTURE & ART 2**

See ARB197.

**Courses:** AR41, AR48

**Credit Points:** 2      **Contact Hours:** 1 per week

■ **ARB199 TECHNOLOGY 1**

See ARB195.

**Courses:** AR41, BN30

**Credit Points:** 8      **Contact Hours:** 4 per week

■ **ARB241 HISTORY OF THE BUILT ENVIRONMENT 2**

A continuation of ARB197. History of the following from circa 1600 AD: ideas, art, and two of the following (one of which must be the student's major discipline): town and country planning, landscape architecture, architecture, interior and industrial design.

**Course:** BN30

**Credit Points:** 6

**Contact Hours:** 3 per week

■ **ARB242 TECHNOLOGY 2**

See ARB195.

**Course:** BN30

**Credit Points:** 14

**Contact Hours:** 5 per week

■ **ARB246 INTRODUCTION TO INTERIOR TECHNOLOGY 2**

Structural systems of domestic building construction; chemical characteristics of materials and finishes including timber/wood products, cement and concrete, ceramics, glass, polymers and metals; manufacturing process and performance. Measurement and recording of building spaces. Photography and photogrammetry. Application of recorded information.

**Course:** BN30

**Prerequisite:** ARB161

**Co-requisite:** ARB200 (Interior Design only)

**Credit Points:** 14

**Contact Hours:** 5 per week

■ **ARB248 INTRODUCTORY DESIGN 2**

Continuation of ARB140 Introductory Design 1; studio work involving three-dimensional design tasks of a variety of scales; workshop and field teaching; techniques of oral and written presentation of schemes to audience; report writing; use of English as applicable to the professional needs.

**Courses:** AR41, AR48, BN30

**Prerequisite:** ARB140

**Credit Points:** 18

**Contact Hours:** 9 per week

■ **ARB249 THE HUMAN ENVIRONMENT 2**

See PLB201.

**Course:** BN30

**Credit Points:** 6

**Contact Hours:** 2 per week

■ **ARB251 ERGONOMICS FOR INDUSTRIAL DESIGNERS 1**

Psychomotor skills; human information processing; human-machine interfaces; displays, controls, and tools; human-machine system properties; feedback and controls; workplace design; noise; stress; vibration; legal aspect; safety and product liability. Practical exercises in product design.

**Course:** BN30

**Credit Points:** 4

**Contact Hours:** 2 per week

■ **ARB288 DESIGN SCIENCE 2**

Basic design for hot humid climates, principles governing air flow through and around buildings and space. Natural ventilation; air flow in cities. Testing of air flow through and around models. Basic design for hot arid climates and cold climates; macro and micro climatic conditions and their evaluation for design; manual and computerised climatic evaluation.

**Courses:** AR41, AR48, BN30

**Credit Points:** 2

**Contact Hours:** 1 per week

■ **ARB289 DESIGN SCIENCE 1**

The principles of science and their implications for the design of buildings and spaces; the application of these in the conceptual stages of design, laboratory tests and computer evaluations of proposals. Quantity and quality of light; day lighting in buildings; manual and computerised projection of solar shadows. Testing of models on heliodon and artificial sky.

**Courses:** AR41, AR48, BN30

**Credit Points:** 2

**Contact Hours:** 1 per week

■ **ARB290 INTRODUCTION TO COMPUTING 2**

Computer as tool for drafting; line graphics; plotting, symbol libraries; dimensioning; computer drafting



and office organisation; comparison of available software packages.

**Courses:** AR41, AR48, BN30

**Credit Points:** 2 **Contact Hours:** 1 per week

### ■ ARB291 THE HUMAN ENVIRONMENT 3

The social and cultural development of Australian urban environments, local built environments; study of human functioning in urban environments, privacy, personal space, territoriality, environmental meaning and cognition, cognitive maps and wayfinding, intercultural and intracultural differences. Application via examination and analysis of an urban environment with respect to its sociocultural function.

**Courses:** AR41, AR48, BN30

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ ARB292 THE HUMAN ENVIRONMENT 4

The interaction of formal organisations and institutions especially the organisation of work and government and the built environment; small group theory and the effective group; work and motivation. Management style and bureaucracy, its character and influence; social analysis and social forecasting; social interest groups in a pluralist society; mechanisms and processes of compromise; Australia's government system as relating to public policy and the electoral system; modern society and the individual.

**Courses:** AR41, AR48, BN30

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ ARB293 DESIGN 3

Theory: scope of design; Reitman's State Transformation model, problem-solving methods; precedence diagrams; testing; general design heuristic; the art of design. Planning objectives and techniques, privacy and convenience, intelligibility, forms and order, history of planning techniques, the vertical dimension, safety, external constraints. Architectural projects: single-storey to low-rise buildings of domestic or semi-domestic nature. Graphics: use of media for presentation of architectural projects; use of colour, shade, shadow in architectural drawings; three-dimensional presentation and modelling.

**Course:** AR41

**Credit Points:** 10 **Contact Hours:** 5 per week

### ■ ARB294 DESIGN 4

See ARB293.

**Course:** AR41

**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ ARB295 BUILDING CONSTRUCTION 1

Building construction of domestic and semi-domestic buildings with upper floors, excavation, retaining walls, culverts, site and soil investigations, footings, frames and load bearing walls, construction of low-rise buildings, roofing of medium and large spans; environmental factors, building defects and remedies.

**Courses:** AR41, AR48

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ ARB296 BUILDING CONSTRUCTION 2

See ARB295.

**Courses:** AR41, AR48

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ ARB299 INTRODUCTION TO COMPUTING 1

The computer as a tool; introduction to micro-computer hardware and software; architectural application overview, specialised graphics hardware, files, computer access and operating systems; simple computer graphics production symbols, colour control, printer control, transformation and deformation.

**Courses:** AR41, AR48, BN30

**Credit Points:** 2

**Contact Hours:** 1 per week

### ■ ARB340 ARCHITECTURAL DESIGN 1

Theory: concepts of design process; systematic methodology in architectural design. Studio: developing skills in site surveys, adjacency analysis, brief formation, application of architectural science; safety, comfort, construction, content, form and order.

**Courses:** AR48, BN30

**Prerequisite:** PSB011

**Credit Points:** 18 **Contact Hours:** 7 per week

### ■ ARB341 BUILDING CONSTRUCTION 1

Introduction to common building materials, their properties and behaviour in use; the building as a system; elements of the small building and their function in the building system. Studio work will consist of exercises in construction drawing related to the lecture topics. Lectures and studio work will be complemented by site visits and workshop practice.

**Course:** BN30

**Credit Points:** 16 **Contact Hours:** 6 per week

### ■ ARB343 VISUAL COMMUNICATION FOR ARCHITECTS 1

Introduction to presenting architectural works using manual skills and computer techniques.

**Course:** BN30

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ ARB350 INDUSTRIAL DESIGN 1

Scope of problem solving theory; special characteristics of design problems; the task environment, design heuristics; creativity and innovation and general psychological theories of creativity. The studio exercises to which most of the time is devoted are aimed at a range of different product designs. The complexity and depth of the design project will increase systematically according to the semester level.

**Course:** BN30 **Prerequisites:** ARB200, PSB011

**Credit Points:** 18 **Contact Hours:** 8 per week

### ■ ARB351 ERGONOMICS FOR INDUSTRIAL DESIGNERS 2

Person-machine system models; human capabilities; hearing and signal detection theory; vision; and user modelling. Practical exercises cover application of lecture topics to product design.

**Course:** BN30

**Prerequisite:** ARB251

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ ARB352 VISUAL COMMUNICATION FOR INDUSTRIAL DESIGNERS 1

The development of visual communication techniques; introduction to rendering techniques and the use of different media including computer graphics.

**Course:** BN30

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ ARB353 MANUFACTURING TECHNOLOGY 1

Metals, glass, wood, ceramics and plastics technologies: the relation between the properties of materials and the industrial processes available for their fabrication. Application of the study of materials and their fabrication to design problems in studio exercises. Introduction of computers (CAD).

**Course:** BN30

**Credit Points:** 14 **Contact Hours:** 6 per week

### ■ ARB354 COMPUTER-AIDED INDUSTRIAL DESIGN 1

PC computer operation, DOS, file and disk management; the use of graphics and CAD by industrial designers. Applications in design, presentation

graphics and engineering drawings, introduction to three-dimensional CAD.

**Course:** BN30

**Credit Points:** 4      **Contact Hours:** 2 per week

### ■ ARB360 INTERIOR DESIGN 1

Introduction to a systematic design process related to interior design problems. Theory and studio exercises using a range of interior design problems.

**Course:** BN30

**Prerequisite:** PLB200

**Co-requisite:** ARB361

**Credit Points:** 18

**Contact Hours:** 7 per week

### ■ ARB361 INTERIOR TECHNOLOGY 1

Upgrades the technical drawing skills developed in ARB261 and introduces students to the building codes and by-laws regulating the design and construction of building interiors at the domestic level; issues such as the evolution of building materials and the evaluation of material performance and suitability.

**Course:** BN30

**Prerequisite:** ARB261

**Co-requisite:** ARB360

**Credit Points:** 18

**Contact Hours:** 6 per week

### ■ ARB362 FURNITURE & FITTINGS 1

Fabrics and textiles in interior design; wall to wall carpeting; curtains and blinds; upholstery; in each case materials, properties and techniques are discussed; fabrics and textiles in interior design.

**Course:** BN30

**Credit Points:** 4

**Contact Hours:** 2 per week

### ■ ARB363 VISUAL COMMUNICATION FOR INTERIOR DESIGNERS 1

Visual thinking and drawing and basic rendering skills; rough mock-ups and scale model making.

**Course:** BN30

**Prerequisite:** PSB011

**Credit Points:** 4

**Contact Hours:** 2 per week

### ■ ARB388 DESIGN SCIENCE 4

The control of noise and aural conditions in buildings; basic acoustic design and noise control in buildings. Electrical lighting of interiors, lamp characteristics, colour rendering, modelling, lighting quality, simplified lighting design methods, external lighting.

**Courses:** AR41, AR48, BN30

**Credit Points:** 2

**Contact Hours:** 1 per week

### ■ ARB389 DESIGN SCIENCE 3

Thermal performance of buildings; energy conservation and low energy design; calculation of heat flow and indoor temperatures under steady state and fluctuating conditions; quantitative monitoring of thermal performance of building elements. Computer-aided planning analysis and environmental control analysis; integration with design.

**Courses:** AR41, AR48, BN30

**Credit Points:** 4

**Contact Hours:** 2 per week

### ■ ARB391 BUILDING SERVICES 1

Hydraulics: water; gas; plumbing; drainage and sewerage in domestic and low-rise buildings. Fire services; sprinklers; alarms; extinguishers; emergency systems.

**Courses:** AR41, AR48, BN30

**Credit Points:** 4

**Contact Hours:** 1.5 per week

### ■ ARB392 BUILDING SERVICES 2

Electricity: supply and transmission systems; sub-stations; metering; reticulation. Vertical transportation; lifts; escalatory hoists. Air-conditioning; refrigeration cycle, principles of air-conditioning, equipment components, domestic and commercial systems; approximate sizing of plant rooms and ductwork; cooling load estimate; choice of systems.

**Courses:** AR41, AR48, BN30

**Credit Points:** 3

**Contact Hours:** 1.5 per week

### ■ ARB393 DESIGN 5

Theory: the building as object, surface, volume, space and sequence; expression of building; criteria of good design in terms of style, function, form, structure, services, context, environment, society, and other relevant issues; design ethics and values. Projects: low to medium rise with emphasis on industry and commerce; integration with architectural science; flow charting; building type analysis.

**Course:** AR41

**Credit Points:** 8

**Contact Hours:** 4 per week

### ■ ARB394 DESIGN 6

See ARB393.

**Course:** AR41

**Credit Points:** 8

**Contact Hours:** 4 per week

### ■ ARB395 BUILDING CONSTRUCTION 3

Site investigations, earth and rock retaining systems, foundations including piles, bored piers and rafts, underpinning and shoring, medium-rise masonry construction, structural steel concrete and composite structures, service cores, precast concrete, prestressed concrete: systems for floors, roofs, external cladding, partitions, ceilings; waterproofing, corrosion protection, fireproofing; building failures.

**Courses:** AR41, AR48

**Credit Points:** 3

**Contact Hours:** 1.5 per week

### ■ ARB396 BUILDING CONSTRUCTION 4

See ARB395.

**Courses:** AR41, AR48

**Credit Points:** 3

**Contact Hours:** 1.5 per week

### ■ ARB440 ARCHITECTURAL DESIGN 2

Theory: concepts of design process; systematic methodology in architectural design. Studio: developing skills in site surveys, adjacency analysis, brief formation, application of architectural science to inculcate concerns for safety, comfort, construction, content, form and order.

**Courses:** AR41, AR48, BN30

**Prerequisite:** ARB340

**Credit Points:** 16

**Contact Hours:** 6 per week

### ■ ARB441 BUILDING CONSTRUCTION 2

Case studies with lectures and studio work. Each case study will discuss the system characteristics of the problem, the human and environmental factors involved, and the technical systems required. Lectures and studio work will be complemented by field studies and workshop practice.

**Course:** BN30

**Prerequisite:** ARB341

**Credit Points:** 16

**Contact Hours:** 6 per week

### ■ ARB443 VISUAL COMMUNICATION FOR ARCHITECTS 2

Development of skills in various techniques for presenting architectural designs. Includes rendering and presentation techniques, audiovisual media, model making and portfolio organisation. The use of manual skills and computer techniques are studied.

**Course:** BN30

**Credit Points:** 4

**Contact Hours:** 2 per week

### ■ ARB444 ENVIRONMENTAL IMPACT

Environmental impacts related to development, production and use of consumer products, materials and processes, and environmental criteria for future product development.

**Course:** BN30

**Credit Points:** 2

**Contact Hours:** 1 per week

**■ ARB450 INDUSTRIAL DESIGN 2**

Design methodologies; process; creativity and product innovation; studio exercises are aimed at different product ranges. The complexity of the project increases according to the semester level.

Course: BN30 Prerequisite: ARB350  
Credit Points: 20 Contact Hours: 6 per week

**■ ARB452 VISUAL COMMUNICATION FOR INDUSTRIAL DESIGNERS 2**

The structure of presentation layouts; product graphics, including the use of computer graphics; photography; introduction to three-dimensional presentation: model making techniques.

Course: BN30 Prerequisite: ARB352  
Credit Points: 4 Contact Hours: 2 per week

**■ ARB453 MANUFACTURING TECHNOLOGY 2**

Application of engineering mechanisms to products or systems; the performances of mechanical, electrical, hydraulic and pneumatic mechanisms in relation to particular functions; introduction to electronics; design problems in studio using CAD.

Course: BN30 Prerequisite: ARB353  
Credit Points: 10 Contact Hours: 5 per week

**■ ARB454 COMPUTER-AIDED INDUSTRIAL DESIGN 2**

Development of skills in the use of CAD in the production of two-dimensional engineering drawings and introduction to three-dimensional CAD using AUTOCAD. Shading of design evaluation drawing using paintbrush.

Course: BN30 Prerequisite: ARB354  
Credit Points: 4 Contact Hours: 2 per week

**■ ARB460 INTERIOR DESIGN 2**

Development of the design process; furthers a systematic approach to design, encourages the application of technologies and philosophies. Studio exercises on problems with specific parameters.

Course: BN30 Prerequisite: ARB360 Co-requisite: ARB461  
Credit Points: 16 Contact Hours: 7 per week

**■ ARB461 INTERIOR TECHNOLOGY 2**

Industrialised interior finishes and construction of joinery and fittings and their interaction with the building shell and services. The notions of interior maintenance, life span economies will be introduced.

Course: BN30 Prerequisite: ARB361 Co-requisite: ARB460  
Credit Points: 16 Contact Hours: 6 per week

**■ ARB462 FURNITURE & FITTINGS 2**

The manufacture, assembly and fabrication of furniture, fittings and components; expected performance of materials and furniture items, focuses on functional, maintenance, life span, economic properties.

Course: BN30 Prerequisite: ARB362  
Credit Points: 6 Contact Hours: 2 per week

**■ ARB463 VISUAL COMMUNICATION FOR INTERIOR DESIGNERS 2**

The achievement of a professional standard in techniques of graphic communication whilst allowing for the development of an individual style.

Course: BN30 Prerequisite: ARB363  
Credit Points: 4 Contact Hours: 2 per week

**■ ARB464 ARCHITECTURAL INTERIOR SYSTEMS 1**

Lighting and acoustic considerations, human sensory and behavioural needs. An outline of systems and guidelines for selection and professional judgement.

Course: BN30

Credit Points: 4

Prerequisite: ARB361

Contact Hours: 2 per week

**■ ARB480 DESIGN 7**

See ARB493.

Course: AR48

Credit Points: 32 Contact Hours: 5 per week

**■ ARB481 PROFESSIONAL STUDIES 1**

See ARB495.

Course: AR48

Credit Points: 12 Contact Hours: 3 per week

**■ ARB491 HISTORY OF ARCHITECTURE & ART 3**

Early Australian colonial architecture; Victorian Australia; gothic and classical revival in Australia; the Australian house; modern architecture in Australia; conservation and preservation; Australian landscape and its influence in architecture.

Courses: AR41, AR48

Credit Points: 4 Contact Hours: 1 per week

**■ ARB493 DESIGN 7**

Theory: Masters of the twentieth century in Europe and USA; their architectural styles, design philosophies and influence; architects in Australia and their influence on Australasian architecture. Projects: brief, design, construction, services and landscape; a series of architectural projects of medium to high-rise construction; emphasis on workability and compliance with codes, by-laws and regulations.

Course: AR41

Credit Points: 20 Contact Hours: 5 per week

**■ ARB495 PROFESSIONAL STUDIES 1**

Specifications; estimates; cost planning and control; codes; standards; building legislation; computing.

Course: AR41

Credit Points: 16 Contact Hours: 3 per week

**■ ARB497 ADVANCED TECHNOLOGY**

Mechanisation of construction; construction machinery; excavation; piling; deep basement construction; high-rise construction systems; steel, reinforced concrete and pre-stressed concrete; framing; walling and flooring. Special services: energy management and maintenance systems; automated building systems; integration of design, structures, services and construction; decision making and choice of constructional methods and procedure. Prefabrication. Case studies.

Courses: AR41, AR48

Credit Points: 8 Contact Hours: 2 per week

**■ ARB540 ARCHITECTURAL DESIGN 3**

Theory: the building as object, surface, volume, space and sequence; expression of buildings; criteria of good design; design ethics and values. Studio: to develop ethics in design and to apply aesthetic theories in architectural projects, a series of architectural projects of low to medium use with emphasis on industry and commerce.

Courses: AR48, BN30 Prerequisite: ARB440

Credit Points: 18 Contact Hours: 6 per week

**■ ARB541 BUILDING CONSTRUCTION 3**

Studies will review the construction of non-domestic buildings of intermediate size. Each case study will discuss the system characteristics of the building type, the human and environmental factors which constrain the solution, and the associated building systems. Studio work will be complemented by field work.

Course: BN30

Credit Points: 17 Prerequisite: ARB441

Contact Hours: 6.5 per week

### ■ ARB544 LANDSCAPE ARCHITECTURE IN THE BUILT ENVIRONMENT

Principles and development of landscape architecture, application in architectural design, effect in the conservation and enhancement of the environment, landscape architect's role in architectural practice.

Courses: AR41, BN30

Credit Points: 2

Contact Hours: 1 per week

### ■ ARB550 INDUSTRIAL DESIGN 3

Product design in depth. The projects are cross-referenced with other subject areas which will provide an integration of knowledge and skills acquired in the previous semesters. During the design projects, different specialist expertise is included.

Course: BN30

Prerequisite: ARB450

Credit Points: 20

Contact Hours: 6 per week

### ■ ARB552 VISUAL COMMUNICATION FOR INDUSTRIAL DESIGNERS 3

Organisation of visual communication media relevant to the presentation of a product; the use of graphic skills in visual analysis; advanced renderings and exploded technical renderings, and the application of computer graphics to these tasks.

Course: BN30

Prerequisite: ARB452

Credit Points: 4

Contact Hours: 2 per week

### ■ ARB553 MANUFACTURING TECHNOLOGY 3

Production techniques in relation to different materials, various methods for different finishing operations, various methods for forming, automatic and semi-automatic assembly and quality control methods. Field studies include visits to manufacturing industries. The application of production techniques in studio design projects using CAD.

Course: BN30

Prerequisite: ARB453

Credit Points: 8

Contact Hours: 3 per week

### ■ ARB554 COMPUTER-AIDED INDUSTRIAL DESIGN 3

Development of wire frame and shaded three-dimensional evaluation presentation, introduction to animation; advanced two-dimensional engineering drawing; evaluation of a product's features and characteristics; refinement through three-dimensional studies, in wire frame and shaded versions.

Course: BN30

Prerequisite: ARB454

Credit Points: 4

Contact Hours: 2 per week

### ■ ARB555 ECONOMICS OF INDUSTRIAL PRODUCTION

Commercial practice, costing production, marketing, strategic planning and capital budgeting.

Course: BN30

Credit Points: 4

Contact Hours: 2 per week

### ■ ARB556 PRODUCT ANALYSIS & DEVELOPMENT

Case studies on success and failure of industrial/product design; sources for new product development; system for total design product planning; product status and process of total design management.

Course: BN30

Credit Points: 4

Contact Hours: 2 per week

### ■ ARB560 INTERIOR DESIGN 3

This unit gives the major time allocation to the studio and workshop. Students develop their knowledge of systematic interior design processes and apply knowledge gained in support and co-requisite units.

Course: BN30

Prerequisite: ARB460

Co-requisite: ARB561

Credit Points: 20

Contact Hours: 6 per week

### ■ ARB561 INTERIOR TECHNOLOGY 3

Continuation of ARB461; emphasis on commercial construction systems and the impact of regulations; high-rise buildings, the planning of tenancies, partitioning and furniture systems, shopping centres, theatres, medical clinics, taverns, restaurants.

Course: BN30

Prerequisite: ARB461

Co-requisite: ARB560

Credit Points: 16

Contact Hours: 7 per week

### ■ ARB562 FURNITURE & FITTINGS 3

Principles of ornamental design; decorative metalwork; stained glass; decorative ceramics; plasterwork; carved and inlaid woodwork; lacquer work; printed fabrics and papers; tapestry and embroidery.

Course: BN30

Prerequisite: ARB462

Credit Points: 8

Contact Hours: 2 per week

### ■ ARB563 VISUAL COMMUNICATION FOR INTERIOR DESIGNERS 3

Visual and oral communication techniques employed in the production of design presentations to clients. The program consists of a series of studio exercises and mock-up presentations in a 'forum' environment.

Course: BN30

Prerequisite: ARB463

Credit Points: 4

Contact Hours: 2 per week

### ■ ARB564 ARCHITECTURAL INTERIOR SYSTEMS 2

An overview of the environmental systems used in buildings; air-conditioning and system performance, thermal and atmosphere control; the building as a comprehensive environmental system; and their impact on individual interior spaces.

Course: BN30

Prerequisite: ARB464

Credit Points: 4

Contact Hours: 2 per week

### ■ ARB580 DESIGN 8

See ARB593.

Course: AR48

Credit Points: 36

Contact Hours: 6 per week

### ■ ARB590 ELECTIVE 1A

Selected architectural topics including history, conservation, design theory, management, finance, economics, architectural science, computing, urban design, and courses where approved.

Courses: AR41, AR48

Credit Points: 4

Contact Hours: 2 per week

### ■ ARB591 HISTORY OF ARCHITECTURE & ART 4

A global perspective of the development of art and architecture of regional interest with particular emphasis on non-European traditions. Architectural development in the Far East, South East Asia, the Pacific, and South America. Planning of settlements, indigenous architecture, materials and techniques in building construction, social, cultural, economic, religious, and western influence. Modernisation, current architecture issues.

Courses: AR41, AR48

Credit Points: 4

Contact Hours: 1 per week

### ■ ARB593 DESIGN 8

Architectural criticism; main themes selected for design and the realisation, convenience, clarity, intelligibility, expression, technology, context form. Post-occupancy evaluation. Testing methodology; analysis and evaluation of building performance, user-oriented design. A series of architectural projects of medium to high-rise buildings involving general building

briefs and programs, environmental impact issues, and post-occupancy analysis.

Course: AR41

Credit Points: 20 Contact Hours: 6 per week

#### ■ ARB595 PROFESSIONAL STUDIES 2

Building economics; practice management and accounting systems; legal aspects of practice, contracts; building procurement systems.

Courses: AR41, AR48

Credit Points: 16 Contact Hours: 4 per week

#### ■ ARB598 ELECTIVE 1B

See ARB590.

Courses: AR41, AR48

Credit Points: 4 Contact Hours: 2 per week

#### ■ ARB640 ARCHITECTURAL DESIGN 4

Theory: the building as object, surface, volume, space and sequence; expression of buildings; criteria of good design; design ethics and values. Studio: to develop ethics in design and to apply aesthetic theories in architectural projects. A series of architectural projects of low to medium use with emphasis on industry and commerce.

Courses: AR48, BN30

Prerequisite: ARB540

Credit Points: 18 Contact Hours: 6 per week

#### ■ ARB641 BUILDING CONSTRUCTION 4

Review the construction of non-domestic buildings of intermediate size. Each case study will discuss the system characteristics of the building type, the human and environmental factors which constrain the solution, and the associated building systems. Studio work will be complemented by field work.

Course: BN30

Prerequisite: ARB541

Credit Points: 17 Contact Hours: 6.5 per week

#### ■ ARB646 LAW OF THE BUILT ENVIRONMENT

The law as a constraint in the design and construction process. Australian and Queensland acts, by-laws and regulations of statutory authorities as they affect the built environment. Legal aspects of land and land transfer. Introduction to professional liability, design registration, patents and copyrights.

Courses: AR41, AR48, BN30

Credit Points: 4 Contact Hours: 2 per week

#### ■ ARB647 ARCHITECTURAL RESEARCH 2

Studies on approved topics to sufficient depth to demonstrate the student's ability to define and logically analyse proposition, and to conduct research to prove its validity.

Courses: AR41, AR48

Credit Points: 24 Contact Hours: 6 per week

#### ■ ARB650 INDUSTRIAL DESIGN 4

Design studio projects; there are usually two projects per semester and they are done in depth. The interdisciplinary expertise is included when appropriate. Most of the projects are industry based.

Course: BN30

Prerequisite: ARB550

Credit Points: 20 Contact Hours: 6 per week

#### ■ ARB652 VISUAL COMMUNICATION FOR INDUSTRIAL DESIGNERS 4

Structure of professional presentation, with selection of appropriate visual communication media particularly computer graphics; advanced renderings and their application to product design concepts; professional portfolio organisation.

Course: BN30

Prerequisite: ARB552

Credit Points: 4 Contact Hours: 2 per week

#### ■ ARB653 MANUFACTURING TECHNOLOGY 4

Organisation, planning the technologies required for CIM (Computer-integrated Manufacturing). The impact of CIM on product design solutions. Field studies complement the lecture series. Studio exercises will utilise computer applications.

Course: BN30

Prerequisite: ARB553

Credit Points: 14 Contact Hours: 5 per week

#### ■ ARB654 COMPUTER-AIDED INDUSTRIAL DESIGN 4

Advanced three-dimensional animation techniques; application of project management and evaluation techniques to design projects; two-dimensional and three-dimensional CAD used for the development of design concepts through to engineering drawings.

Course: BN30

Prerequisite: ARB554

Credit Points: 6 Contact Hours: 2 per week

#### ■ ARB660 INTERIOR DESIGN 4

Students select and develop one complex design problem from brief stage to developed design studio stage. Theory studies will be cross-referenced to studio projects and exercises.

Course: BN30

Prerequisite: ARB560

Co-requisites: ARB661, ARB663

Credit Points: 18 Contact Hours: 6 per week

#### ■ ARB661 INTERIOR TECHNOLOGY 4

The technological assessment of interiors, structure, openings, environmental systems, artefacts and ambience of existing spaces; tendering, consultants, leasing and tenancy-building interface.

Course: BN30

Prerequisite: ARB561

Co-requisite: ARB660

Credit Points: 14 Contact Hours: 6 per week

#### ■ ARB662 FURNITURE & FITTINGS 4

The development of a methodical approach to the choice of loose furniture, furniture systems and interior products; quantitative and qualitative assessment approaches; the understanding of furniture design and its integration into interiors.

Course: BN30

Prerequisite: ARB562

Credit Points: 8 Contact Hours: 2 per week

#### ■ ARB663 RESEARCH METHODS

An overview of research methodology; differences between various research methods and products.

Courses: AR48, BN30

Co-requisite: ARB660

Credit Points: 4 Contact Hours: 2 per week

#### ■ ARB664 ARCHITECTURAL RESEARCH 1

Establishment of objectives; delimitation of relevant areas; structuring the research program; identification of background reading sources; analysis and preliminary conclusions regarding the proposed field of study; preparation of an individual proposal.

Courses: AR48, BN30

Credit Points: 4 Contact Hours: 2 per week

#### ■ ARB681 PROFESSIONAL STUDIES 3

See ARB695.

Course: AR48

Credit Points: 16 Contact Hours: 2 per week

#### ■ ARB690 ARCHITECTURAL PROJECT

See ARB693.

Course: AR48

Credit Points: 12 Contact Hours: 6 per week

#### ■ ARB693 DESIGN 9

Theory: contemporary architects' theories and ideas, their influence in architectural design and practice.

Projects: process of brief, functional and space programming; urban values, design principles and landscape-townscape, civic and formal planning; urban quality. A comprehensive project of groups of complex buildings as a design vehicle to develop planning skills; brief formation; building programming; quality evaluation; planning and presentation.  
**Course:** AR41  
**Credit Points:** 16      **Contact Hours:** 6 per week

### ■ ARB695 PROFESSIONAL STUDIES 3

Alternative methods of building procurement; management of all phases of the building project. The Architect Act 1962 and amendments; Board of Architects Queensland Practice Examination.  
**Course:** AR41  
**Credit Points:** 8      **Contact Hours:** 2 per week

### ■ ARB697 ELECTIVE 2

Studies on approved topics to sufficient depth to demonstrate the student's ability to define and to logically analyse proposition, and to conduct research to prove its validity.  
**Course:** AR41  
**Contact Hours:** Semester 1: 2 per week; Semester 2: 5 per week  
**Credit Points:** Semester 1: 4; Semester 2: 20

### ■ ARP151 ARCHITECTURAL PRACTICE

Pre-design activities, brief formulation and evaluation; development and building approvals; programming and staffing; the documentation process; office systems; building procurement systems; contract administration; quality control; post occupancy evaluation; risk management.  
**Course:** AR80  
**Credit Points:** 12      **Contact Hours:** 2 per week

### ■ ARP152 ARCHITECTURAL ADMINISTRATION

Architectural practice as a small business; setting up and managing a practice; fees; personnel administration; modes of practice; the business plan; marketing architectural services; special concerns of the sole practitioner; the architect as entrepreneur; survival strategies for the future of architectural practice.  
**Course:** AR80  
**Credit Points:** 12      **Contact Hours:** 2 per week

### ■ ARP153 LEGAL STUDIES IN ARCHITECTURE

Contract and tort; architect's liability; building legislation update; trades practices act; intellectual property law; heritage and environment law; subcontractors changes act; workplace health and safety act; bankruptcy; company law; dispute resolution.  
**Course:** AR80  
**Credit Points:** 12      **Contact Hours:** 2 per week

### ■ ARP154 ARCHITECTURAL COST PLANNING

Sectors of the property market; financial feasibility studies; project financing; project cost control; life cycle costing; energy audits; maintaining property asset value; investment decision-making; facilities management; forecast for property markets.  
**Course:** AR80  
**Credit Points:** 12      **Contact Hours:** 2 per week

### ■ ARP502 ADVANCED INTERIOR DESIGN 1

Exploration of contemporary ideas, theories, methods; practical application of research, analysis, evaluation and the synthesis of ideas related to interiors; contemporary issues in user-oriented design; the

development of advanced information retrieval skills; main topics in this AIRS program are: using the QUT library and other information services; accessing information through indexes and abstracts; computerised information retrieval; current awareness strategies; organising and evaluating information.  
**Course:** AR62  
**Credit Points:** 18      **Contact Hours:** 7 per week

### ■ ARP503 ADVANCED INTERIOR DESIGN 2

The issues of environmental communications; the physiological, psychological and sociological aspects of workplace interiors.  
**Course:** AR62  
**Credit Points:** 18      **Contact Hours:** 6 per week

### ■ ARP506 BRIEF DEVELOPMENT

Explores the fundamentals of brief development and its implications for design efficiency and effectiveness; the nature of design; problem definition; brief development - a traditional view; brief development: an evolutionary view; participatory design; decision-making and the organisational structure; setting up the information network; information gathering and recording; developing a client structure; and design process and problem type.  
**Course:** AR62  
**Credit Points:** 8      **Contact Hours:** 2 per week

### ■ ARP507 PROFESSIONAL PRACTICE FOR INTERIOR DESIGNERS

The role and responsibilities of the interior designer in professional practice: job administration, liability, copyright, designer and client relationships; communication management and organisation of a project. The fundamentals of task scheduling; planning systems and control models; program evaluation and review techniques; critical path monitoring; organisational developments; recruitment staffing structures; concepts of marketing related to the profession.  
**Course:** AR62  
**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ ARP601 SETTING THE SCENE

Incorporates a series of case studies of significant film and theatre sets; students explore the influence of design on emotive behaviour and interpret the implication of this for interior design of a more conventional kind; use will be made of the current projects in the unit Environmental Communications.  
**Course:** AR62  
**Credit Points:** 10      **Contact Hours:** 3 per week

### ■ ARP604 CONSERVATION OF HISTORIC INTERIORS

The ethics and the role of the designer in the conservation of interiors. An introduction to building technologies as required by a practising designer working on conservation and restoration projects.  
**Course:** AR62  
**Credit Points:** 14      **Contact Hours:** 6 per week

### ■ ARP605 BUILDING EVALUATION

Strategies for evaluation of building interior physical characteristics and user responses to utilisation of such areas from technical, sociological and psychological perspectives; students assess existing sites to foster an appreciation of client and user requirements, compilation of strategies and reports, statistical analysis and application of data.  
**Course:** AR62  
**Credit Points:** 8      **Contact Hours:** 2 per week

**■ ARP613 ADVANCED ERGONOMICS 1**

Man-machine systems and their relations with living and working environments; the importance of ergonomics (human factors) criteria and their application to industrial design. The course consists of series of seminars relevant to case studies concerned. Typical case studies are concentrated on the ergonomic evaluation of consumer products.

Course: AR61

Credit Points: 2 Contact Hours: 1 per week

**■ ARP623 ADVANCED ERGONOMICS 2**

Systematic ergonomic evaluation methods and their application to design problems. Lectures and seminars relevant to case studies on the ergonomic evaluation of the working and living environment, eg. key-punch operator work station, bus driver work station and ergonomic evaluation of an assembly line.

Course: AR61

Prerequisite: ARP613

Credit Points: 4 Contact Hours: 2 per week

**■ ARP642 CASE STUDIES**

Case study evaluation by practising designers; study of different evaluation methods and techniques; the application of evaluation methods through individual case studies. All design factors of manufactured products are evaluated in depth.

Course: AR61

Credit Points: 4 Contact Hours: 2 per week

**■ ARP652 DESIGN MANAGEMENT & DECISION THEORY**

Meaning of the design process, control and the design process, complexity of design problems, types of contracts, design and business, project team, design responsibility, management, documentation, concept of evaluation and management action, application of design theory to design management.

Course: AR61

Credit Points: 2 Contact Hours: 1 per week

**■ ARP653 PROFESSIONAL PRACTICE**

The role and responsibilities of the industrial designer in professional practice; job administration, liability, design protection, designer and client relationships.

Course: AR61

Credit Points: 2 Contact Hours: 1 per week

**■ ARP671 HISTORY, THEORY & CRITICISM OF INDUSTRIAL DESIGN**

The development of industrial design and its relationship to ideas, technology and arts; the development of industrial design from eighteenth century to the present day; Australian inventions and their impact on product design in Australia.

Course: AR61

Credit Points: 2 Contact Hours: 1 per week

**■ ARP672 INDUSTRIAL DESIGN 1****■ ARP673 INDUSTRIAL DESIGN 2**

These units consist of studio work in which students design a range of products or systems. The emphasis is on projects generated from local industry and community. The complexity and depth of the design project increases according to the semester level.

Course: AR61

Prerequisite: ARP672

Credit Points: 16 Contact Hours: 6 per week

**■ ARP674 INDUSTRIAL DESIGN RESEARCH 1**

A topic is selected by a student and approved and supervised by industrial design staff. Examples are: microsurgical equipment design, bushfire safety

equipment, mobile dental clinic in isolated regions and interactive display in psychological testing.

Course: AR61

Prerequisite: ARP673

Credit Points: 20 Contact Hours: 8 per week

**■ ARP675 INDUSTRIAL DESIGN RESEARCH 2**

This course depends on the topic selected by a student in the previous semester. Students are responsible for the program as a part of their project work, which will be approved and supervised by industrial design staff.

Course: AR61

Prerequisites: ARP672, ARP674

Credit Points: 20 Contact Hours: 8 per week

**■ ARP676 ADVANCED COMPUTER-AIDED INDUSTRIAL DESIGN 1**

CAD in the design process. Two-dimensional and three-dimensional application of appropriate CAD programs. Development of a design project through the interactive use of CAD and related engineering programs as an aid to design analyses and finalisation.

Course: AR61

Credit Points: 4 Contact Hours: 2 per week

**■ ARP677 ADVANCED COMPUTER-AIDED INDUSTRIAL DESIGN 2**

CAD/CAM in the design, analysis and manufacturing process. Three-dimensional solid modelling, finite analyses, and CAM will be employed. A project will be taken from first concept through final documentation. The presentation, technical description, engineering analyses and finalisation to Computer Numerically Controlled (CNC) testing and prototype production of a small product.

Course: AR61

Credit Points: 4 Contact Hours: 2 per week

**■ ATN001 RESEARCH PROJECT – 1 UNIT**

Repeatable unit indicating the rate at which the Research Project within AT22 is being undertaken.

Course: AT22

Credit Points: 12

**■ ATN002 RESEARCH PROJECT – 2 UNITS**

See ATN001.

Course: AT22

Credit Points: 24

**■ ATN003 RESEARCH PROJECT – 3 UNITS**

See ATN001.

Course: AT22

Credit Points: 36

**■ ATN004 RESEARCH PROJECT – 4 UNITS**

See ATN001.

Course: AT22

Credit Points: 48

**■ AYB100 ACCOUNTING FOR MANAGERS**

Accounting in the business world; fundamental accounting recording systems, preparation of financial statements for servicing and merchandising firms, financial statements of partnership and limited companies; internal control of cash, inventories and non-current assets; analysis and interpretation of financial statements; introduction to managerial accounting, cost-volume-profit analysis, the nature of planning and control, and managerial decision making.

Courses: AA21, BS50, ED23, IF52, IF53, IS43, NS48

Incompatible with: AYB104

Credit Points: 12 Contact Hours: 3 per week

**■ AYB101 COMPUTERISED ACCOUNTING SYSTEMS**

Management information systems and accounting systems; database and files; systems development life

cycle; design of accounting systems including sales, accounts receivable, inventory, purchases, accounts payable, non-current assets, payroll and general ledger systems; accounting software such as ACCPAC, and spreadsheet software such as LOTUS 1-2-3; internal control in computer systems.

**Courses:** BS50, ED50, IF31 **Prerequisite:** ISB892

**Incompatible with:** FNB117

**Credit Points:** 12 **Contact Hours:** 4 per week

#### ■ **AYB102 ACCOUNTING DISCLOSURE & AUDITING**

This unit provides students with an extended study in company accounting and audit. Topics include: tax effect accounting; consolidations; liquidations; acquisition of assets; company disclosure; overview of auditing and audit reports; ethics, legal liability and audit objectives; overall audit plan and audit program involving: evidence and documentation, materiality and risk, internal controls and the procedures for the audit of various applications - sales, purchases, etc.

**Course:** ED50 **Prerequisite:** AYB111

**Credit Points:** 12 **Contact Hours:** 4 per week

#### ■ **AYB103 GOVERNMENT ACCOUNTING**

The structure of government economic and fiscal activities; elements of government accounting; the concept of public accountability; fiscal federalism and theory of budgeting fund accounting; public accounting of Commonwealth, State and Local Government levels; zero-based budgets and program budgets; budget strategies and financial decision making; project review; statutory corporations; quangos and committees; government financial reporting; external, internal and efficiency auditing; accounting for government business enterprises.

**Course:** BS50 **Prerequisite:** AYB110

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ **AYB105 PRINCIPLES OF ACCOUNTING**

Accounting in the business world; recording and classifying transactions; end of period adjustments; preparation of financial statements for service and merchandising firms; preparation of a worksheet to assist in preparing financial statements; internal control of cash; accounting for merchandising operations, accounts receivable and bad debts, inventories and non-current assets; the use of special journals; preparation of cash flow statements for sole trader; analysis and interpretation of financial statements; introduction to management accounting, cost-volume profit analysis, planning, budgeting, control and managerial decision-making.

**Course:** PU48 **Incompatible with:** AYB100

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ **AYB110 ACCOUNTING**

Financial statements; characteristics of financial information; recording and classifying transactions; end of period adjustments; financial statements for service and merchandising firms; accounting for cash, receivables, inventory and non-current assets.

**Courses:** BS50, ED50, IF31, NS48, PU48

**Incompatible with:** AYB100, AYB104

**Credit Points:** 12 **Contact Hours:** 4 per week

#### ■ **AYB111 FINANCIAL ACCOUNTING**

The procedures and principles relevant to both partnerships and companies for: formation, operations, reporting, dissolution, cash flow; statements and analysis and interpretation of financial statements; an introduction to the conceptual framework.

**Courses:** BS50, ED50, IF31, NS48

**Prerequisite:** AYB110

**Credit Points:** 12 **Contact Hours:** 4 per week

#### ■ **AYB112 COMPANY ACCOUNTING**

Accounting for company income tax (tax effect accounting); acquisition of assets; consolidated financial statements; equity accounting and disclosure in company financial statements.

**Courses:** BS50, ED50, IF31

**Prerequisite:** AYB111

**Credit Points:** 12 **Contact Hours:** 4 per week

#### ■ **AYB113 ACCOUNTING THEORY & APPLICATIONS**

The evaluation and development of accounting theory; regulatory framework and the theories of regulation; development of the conceptual framework; contracting cost framework; critique of historical cost and alternative theories; asset and liability definition and recognition; revenue and expense recognition and measurement.

**Courses:** BS50, IF31

**Prerequisite:** AYB112

**Credit Points:** 12 **Contact Hours:** 4 per week

#### ■ **AYB210 AUDITING**

The audit environment; legal liability of auditors; professional ethics; study and evaluation of audit planning and programming, evidence, internal control theory and review techniques; audit program applications; revenue, receivables, cash inventory; audit in EDP environment and evaluation of EDP controls; computer-assisted audit techniques, computer fraud, sampling techniques; the audit report.

**Courses:** BS50, ED50, IF31

**Prerequisite:** AYB112

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ **AYB212 COMPUTER SECURITY & AUDIT**

Impact of EDP on auditing, general EDP controls, EDP application controls, generalised audit software (GAS), computer-assisted audit techniques, special EDP environments, fraud and privacy.

**Course:** BS50

**Prerequisite:** AYB210

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ **AYB214 COMPANY ACCOUNTING FOR EDUCATORS**

Accounting procedures and records required on formation of a company; procedures for alteration of capital structure and for liquidations, amalgamations and consolidations of companies; professional and legal requirements of accounting reporting.

**Prerequisite:** Tertiary studies in accounting or relevant teaching experience.

**Course:** ED26

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ **AYB217 INTRODUCTORY ACCOUNTING**

The accounting equation and the double entry principle; recording business transactions; end of period adjustments; financial statements and closing entries; accounting for merchandising operations; specialised journals and subsidiary ledgers; cash controls; accounting for partnerships; accounting for companies; interpretation of financial statements.

**Courses:** LW31, LX31

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ **AYN101 ACCOUNTING PRINCIPLES**

The nature and function of accounting information and its underlying concepts. Topics include: the accounting equation; elements of financial statements; recording and classifying accounting transactions; preparation of financial statements; external report-



ing; analysis and interpretation of financial information; managerial accounting including simple decision models and the preparation of budgets.

**Courses:** BS78, BS81

**Incompatible with:** AYN112

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AYN102 ACCOUNTING RESEARCH

The research methodology used in accounting and related disciplines; the use of certain research techniques to assist students in their research dissertation and preparation of research papers; aims to develop a capacity to build a theoretical model, to design an appropriate research methodology and to understand and utilise statistical analysis for accounting research purposes. This unit is a prerequisite for BSN100 Dissertation and should be attempted immediately prior to enrolment in BSN100 Dissertation.

**Courses:** BS60, BS70, BS87

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AYN103 ADVANCED COMPANY ACCOUNTING

Consolidated financial statements; changes in degree of ownership; reverse subsidiaries and reciprocal shareholdings; consolidation and the existence of preference shares; translation and consolidation of foreign currency financial statements; consolidated cash flow statements; accounting for joint ventures, foreign currency transactions; segment reporting; trusts, superannuation funds and insurers.

**Courses:** BS70, BS87

**Incompatible with:** AYN300

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AYN104 AUDIT SAMPLING

Statistical sampling methods in the performance of audits. Discussion centres on relevant statistical concepts rather than on unique computational issues. Topics include: the audit sampling process; auditor decisions and risk; attribute, variable and probability proportional-to-size sampling.

**Courses:** BS70, BS87

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AYN106 AUDITING HONOURS

The nature of auditing research and review of current research in such areas as: the role of auditing; independence; reporting; liability; fraud detection; audit process; risk; materiality; internal control; analytical review; computer auditing; and auditing standards.

**Courses:** BS60, BS70, BS87

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AYN107 AUDITING STANDARDS & PRACTICE

An examination of relevant auditing standards and their implications for practice. Case studies develop an analytical approach and the ability to exercise professional judgement in audit problems. Recent journal articles, legal cases and newspaper reports are used in conjunction with the cases.

**Courses:** BS70, BS87

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AYN109 COMPUTER AUDITING

The impact of EDP on controls and auditing; general EDP controls; generalised audit software, static and concurrent computer-assisted audit techniques, special EDP environments and computer fraud.

**Courses:** BS70, BS87

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AYN111 EXTERNAL REPORTING ISSUES

Issues in external reporting; the extractive industries; long-term construction contracts; segments; foreign currency operations, translations and transactions; leasing; tax-effect accounting; goodwill and unidentifiable intangibles; intercorporate investments and joint ventures; liabilities and off-balance sheet financing; and funds/cash flow statements. Readings from research and professional literature to enhance students' understanding of professional problems.

**Courses:** BS70, BS87

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AYN112 FINANCIAL ACCOUNTING 1

An introduction to accounting; recording business transactions; adjusting the accounts and preparing financial statements; completion of the accounting cycle; accounting systems and specialised journals; cash and cash journals; accounting for receivables and payables; accounting for merchandising operations and inventories; non-current assets; partnerships; companies; accounting for non-current liabilities; investments; statement of cashflows; analysis and interpretation of financial statements.

**Course:** BS81

**Incompatible with:** AYB110, AYB111

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AYN113 FINANCIAL ACCOUNTING 2

Accounting function within a company; accounting for company income tax (tax-effect accounting); liquidation; acquisition of assets including companies; consolidated financial statements, equity accounting; disclosure in company financial statements.

**Course:** BS81

**Prerequisite:** AYN112

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AYN114 FINANCIAL ACCOUNTING 3

The evolution of accounting theory; the external financial reporting framework; theories of regulation and the conceptual framework; theory of the firm developed into the contracting cost framework; profits and application of the theory of profits - construction contracts and segment reporting; assets and the application of the theory of assets, intangible assets and the extractive industries; liabilities and the application of the theory of liabilities - debt defeasance, debt versus equity and leases; further applications of the theory of profits, assets and liabilities - intercorporate investments, joint ventures and foreign currency transactions and translation.

**Course:** BS81

**Prerequisite:** AYN113

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AYN115 FINANCIAL ACCOUNTING HONOURS

The nature, methodology and development of accounting theory; the transaction cost economic; positive accounting; accounting disclosure regulations; incentive problems and contracting explanations for external financial reporting; accounting policy choice and the value of the firm; accounting and the political process.

**Courses:** BS60, BS70, BS87

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ AYN117 FINANCIAL REPORTING

Conceptual framework; preparation and presentation of financial statements; accounting for income tax (tax-effect accounting), leases, construction contracts and the extractive industries; goodwill; acquisition and revaluation of assets; equity accounting.

**Courses:** BS70, BS87

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ AYN118 INTERNAL AUDITING

The techniques used by the internal or operational auditors; the need for efficiency or value-for-money auditing; performance auditing; the internal auditor in large organisations both public and private.

Courses: BS70, BS87

Credit Points: 12 Contact Hours: 3 per week

#### ■ AYN119 INTERNATIONAL ACCOUNTING

Issues related to international accounting and the international accounting standard setting process. Issues examined include: the harmonisation of accounting; the environmental influences on international accounting; accounting principles and procedures in selected countries; foreign currency translation and transactions; transfer pricing and management accounting issues; internal and external audits worldwide; impact of multi-national enterprises; analysis of foreign financial statements.

Courses: BS70, BS87

Credit Points: 12 Contact Hours: 3 per week

#### ■ AYN120 AUDITING (MBA)

The audit environment; legal liability of auditors; professional ethics; study and evaluation of audit planning and programming, evidence, internal control theory and review techniques; audit program applications; revenue, receivables, cash; inventory; audit in EDP environment and evaluation of EDP controls; computer-assisted audit techniques; computer fraud; sampling techniques; the audit report.

Course: BS81

Prerequisite: AYN113

Credit Points: 12 Contact Hours: 3 per week

#### ■ AYN300 ACCOUNTING 1 (PY)

See AYN103.

Courses: BS70, BS87

Prerequisite: AYN117

Incompatible with: AYN103

Credit Points: 12 Contact Hours: 3 per week

#### ■ AYN301 AUDITING (PY)

Examination at an advanced level of auditing standards and their practical application, judgemental and statistical audit sampling; EDP controls, and computer-assisted audit techniques, and audit reporting.

Courses: BS70, BS87

Prerequisite: FNN300

Credit Points: 12 Contact Hours: 3 per week

#### ■ AYN302 SPECIAL TOPIC – PUBLIC ACCOUNTING

A study of topical areas in the public accounting area.

Courses: BS70, BS87

Credit Points: 12 Contact Hours: 3 per week

#### ■ AYN303 ACCOUNTING INFORMATION SYSTEMS (PY)

Examination at an advanced level of accounting information systems (AIS). Topics include AIS strategic planning, feasibility analysis, systems development and implementation, networks and the electronic business.

Courses: BS70, BS87

Credit Points: 12 Contact Hours: 3 per week

#### ■ BNB001 LEARNING AT UNIVERSITY

The importance of goal setting and motivation, differences between High School and University study, the student/lecturer relationship, approach to learning questionnaire; study management, clarification of learning goals, benefits of planning to the control of learning; using lectures and pracs to your advantage, networking, concept mapping and flow charts; using textbooks and set notes to boost understanding; active

vs passive learning skills and the implications of both; professional writing – pracs, reports, assignments; critical thinking, problem-solving and first year construction management; concentration and memory; learning and stress management; exam preparation, strategies and techniques.

Courses: BN30, CE42, CN31, CN32, CN33, EE43, EE44, ME45, ME46, PS47

Credit Points: 2 Contact Hours: 1.5 per week

#### ■ BNB103 GENERAL ELECTIVE UNIT

Studies previously completed by students in areas of business or humanities may be acceptable as a Group A elective; applications to have such studies accepted as meeting the Group A elective requirements are considered on an individual basis.

Courses: EE44, ME45

Credit Points: 4 Contact Hours: 2 per week

#### ■ BNT100 INDUSTRIAL EMPLOYMENT 1

#### ■ BNT200 INDUSTRIAL EMPLOYMENT 2

#### ■ BNT300 INDUSTRIAL EMPLOYMENT 3

#### ■ BNT400 INDUSTRIAL EMPLOYMENT 4

#### ■ BNT500 INDUSTRIAL EMPLOYMENT 5

#### ■ BNT600 INDUSTRIAL EMPLOYMENT 6

#### ■ BNT700 INDUSTRIAL EMPLOYMENT 7

#### ■ BNT800 INDUSTRIAL EMPLOYMENT 8

Students should engage in at least 15 weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.

Courses: CE21, EE22, ME23

Contact Hours: 15 weeks each

Credit Points: 3 each

#### ■ BSB102 MANAGEMENT & ORGANISATION

An introduction to the theory, process and practice of management and organisations. Emphasis is placed on the importance of people in achieving organisational objectives and the need for participants in organisations to become more analytical and strategic in their approach to managing various organisations including those in both the public and private sector.

Courses: AA21, BS50, ED50, IF31, IF53, IS43, IT20, NS48, PU48, PU49

Credit Points: 12 Contact Hours: 3 per week

#### ■ BSB103 BUSINESS COMMUNICATIONS & APPLICATIONS

Nature and development of information systems. Transaction processing and computer applications in business. Management information systems, decision support systems, executive information systems and expert systems. Security issues. Theory and practice of written communication in a professional context.

Courses: IF33, IF53, IS28, IS43, IT20, IT32

Credit Points: 12 Contact Hours: 3 per week

#### ■ BSB400 RESEARCH METHODOLOGY

Equips students with a range of ideas and methods allowing them to analyse, evaluate and conduct research in discipline areas within the fields of study. Essential preparation for the thesis. Areas include: science and knowledge – paradigms; analysis and criticism; research design; data collection; data manipulation and interpretation; presentation.

Courses: BS62, BS83, BS85

Credit Points: 12 Contact Hours: 3 per week

**■ BSN100 DISSERTATION**

The dissertation should reflect the application of theoretical analysis or problem-solving in accounting, managerial accounting or finance, or accounting legal studies. Students are advised to seek a topic, and to approach the course coordinator early in their program. The dissertation topic proposal must be presented as a seminar to Faculty staff in the semester prior to enrolling in the dissertation.

**Course:** BS87

**Prerequisite:** AYN102

**Credit Points:** 24

**■ BSN102 SEMINAR IN COMMUNICATION RESEARCH**

Allows advanced students to undertake research in order to develop special expertise in a selected methodology, including specific methods and techniques, appropriate to each student's own research interests. It is designed for advanced study in the methods of interpretive or empirical research, quantitative or qualitative. Students may undertake one or more research projects under the direction of their supervisor. They progressively present their work in a seminar of advanced students for review. It can be used to advance a thesis or project.

**Course:** BS84

**Credit Points:** 12

**Contact Hours:** 3 per week

**■ BSN116 THESIS**

A thesis is a scholarly work providing an opportunity to combine an appropriate research methodology to examine a significant communication problem or issue. Main text will be in the vicinity of 30,000 words. Students will complete a literature review and thesis proposal before proceeding to the thesis proper.

**Course:** BS84

**Credit Points:** 48

**■ BSN141 APPLIED RESEARCH METHODS**

Applied Research Methods provides a detailed review of data collection and analysis techniques, relevant to research in accounting, finance and related disciplines. The subject will teach students how to develop applied research proposals. Students will develop a practical understanding of survey, interview, case study and associated research techniques. Students will be expected to undertake advanced information retrieval in order to gather extensive detailed information relating to a particular research topic. Research findings must be presented in both report form and through verbal presentation.

**Course:** BS87

**Credit Points:** 12

**Contact Hours:** 3 per week

**■ BSN142 RESEARCH PROJECT**

A major piece of applied research. The research project provides the opportunity to apply and reinforce the education and knowledge gained from the course to resolving a complex business problem in accounting, finance, and accounting legal studies or related discipline by research report, case study, or application of technology. The final project must demonstrate an ability to identify and research a complex business problem in accounting, finance and accounting legal studies or related discipline.

**Course:** BS87 **Prerequisite:** AYN102 or BSN141

**Credit Points:** 24

**Contact Hours:** 3 per week

**■ BSN143 IMPLEMENTING & SUSTAINING TOTAL QUALITY MANAGEMENT**

The management issues that need to be addressed in implementing a sustainable structure for TQM. These include the definition of an appropriate structure

based on organisational strengths and weaknesses, and the development of a strategy for implementation.

**Course:** BS86

**Credit Points:** 12

**Contact Hours:** 3 per week

**■ BSN144 THESIS**

This unit is a culmination of a research degree in that students apply theory and research material to explore in some depth an applied or theoretical topic in their chosen field. Students develop a research topic, collect information about that topic from primary and/or secondary sources, evaluate the evidence and arguments, and present the results of that critical assessment in an organised and logical form. The thesis will consist of a substantial written report. Honours theses of 48 credit points could be expected to contain about 20,000 words. The thesis will be assessed by two examiners, one of whom must be external to QUT. Students select a supervisor to assist them with the development and implementation of their research topic. They will negotiate a learning contract which will stipulate among other things the frequency and duration of meetings with the supervisor, and the timetable for submission of interim and final reports. Planning for the thesis should begin as early as possible, allowing lead-up units to be keyed to the thesis as appropriate.

**Courses:** BS62, BS80, BS83

**Prerequisites:** BSB400 and 2 of 3 major units

**Credit Points:** Students enrol in sequential 12 credit point thesis units commencing with BSN144 until they have completed the requisite number of thesis credit points. Progress is assessed at the end of each semester. Note that each thesis is assessed on one major report submitted at the completion of all necessary thesis units.

**■ BSN145 THESIS**

This unit is a culmination of a research degree in that students apply theory and research material to explore in some depth an applied or theoretical topic in their chosen field. Students develop a research topic, collect information about that topic from primary and/or secondary sources, evaluate the evidence and arguments, and present the results of that critical assessment in an organised and logical form. The thesis will consist of a substantial written report. Ordinarily this would involve a report of up to 60,000 words of examinable material for a 144 credit point thesis.

**Courses:** BS62, BS80, BS83 **Prerequisite:** BSN144

**Credit Points:** Students enrol in sequential 12 credit point thesis units commencing with BSN145/1 until they complete the requisite number of thesis credit points. Progress is assessed at the end of each semester. Note that theses are assessed on one major report submitted at the completion of all necessary thesis units.

**■ BSN149 PROJECT**

The project will provide students with practical experience in integrating the material studied in their course and applying it in an organisation. The projects will involve evaluation of an organisation's approach to quality and the extent and effectiveness of its deployment, together with a strategy for overcoming any weaknesses identified. The student will receive broad guidance from a supervisor, but will retain overall responsibility for development of the project. The project will involve presentation of at least two seminars reporting progress and a detailed report of approximately 12,000 words.

**Course:** BS86

**Credit Points:** 12

### ■ CEB506 CIVIL ENGINEERING PRACTICE 2

Lectures, tutorials, practical work and field trips covering current topics in a specified area of civil engineering at an advanced undergraduate level. Unit is offered irregularly. When offered the unit material will be advertised by the Head of School.

Course: CE42

Prerequisites: Students must be in the final year of their course.

Credit Points: 6

Contact Hours: 3 per week

### ■ CEB511 TRANSPORT ENGINEERING 2

Students focus on two aspects of transport engineering, rural road upgrading and small urban area transportation planning and road needs. Includes highway upgrading, deficiency analysis, traffic accident analysis, traffic flow simulation, staged development: overtaking lanes and rural intersection design; application of four-step transportation planning models, surveys, zone selection, network development, trip generation, distribution, assignment, model calibration, future year modelling, evaluation and selection of road needs, sensitivity analysis.

Course: CE42

Co-requisite: CEB512

Credit Points: 6

Contact Hours: 3 per week

### ■ CEB512 TRANSPORT ENGINEERING 1

Land use/transport interaction, trip generation, trip distribution, mode choice, transport operations analysis, transport economics, transport capacity, urban road planning principles, urban transit planning, railway, aviation and bulk commodity systems design. Advanced pavement design techniques.

Course: CE42

Prerequisite: CEB313

Credit Points: 6

Contact Hours: 3 per week

### ■ CEB520 FINITE ELEMENT METHODS

Finite element, finite difference and similar numerical techniques. Theoretical and modelling considerations are covered in the context of case studies in structures, soil mechanics and hydraulics.

Course: CE42

Prerequisite: CEB220

Credit Points: 6

Contact Hours: 3 per week

### ■ CEB531 MASONRY DESIGN

Working stress design. Assumptions, derivation of design formulae for beams, walls and columns with clay and concrete masonry. Masonry materials. Physical properties of masonry materials.

Course: CE42

Prerequisites: CEB306, CEB355

Co-requisite: CEB291

Credit Points: 6

Contact Hours: 3 per week

### ■ CEB541 GEOTECHNICAL ENGINEERING 2

Analysis, design and installation of sheetpile walls and excavation support. Protection of adjacent structures. Analysis, design and installation of pile and pier foundations. Shallow foundations on rock. Rock sockets. Foundations on expansive soils. Site characteristics by in situ testing methods. Selection of soil properties for design.

Course: CE42

Prerequisite: CEB341

Credit Points: 6

Contact Hours: 3 per week

### ■ CEB542 GEOTECHNICAL ENGINEERING 3

Development of marginal lands: trafficability; embankments on soft soil; preloading; vertical drainage; vibroflotation; dynamic compaction and methods of deep foundation improvement. Rock excavation and slope stabilisation. Soil improvement, including mechanical and chemical stabilisation, soil reinforcement and other techniques. Anchoring in soil and rock. Earth and rockfill design and construction.

Course: CE42

Credit Points: 6

Prerequisite: CEB341

Contact Hours: 3 per week

### ■ CEB543 ENVIRONMENTAL GEOHYDROLOGY

An introduction into the investigation and analysis of groundwater flow through porous media, including numerical modelling and contaminant transport.

Course: CE42

Prerequisite: CEB341

Credit Points: 6

Contact Hours: 3 per week

### ■ CEB551 ADVANCED STRUCTURAL DESIGN

Emphasis on the design of more complex structures. Normally three projects are studied involving some or all of: design in new materials, new analytical techniques, new codes of practice, novel structures.

Course: CE42

Co-requisite: CEB405

Prerequisites: CEB201, CEB306, CEB354

Credit Points: 6

Contact Hours: 3 per week

### ■ CEB559 PRINCIPLES OF STRUCTURES 3

Structural properties of mild steel and high tensile steel. Structural framing and connections. Structural systems in steel: beams and columns, portal frames, space frames, trusses, tensile structures.

Courses: AR41, AR48, BN30

Prerequisite: CEB459

Credit Points: 3

Contact Hours: 2 per week

### ■ CEB560 HYDRAULIC ENGINEERING 3

Lectures, tutorial, practical work and site visits examine selected topics in water engineering. Topics chosen from hydrology, mobile bed hydraulics, river hydraulics, hydraulic structures, urban drainage, physical and mathematical modelling.

Course: CE42

Prerequisites: CEB361, CEB460

Credit Points: 6

Contact Hours: 3 per week

### ■ CEB561 COASTAL ENGINEERING

Coastal engineering: wave theory, recording and analysis, wave generation; coastal processes, tides, surges, etc. currents, sediment movement, foreshore protection; coastal inlets, canal systems; planning and design of coastal structures; hydraulic models.

Course: CE42

Prerequisite: CEB360

Co-requisite: CEB460

Credit Points: 6

Contact Hours: 3 per week

### ■ CEB564 ENGINEERING SCIENCE 4

Road pavement and building footing appraisal methods; earthworks and reclamation design/testing procedures; local authority/DPI design guidelines for water supply and sewerage reticulation, all fittings and testing; roads - earthworks, pavements, surfacing, etc.; stormwater - trenching, bedding and backfilling; water/sewer - trenching, bedding, testing and backfilling; other services - conduits, specifications and estimating procedures; preparation of selected engineering design plans - roadworks, stormwater and other services; other engineered services for land developments projects; material selected to suit the student group; costing of engineering services; use of planning figures and unit costs; design office exercises in reading data from plans estimating costs, and preparing original designs and modifications to roads, water supply, sewerage and other engineered services.

Course: PS47

Co-requisite: CEB464

Prerequisites: CEB364, MED221

Credit Points: 6

Contact Hours: 3 per week

### ■ CEB570 PUBLIC HEALTH ENGINEERING 3

Basic solid waste management (domestic, commercial and industrial wastes); the general principles of

industrial liquid waste management, with examples of some important industries.

**Course:** CE42

**Co-requisite:** CEB470

**Credit Points:** 6

**Contact Hours:** 3 per week

#### ■ CEB575 ENVIRONMENTAL IMPACT ASSESSMENT

Introduction to the techniques of environmental management. Environmental impact assessment and the evaluation of critical environmental problems.

**Course:** CE42

**Prerequisites:** CHB346, CEB370, CEB491

**Credit Points:** 6

**Contact Hours:** 3 per week

#### ■ CEB659 PRINCIPLES OF STRUCTURES 4

Structural behaviour of reinforced concrete. Basic theory of reinforced concrete beams and columns. Structural elements systems in reinforced concrete: post-and-beam, one-and two-way slab, waffle slab, flat slab. Columns. Frames. Framing, walling and roofing in reinforced concrete.

**Courses:** AR41, AR48, BN30

**Prerequisite:** CEB559

**Credit Points:** 4

**Contact Hours:** 2 per week

#### ■ CEB701 CIVIL ENGINEERING QUANTITIES 1

The measurement of civil engineering works based on the study of SMM of Civil Engineering Quantities. Detailed study of construction methods, plant, specification and measurement of: earthworks (clearing, compaction and dredging); roadworks (survey, bulk excavation and filling, pavement construction, kerbing, culverts); and bridges (abutments, superstructure, approach embankments, safety structures, types of bridge structures, foundations, prestressed concrete). It includes a brief introduction to computer applications such as earthwork calculations etc.

**Courses:** CN31, CN33

**Prerequisite:** CNB341

**Credit Points:** 4

**Contact Hours:** 2 per week

#### ■ CEB901 CIVIL ENGINEERING QUANTITIES 2

Further study of SMM for industrial engineering construction leading to the measurement of dams, earthworks, storage volumes etc; refinery and processing plant, pipework, vessels, tanks, instrumentation, electrical commissioning, scaffold, shut down maintenance; pipelines, environmental assessment, construction, stations; mining, plant and equipment, conveyors, processing plant etc; oil and gas, off shore platforms, fabrications etc; cost engineering and cost control on engineering projects.

**Course:** CN33

**Prerequisite:** CEB701

**Credit Points:** 4

**Contact Hours:** 2 per week

#### ■ CEP107 CONSTRUCTION MANAGEMENT & ECONOMICS

The management of operational features of engineering practice. Topics include engineering economics, contracts, plant and labour considerations of concern to the engineer and manager.

**Courses:** CE63, CE74

**Credit Points:** 8

**Contact Hours:** 2 per week

#### ■ CEP109 MUNICIPAL LAW & REGULATIONS

The legislative framework for municipal engineering in Queensland. The various acts and regulations affecting the practising municipal engineer including powers and responsibilities are covered.

**Courses:** CE63, CE74

**Credit Points:** 8

**Contact Hours:** 2 per week

#### ■ CEP127 ROAD & TRAFFIC ENGINEERING

Urban traffic management, parking systems, surveys, intersection analysis; the design and evaluation of the urban road network; design of rural roads and pavement structures; pavement management.

**Courses:** CE63, CE74

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ CEP128 MUNICIPAL ENGINEERING PLANNING

The principles of town and regional planning for municipal engineers in Queensland. The objectives and methodology of planning, practical problem solving, legislation and other factors of concern to the municipal and development engineer.

**Courses:** CE63, CE74

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ CEP131 ENGINEERING MANAGEMENT & ADMINISTRATION

Management principles and functions. Strategic and tactical planning, forecasting, decision-making. Budgeting and controls in organisations, techniques of project control. Human resources, managing change and development. Formulation of policy within a local authority. Local authority internal organisation, management, powers, responsibilities and functions, accounting and budgetary cycles, sources of finance and expenditure patterns.

**Courses:** CE63, CE74

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ CEP172 WATER QUALITY ENGINEERING

Liquid wastes and their effect on receiving waters. Dispersion and decay of pollutants in the water environment. Water quality standards and objectives.

**Courses:** CE63, CE74

**Credit Points:** 8

**Contact Hours:** 2 per week

#### ■ CEP174 PUBLIC HEALTH ENGINEERING PRACTICE

Water supply network analysis, water sources, reservoirs, pumps, water hammer, sewerage systems, pump stations, corrosion, water quality, water and wastewater treatment

**Courses:** CE63, CE74

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ CEP200 PROCESS MODELLING

Role of models in engineering design and investigation. Principles of modelling techniques and their uses, limitations and relevant applications.

**Courses:** CE63, CE74

**Credit Points:** 8

**Contact Hours:** 2 per week

#### ■ CEP215 ADVANCED TRAFFIC ENGINEERING

Traffic flow theory and traffic management. Analytical and computer analysis routines for urban intersection design, their background and applications.

**Courses:** CE63, CE74

**Credit Points:** 12

**Contact Hours:** 2 per week

#### ■ CEP218 TRANSPORTATION ENGINEERING

Techniques for the appraisal of rural and urban area road systems, bus operations, airport design, construction and maintenance.

**Courses:** CE63, CE74

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ CEP276 ADVANCED TREATMENT PROCESSES

The design and operation of water and wastewater treatment plants, including conventional and alternative processes. Current practice and development.

**Courses:** CE63, CE74 **Prerequisite:** CEP174  
**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ CEP277 WASTE MANAGEMENT

Characteristics and analysis of solid wastes. Collection, storage, transportation, handling, recycling and disposal. Sources and characteristics of industrial liquid wastes. Treatment design methodology. Pilot scale modelling and investigation. Case studies of selected classes of industrial wastes.

**Courses:** CE63, CE74 **Co-requisite:** CEP174  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ CEP290 ENVIRONMENTAL LAW & ASSESSMENT

Introduction to environmental law. Commonwealth and State legislation. Development controls. Trends in environmental control. The framework for environmental assessment. Description of the environmental setting. Impact assessment and analysis.

**Courses:** CE63, CE74  
**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ CEP310 URBAN TRANSPORTATION PLANNING

Transportation planning applications; road needs, urban transport, local area planning. Macro land use/transportation and micro urban transportation models; urban transportation zone selection and data needs; trip generation; model splits; surveying.

**Courses:** CE63, CE74  
**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ CEP361 DRAINAGE ENGINEERING

Drainage engineering for municipal engineers, road and railway designers, irrigation and general civil engineers. Rainfall and runoff models, both rational and computer models; drainage hydraulics of roof, streets, pipes, open channels, retention basins, culverts and bridges; erosion, sedimentation aspects of drainage, costs, planning policies and the law.

**Courses:** CE63, CE74  
**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ CEP491 MUNICIPAL ENGINEERING PRACTICE

A prescribed program of individual supervised study in a selected area within the field of municipal engineering, involving one or more major assignments together with appropriate tutorials.

**Course:** CE63  
**Credit Points:** 16 **Contact Hours:** 4 per week

### ■ CEP998 PROJECT B

The student is required to investigate in depth a shorter approved topic than that required in CEP999. The results will be presented in a major formal report.

**Course:** CE74  
**Credit Points:** 20 **Contact Hours:** 5 per week

### ■ CEP999 PROJECT A

The student is required to investigate in depth a substantial approved topic within the range of civil engineering practice and to carry out design, computing, model or experimental design and construction, experimental work and testing. The results will be presented in a major formal report.

**Course:** CE74  
**Credit Points:** 36 **Contact Hours:** 9 per week

### ■ CET120 CIVIL SYSTEMS 1

Introduction to hardware and operating systems of personal computers. Wordprocessors, spreadsheets and databases used for civil engineering applications. Introduction to high level languages using FORTRAN or PASCAL as an example.

**Course:** CE21  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ CET135 ENGINEERING MECHANICS

Equilibrium of forces and moments, reactions, free body diagrams, truss analysis, shear force and bending moment diagrams.

**Course:** CE21  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ CET180 CIVIL DRAFTING PRACTICE A

Short, practical exercises in drafting. Lettering, linework, layout, orthographic presentation.

**Course:** CE21 **Co-requisite:** MET120  
**Credit Points:** 3 **Contact Hours:** 2 per week

### ■ CET190 CIVIL ENGINEERING MATERIALS

Properties of common ferrous and nonferrous metals and alloys, timber, plastics, bitumen and asphaltic concrete relating to their use by civil engineers. Study of welding processes and defects, corrosion mechanisms and prevention for metals. Quality control and selection of engineering materials.

**Course:** CE21  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ CET195 CIVIL ENGINEERING

Civil engineering: the profession, organisation and work options. Measurement in civil engineering, maintenance of standards, role of NML and NATA. Technical writing, reports, letters, etc. Mathematical techniques applicable to relevant examples.

**Course:** CE21  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ CET235 LABORATORY PRACTICE A

The type and role of laboratories in civil engineering. NATA registration and calibration requirements. Quality control and assurance, basic statistics. Basic measuring equipment and techniques; associated calculations. Presentation of data in reports. Laboratory work in materials and hydraulic engineering to demonstrate measuring techniques.

**Course:** CE21 **Co-requisites:** CET365, CET435  
**Credit Points:** 3 **Contact Hours:** 2 per week

### ■ CET255 STRUCTURAL MECHANICS

Deflections, stress, direct flexure, and shear in beams and shafts. Combined stress conditions.

**Course:** CE21 **Prerequisite:** CET135  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ CET286 CIVIL OFFICE PRACTICE

Preparation and layout of civil engineering drawings; design office procedures including methods of data manipulation, presentation and checking. Drafting office organisation and management.

**Course:** CE21 **Prerequisite:** MET120  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ CET287 CIVIL OFFICE PRACTICE A

Applied civil engineering design drafting/drawing. Use of field data in preparation of plans.

**Course:** CE21  
**Prerequisite:** MET120 **Co-requisite:** CET286  
**Credit Points:** 3 **Contact Hours:** 2 per week

**■ CET306 FIELD PRACTICE 1A**

Setting out, as-built surveys and drawings, photography and field sketching; field measurement and sampling in water, soils and materials; implications of field measurements on design and construction.

Course: CE21

Co-requisite: CET775

Prerequisites: CET365, PST901

Credit Points: 3

Contact Hours: 2 per week

**■ CET365 HYDRAULIC ENGINEERING**

Fluids, simple hydrostatics, fundamental characteristics and equations of fluid flow, pipe and open channel flow, hydraulic measurements. Laboratory work on fluid behaviour and instrumentation.

Course: CE21

Prerequisite: CET135

Credit Points: 7

Contact Hours: 3 per week

**■ CET387 CIVIL ENGINEERING DRAFTING A**

Municipal engineering design drawings for roadworks. Stormwater drainage designs and drawings.

Course: CE21

Prerequisite: CET286

Co-requisite: CET585

Credit Points: 3

Contact Hours: 2 per week

**■ CET405 FIELD PRACTICE 2A**

Field visits and laboratory workshops on many aspects of civil engineering construction.

Course: CE21

Credit Points: 3

Contact Hours: 2 per week

**■ CET420 CIVIL SYSTEMS 2**

Computer file management, error recovery, networking, software installations and data acquisition, civil engineering software applications.

Course: CE21

Prerequisite: CET120

Credit Points: 7

Contact Hours: 3 per week

**■ CET435 CONCRETE PRACTICE**

Raw materials, cements, aggregates, additives and admixtures. Plastic and hardened concrete. Testing and quality control. Mix design, concrete manufacturing and transportation, construction procedures.

Course: CE21

Credit Points: 7

Contact Hours: 3 per week

**■ CET495 PROJECT A**

Undertake a substantial project in the student's chosen field. Involves the investigation of the topic, performance of the tests, design calculations, drawings and submission of a comprehensive report.

Course: CE21

Prerequisites: Student must be in final year.

Credit Points: 3

Contact Hours: 2 per week

**■ CET565 ROAD & DRAINAGE ENGINEERING**

Road construction and maintenance, pavement types, surfacing, maintenance, design and construction. Road drainage principles, design and construction of urban and rural culverts, urban stormwater drainage.

Course: CE21

Prerequisites: CET365, CET645, CET815

Credit Points: 7

Contact Hours: 3 per week

**■ CET585 CIVIL ENGINEERING DRAFTING**

Preparation of municipal engineering drawings including roadworks and stormwater drainage. State and local authority standards. Projects involve varying amounts of design computations and computer usage. Quantity take-off, bills of quantities, cost estimates and cross referencing between drawings, bills of quantities and specifications.

Course: CE21

Prerequisite: CET286

Co-requisite: CET565

Credit Points: 7

Contact Hours: 3 per week

**■ CET598 PROJECT 2**

An individually designed program including designs, reports and investigations of sanitary engineering.

Course: CE21

Prerequisites: 72 credit points.

Credit Points: 21

Contact Hours: 9 per week

**■ CET606 CONSTRUCTION MANAGEMENT**

Construction planning, organisational structure, construction reporting, contract management, human relations, civil engineering plant hire.

Course: CE21

Credit Points: 7

Contact Hours: 3 per week

**■ CET645 SOIL MECHANICS**

Identification and classification of soils; testing methods. Compaction of soil, soil permeability, effective and total stress, shear strength and compressibility. Introduction to retaining walls, bearing capacity, CBR testing, in situ sampling and testing.

Course: CE21

Prerequisite: CET894

Credit Points: 7

Contact Hours: 3 per week

**■ CET655 CONCRETE & STEEL DESIGN**

Principles of structural design. Design in structural steel, detailing of elements and connections. Design of concrete members, detailing of elements.

Course: CE21

Prerequisites: CET135, CET255, CET435

Credit Points: 7

Contact Hours: 3 per week

**■ CET703 CIVIL ENGINEERING PRACTICE 1**

Current topics in a specified area of civil engineering practice at a level appropriate to the course and as approved by the Head of School. The content of this unit may be changed from semester to semester depending on demand and available staff.

Course: CE21

Prerequisites: Units totalling 72 credit points.

Credit Points: 7

Contact Hours: 3 per week

**■ CET704 CIVIL CONSTRUCTION PRACTICE**

Principles of temporary works design; formwork, false work, scaffolding, shoring, de-watering, excavation and earthworks, civil engineering plant; the Construction Safety Act and Regulations.

Course: CE21

Credit Points: 7

Contact Hours: 3 per week

**■ CET707 MUNICIPAL ENGINEERING**

Structures and function of local authorities, legislation, municipal road and street construction, design offices, traffic management, parking, town planning and subdivision, solid waste management, building practice, other municipal engineering aspects, field trip to local authority facilities.

Course: CE21

Prerequisite: CET815

Co-requisites: CET565, CET775

Credit Points: 7

Contact Hours: 3 per week

**■ CET708 SPECIFICATIONS & ESTIMATES**

General conditions of contract, arbitration, annexures, specifications, special provisions. Types of estimates. Mechanics of estimating, computer applications.

Course: CE21

Credit Points: 7

Contact Hours: 3 per week

**■ CET735 ADVANCED LABORATORY TESTING 1**

Testing work to give experience with a range of equipment and testing procedures. Includes field and laboratory testing in a number of selected areas.

Course: CE21

Credit Points: 7

Contact Hours: 3 per week

**■ CET756 BUILDING CONSTRUCTION PRACTICE**

Practical aspects associated with reinforced, prestressed concrete (in situ and precast). Steel construction, aspects of fabrication and erection. Clay brick and concrete masonry construction including cladding. Overview of building regulations.

Course: CE21

Prerequisite: CET190

Credit Points: 7 Contact Hours: 3 per week

**■ CET775 PUBLIC HEALTH ENGINEERING**

Water supply and sewerage systems, water sources, demand, water and wastewater treatment, water quality, treatment plants, swimming pools, laboratory analysis and field visits to treatment plants.

Course: CE21

Prerequisite: CET365

Credit Points: 7 Contact Hours: 3 per week

**■ CET776 EQUIPMENT OPERATION & MAINTENANCE**

Principles and practice of the operation and maintenance of equipment in water and wastewater treatment plants. Overview of plant; motors, engines, pumps, compressors and generators; rotary and recilinear scraping and raking mechanisms; chemical handling, mixing, dosing; safety and maintenance scheduling for specific equipment items.

Course: CE21

Prerequisites: CET365, CHA140

Credit Points: 7 Contact Hours: 3 per week

**■ CET777 PROCESS OPERATION & CONTROL 1**

Principles and processes of water and wastewater treatment, with reference to their operation. The methods of operational control of these processes.

Course: CE21

Prerequisites: CET365, CET775, CHA140

Credit Points: 7 Contact Hours: 3 per week

**■ CET787 STRUCTURAL ENGINEERING DRAWING**

Structural engineering drawings covering basic steel work and reinforced concrete works. Reinforcing schedules together with details of steel connections.

Course: CE21

Prerequisites: CET286, CET585, CET655, MET120

Credit Points: 7 Contact Hours: 3 per week

**■ CET797 PROJECT 1**

Students undertake a substantial project in their chosen field. Involves the investigation of the topic, performance of tests, design calculations, drawings, etc. and submission of comprehensive report.

Course: CE21

Prerequisites: 72 credit points.

Credit Points: 7 Contact Hours: 3 per week

**■ CET802 CIVIL ENGINEERING PRACTICE 2**

See CET703.

Course: CE21

Prerequisites: 72 credit points.

Credit Points: 7 Contact Hours: 3 per week

**■ CET815 ROAD LOCATION & DESIGN**

Road location principles, road design and geometry including computer applications; subdivision and subdivision street design; introduction to traffic engineering; intersection design.

Course: CE21

Credit Points: 7 Contact Hours: 3 per week

**■ CET838 ADVANCED LABORATORY TESTING 2**

Testing projects undertaken in specialist areas and presented as major reports.

Course: CE21

Credit Points: 7 Contact Hours: 3 per week

**■ CET856 ADVANCED CONSTRUCTION TECHNIQUES**

History of construction; planning and programming including critical path analysis and resource levelling; contracts; crane selection and safety; case studies; detailed and 'fast' estimating techniques.

Course: CE21

Prerequisite: CET606

Credit Points: 7 Contact Hours: 3 per week

**■ CET876 PLANT OPERATION & MAINTENANCE**

Operation and maintenance of water quality treatment plants; scheduling, labour control, workshop organisation, safety, training, performance monitoring.

Course: CE21

Prerequisite: CET606

Co-requisite: CET776

Credit Points: 7 Contact Hours: 3 per week

**■ CET877 PROCESS OPERATION & CONTROL 2**

Unit processes of water and wastewater treatment with particular reference to their operation. The methods of operational control of these processes.

Course: CE21

Prerequisite: CET777

Credit Points: 7 Contact Hours: 3 per week

**■ CET887 COMPUTER AIDED DRAFTING**

Using mainframe and personal computers for civil and structural drawing presentations. Output from computer design programs as examples. Software usage and limitations, plan compilation and output.

Course: CE21

Prerequisite: CET286

Credit Points: 7 Contact Hours: 3 per week

**■ CET888 STRUCTURAL DRAWING & DESIGN**

Minor structural design and layout will be undertaken. Preparation of advanced structural engineering drawings covering steel, reinforced and prestressed concrete and timber where geometric and physical restraints interact with the structural design process.

Course: CE21

Prerequisites: CET286, MET120

Co-requisites: CET585, CET655, CET787

Credit Points: 7 Contact Hours: 3 per week

**■ CET894 COMPUTATIONS A**

Calculations involving aspects of civil and structural engineering. Computer aided design. Use of planimeters. Technical reports.

Course: CE21

Co-requisite: PST901

Credit Points: 3 Contact Hours: 2 per week

**■ CHA111 LABORATORY TECHNIQUES**

Introduces safe and proficient procedures in the laboratory, and gives practice in the manipulation of common elementary laboratory apparatus, equipment and reagents; on completion the student should be able to handle, correctly and safely, all the basic pieces of laboratory equipment and be familiar with their main functions and limitations.

Course: SC10

Credit Points: 8 Contact Hours: 3 per week

**■ CHA145 INTRODUCTORY CHEMISTRY**

An integrated course of fundamental chemistry covering: the nature of chemistry, atomic molecular and nuclear structure, bonding and types of bonds; the structure and nature of matter, molecular formulae,



atomic and molecular weights; the periodic classification; reduction/oxidation, chemical equilibria; liquids and solutions and simple phase equilibria; equilibria in electrolyte solutions; pH and its measurement. Carbon chemistry and functional groups. The chemistry and properties of some common laboratory chemicals. Practical applications are emphasised.

**Courses:** CE21, EE21, SC10

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ CHA218 ANALYTICAL CHEMISTRY 1

A lecture and laboratory program on the theory and techniques of titrimetric and gravimetric analysis.

**Course:** SC10

**Prerequisite:** CHA111

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ CHA219 QUALITATIVE ANALYSIS

The behaviour of a range of common cations and anions towards common laboratory reagents. These reactions form the basis of procedures for the separation and identification of these cations and anions. Qualitative testing for elements in organic molecules together with test procedures for qualitative identification of functional groups in organic molecules.

**Course:** SC10

**Prerequisite:** CHA111

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ CHA230 CHEMISTRY OF INORGANIC MATERIALS

An extension of the basic atomic and molecular theory introduced in CHA145 to include atomic orbitals, orbital shapes and quantum numbers; radioactive breakdown and applications; banding, molecular orbitals; hybridisation, shapes of simple molecules relating to their properties; simple coordination chemistry. The occurrence, extraction/manufacture, properties and uses of the elements and the important inorganic compounds derived from a selection of members of the chemical groups.

**Course:** SC10

**Prerequisite:** CHA145

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CHA240 INSTRUMENTAL TECHNIQUES

An overview of the principles and practice of modern instrumental analysis, including the nature of electromagnetic radiation and its interaction with matter; use of visible, UV and IR spectroscopy; emission and absorption phenomena; chromatographic techniques and electroanalytical methods.

**Course:** SC10

**Prerequisite:** CHA111

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ CHA250 ORGANIC CHEMISTRY 1

An introduction to functional group chemistry including hydrocarbons, aromatic compounds, organic halides, alcohols, phenols and ethers and also an introduction to the use of infrared spectroscopy to indicate the presence of particular functional groups.

**Course:** SC10

**Prerequisite:** CHA145

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ CHA270 PHYSICAL CHEMISTRY 1

The first part of an integrated syllabus of physical chemistry in the Associate Diploma; the fundamental aspects of chemical energetics, solution chemistry, equilibria; practical applications.

**Course:** SC10

**Prerequisite:** CHA145

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ CHA318 INSTRUMENTAL ANALYTICAL CHEMISTRY

A course of lectures and practical work introducing the principles and practices of mass spectrometry,

fluorescence spectroscopy and ICP together with further development of selected topics from CHA240.

**Course:** SC10 **Prerequisites:** CHA218, CHA240

**Co-requisite:** CHA319

**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ CHA319 ANALYTICAL CHEMISTRY 2

Lectures and practical work are designed to develop further the basic titrimetric and gravimetric analysis principles introduced in CHA218. The program will feature the analysis of commercial materials with emphasis on sample dissolution techniques.

**Course:** SC10

**Prerequisite:** CHA218

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ CHA320 CHEMICAL PROCESS PRINCIPLES 1

Chemical reactors both homogeneous and heterogeneous, unit operations: transport preparation and separation of materials and material and energy balances in chemical processes.

**Course:** SC10

**Prerequisite:** CHA270

**Co-requisite:** CHA370

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ CHA350 ORGANIC CHEMISTRY 2

Continues the study of functional groups and includes carbonyl compounds, carboxylic acids and their derivatives, organic nitrogen compounds, including heterocycles, as well as selected polyfunctional compounds such as triglycerides, amino acids and proteins. Further uses of infrared spectroscopy.

**Course:** SC10

**Prerequisite:** CHA250

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ CHA368 INDUSTRIAL CHEMISTRY

The basic aspects of product and quality control, the underlying fundamental chemistry and the chemical technology involved in, for example, the petroleum and petrochemical industry, the polymer, plastic and adhesive industries, the paint industry, the textile industry, the sugar industry, water treatment plants, the glass and ceramics industry, and the cement industry. Field trips are an integral part of this unit.

**Course:** SC10

**Prerequisites:** CHA230, CHA250, CHA320

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ CHA370 PHYSICAL CHEMISTRY 2

The second part of the integrated syllabus of physical chemistry of the Associate Diploma: chemical kinetics, surface chemistry and elementary electrochemistry.

**Course:** SC10

**Prerequisite:** CHA270

**Credit Points:** 6 **Contact Hours:** 2 per week

### ■ CHA410 COMPUTERS IN CHEMISTRY

The use of computers in various aspects of the chemical industry, both in laboratory and plant. The different approaches to laboratory automation and a detailed study of computer control in a selected industry. Field trips also are included.

**Course:** SC10

**Prerequisite:** CSA259

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ CHA442 INTRODUCTION TO OCCUPATIONAL SAFETY

Basic first aid relevant to laboratory, plant and field situations; principles and practice of safe handling of common laboratory chemicals; safety aspects of laboratory design.

**Course:** SC10

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ **CHA520 CHEMICAL PROCESS PRINCIPLES 2**

A lecture and laboratory course which deals with measurement systems, the principles of process control and applications in the chemical industry.

**Course:** SC10 **Prerequisite:** CHA320  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ **CHA550 ORGANIC CHEMISTRY 3**

The chemistry and uses of organic compounds encountered in industry, such as agricultural chemicals, fats and oils, waxes, detergents, dyes, drugs, elastomers, fibres, adhesives and cellulose derivatives.

**Course:** SC10 **Prerequisite:** CHA350  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ **CHA580 FOOD CHEMISTRY 1**

The basic chemical components of food, fats and oils, proteins, carbohydrates, vitamins and minerals; factors affecting quality such as texture, flavour and colour. Measurements of food quality. A major assignment related to the dairy industry is incorporated.

**Course:** SC10 **Co-requisite:** CHA350  
**Prerequisites:** CHA218, CHA240, CHA250  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ **CHA610 INDUSTRIAL ANALYSIS**

A course involving the use of both qualitative (semi-micro) and quantitative techniques in the analysis of commercially important materials, including ores, cement, fertiliser, fats, oils and sugar products.

**Course:** SC10 **Prerequisites:** CHA318, CHA319  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ **CHA644 PROCESS MEASUREMENT & MONITORING 1**

A study of the physical and chemical measurements involved in the analysis of raw and potable waters; and the determination of organic and microbiological pollution. Emphasis is placed on sampling and sample preservation laboratory techniques, interpretation of results and the significance of the measured parameters in the operation and control of water and wastewater treatment plants.

**Course:** CE21 **Prerequisites:** CET365, CET775  
**Co-requisite:** CHA140  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ **CHA670 PHYSICAL CHEMISTRY 3**

The third part of the integrated syllabus of physical chemistry of the Associate Diploma; covers the areas of applied electrochemistry, corrosion, distillation and extraction. Practical applications are emphasised.

**Course:** SC10 **Prerequisite:** CHA370  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ **CHA680 FOOD CHEMISTRY 2**

Advanced chemistry and methods of food processing and preparation. A further major assignment appropriate to the dairy industry is incorporated.

**Course:** SC10 **Prerequisite:** CHA580  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ **CHA744 PROCESS MEASUREMENT & MONITORING 2**

The physical and chemical measurements involved in the determination of inorganic and other pollutants; the analysis of sewage and other sludges; and the testing of sewage effluents together with an introduction to specialised analytical techniques including atomic absorption spectrophotometry, chromatography and polarography. Emphasis on sampling and sample preservation laboratory techniques, interpretation of results and the significance of the

measured parameters in the operation and control of water and wastewater treatment plants.

**Course:** CE21 **Prerequisite:** CHA644  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ **CHA844 TRADE WASTE CONTROL**

A study of industrial wastes with respect to typical waste characteristics, effects on natural waters, sewers and treatment plants, methods of inhouse treatment and their achievable effluent levels, monitoring techniques, legislation and charging procedures.

**Course:** CE21 **Prerequisites:** CET777, CHA744  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ **CHB001 INTRODUCTORY CHEMISTRY**

For students without a pass in Senior Chemistry. Scientific measurement, atomic structure, periodic table, chemical equations, stoichiometry and calculations, chemical bonding, chemical reactivity, acids and bases, redox systems, matter, thermodynamics, enthalpy, heat of reactions, organic chemistry.

**Courses:** PU49, SC30  
**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ **CHB002 INTRODUCTION TO ENGINEERING CHEMISTRY**

The foundations of the principles of chemistry; the basic concepts of stoichiometry; properties of the elements of the periodic table; chemical equilibria, acids and bases; offered for engineering students without sound achievement in chemistry and serves as the foundation for CHB344 and CHB346.

**Courses:** CE42, EE43, ME45  
**Credit Points:** 2 **Contact Hours:** 1 per week

### ■ **CHB142 CHEMISTRY 1**

Inorganic chemistry: modern atomic theory, electronic configuration of the elements, covalent bonding of simple molecules: Organic chemistry: reactions of the carbon-hydrogen bond, carbon-halogen bond, the carbon-carbon double bond, carbon-carbon triple bond and aromatic substitutions: Physical chemistry: chemical equilibrium; equilibria in electrolyte solutions, properties of liquids, phase rule, liquid mixtures and colligative properties.

**Courses:** LS36, OP42, PU42, PU44, PU45  
**Incompatible with:** CHB182  
**Credit Points:** 12 **Contact Hours:** 6 per week

### ■ **CHB173 CHEMISTRY 1A**

States of matter: gases, liquids, solids; kinetic theory of gases, real gases; thermodynamics: forms of energy, work and heat; thermochemistry, enthalpies of formation, combination, etc. thermochemical calculations; entropy, force energy, spontaneity of reactions; equilibria: equilibrium constants, homogeneous and heterogeneous equilibria; ionic equilibria – acids and bases, pH, buffer solutions, acid-base titrations; kinetics: rates of chemical processes, dependence of rate on concentration, order of reaction, integrated rate equations; experimental methods; temperature dependence of rate constant; catalysis; conductance: introduction to electrochemistry; bonding theory and foundations of spectroscopy: quantum theory, classical mechanics; the dynamics of microscopic systems, Schrodinger equation, translational, rotational and vibrational motions; atomic spectra and structure, quantum numbers and orbitals, electron spin.

**Course:** CH32  
**Prerequisites:** Year 12 Chemistry - Sound Achievement OR **Co-requisite:** CHB001  
**Credit Points:** 12 **Contact Hours:** 6 per week

**■ CHB182 CHEMISTRY 1**

Chemical stoichiometry; thermochemistry; atomic structure; chemical bonding; chemical reactions; carbon compounds; states of matter; chemical equilibrium; acids and bases; ions and ionic equilibria.

**Courses:** ED50, SC30

**Prerequisite:** Year 12 Chemistry – Sound Achievement OR CHB001.

**Credit Points:** 12

**Contact Hours:** 5 per week

**■ CHB183 CHEMISTRY 1B**

Fundamental studies in two of the three sub-discipline areas of chemistry – inorganic chemistry and organic chemistry; the periodic table; acid, bases and salts; chemical reactions and stoichiometry; chemistry of hydrogen; chemistry of oxygen; principles of bonding in compounds of carbon; structural and electrical effects in compounds of carbon; chemical reactivity of organic molecules; radical reactions of organic hydrocarbons; mechanism and industrial significance, halocarbons and industrial solvents; addition reactions of alkenes, mechanism and industrial significance, polymers and plastics.

**Course:** CH32

**Prerequisites:** Year 12 Chemistry - Sound achievement OR Co-requisite CHB001

**Credit Points:** 12

**Contact Hours:** 6 per week

**■ CHB213 CONCEPTS OF ANALYTICAL CHEMISTRY**

Scope and limitation of analytical chemistry; role of analytical chemistry in society and technology; laboratory equipment and safety; chemical safety; types of analyses; analytical methodology; data handling; an overview of advanced analytical techniques.

**Course:** CH32, SC30

**Prerequisite:** CHB173 or CHB182

**Credit Points:** 12

**Contact Hours:** 5 per week

**■ CHB242 CHEMISTRY 2**

Inorganic chemistry: classification and properties of the elements, shapes of molecules, bonding in solids and coordination chemistry. Organic chemistry: the reactions of alcohols, phenols and ethers, amino compounds, aldehydes, ketones, carbohydrates, the acyl group (carboxylic acids and derivatives), amino acids and proteins, chemical structure, biological activity, and colour in organic compounds. Physical chemistry: the gas laws for ideal and non-ideal systems, first law of thermodynamics and thermochemistry, galvanic cells, applications to the determination of pH and potentiometric titrations, and colloids. (Note: credit may not be retained for more than one of these units.)

**Courses:** LS36, OP42, PU42, PU44

**Prerequisite:** CHB142

**Incompatible with:** CHB282

**Credit Points:** 12

**Contact Hours:** 6 per week

**■ CHB253 CHEMISTRY 2B**

Builds on the fundamental concepts studied in Chemistry 1B CHB183 and develops a knowledge of organic mechanism as a tool for understanding the nature of organic chemical change; the use of modern spectroscopic techniques in structure elucidation.

**Course:** CH32

**Prerequisite:** CHB183

**Credit Points:** 12

**Contact Hours:** 5 per week

**■ CHB259 ORGANIC CHEMISTRY**

The chemistry of carbon; covalent bonding; families of organic compounds, their properties and reactions; bio-molecules and polymers, carbohydrates, lipids, proteins, enzymes.

**Course:** PU49

**Prerequisite:** CHB001

**Credit Points:** 12

**Contact Hours:** 5 per week

**■ CHB282 CHEMISTRY 2**

Atomic structure; chemical bonding; thermodynamics; oxidation and reduction; electrochemistry; coordination chemistry; metals, metallurgy, transition elements; silicon, silicates, semiconductors; stereochemistry and optical activity; alcohols, phenols, ethers, amines; aldehydes and ketones, carboxylic acids and functional derivatives of carboxylic acids; infrared spectroscopy.

**Courses:** ED50, SC30

**Prerequisite:** CHB182

**Credit Points:** 12

**Contact Hours:** 5 per week

**■ CHB283 CHEMISTRY 2A**

Continuation of the fundamental studies already commenced in two of the three sub-discipline areas of chemistry. Thermodynamics; surface chemistry; equilibrium electrochemistry; liquids and solutions; the Phase Rule. Chemistry of non metals; chemistry of metals; coordination chemistry; nuclear chemistry.

**Course:** CH32

**Prerequisites:** CHB173, CHB183, MAB212, PHB122

**Credit Points:** 12

**Contact Hours:** 5 per week

**■ CHB289 ORGANIC & PHYSICAL CHEMISTRY**

Organic chemistry: the reactions of alcohols, phenols and ethers, amino compounds, aldehydes, ketones, carbohydrates, the acyl group (carboxylic acids and derivatives), amino acids and proteins, chemical structure, biological activity, and colour in organic compounds. Physical chemistry: the gas laws for ideal and non-ideal systems, first law of thermodynamics and thermochemistry, galvanic cells including applications to the determination of pH and potentiometric titrations, and colloids.

**Course:** PU45

**Prerequisite:** CHB142

**Incompatible with:** CHB242, CHB282

**Credit Points:** 8

**Contact Hours:** 4 per week

**■ CHB292 APPLIED SCIENCE FOR DESIGNERS 2**

Chemistry for environmental design; basic chemical properties of common materials, natural and artificial; chemical processes in buildings and artifacts.

**Course:** BN30

**Credit Points:** 4

**Contact Hours:** 2 per week

**■ CHB313 ANALYTICAL CHEMISTRY 3**

Analytical techniques including volumetric glassware, basic laboratory equipment, laboratory balances (top-pan and analytical), sampling, sample dissolution principles; neutralimetry; redoximetry; precipitometry; compleximetry; gravimetry; treatment of results; instrumental methods.

**Courses:** CH32, ED50, SC30

**Prerequisites:** CHB253, CHB282 or CHB283

**Credit Points:** 12

**Contact Hours:** 5 per week

**■ CHB333 INORGANIC CHEMISTRY 3**

Coordination chemistry; bonding and structure of metal complexes including crystal field theory and valence bond theory; an introduction to group theory; spectroscopic terms; solution chemistry – the structure of water; aqueous solutions; inorganic properties of water; distribution diagrams; hydrolysis; EH/pH diagrams; bioinorganic chemistry – biological significance of ligands and metals; HSAB theory; complex equilibria; applications with examples of selected bioinorganic systems – proteins, haem, etc.; chemistry of lanthanides and actinides; chemistry of selected non-metals; chemistry of precious metals.

**Courses:** CH32, ED50, SC30

**Prerequisite:** CHB282 or CHB283

**Credit Points:** 12

**Contact Hours:** 5 per week

**■ CHB344 ENGINEERING CHEMISTRY M**

Specialised chemistry unit designed for mechanical engineers; includes fuels and their combustion; the chemistry of lubricants and lubrication; corrosion and its prevention and water treatment processes.

Course: ME45

Prerequisite: CHB002 or equivalent

Credit Points: 4 Contact Hours: 2 per week

**■ CHB346 ENGINEERING CHEMISTRY C**

Specialised chemistry unit designed for civil engineers and includes such topics as PH control; the chemistry of materials; polymers and composites; corrosion and its prevention.

Course: CE42

Prerequisite: CHB002 or equivalent

Credit Points: 4 Contact Hours: 2 per week

**■ CHB352 ORGANIC CHEMISTRY 3**

Fundamentals of organic reactions; major mechanistic classes, nucleophilic substitution, elimination, electrophilic addition, nucleophilic addition, electrophilic substitution; ultraviolet spectroscopy: electronic transitions, chromophores, bathochromic and hypsochromic shifts, sampling; infrared spectroscopy: classification of vibrations, effects of: molecular association, conjugation, cumulation, a-halogens, ring and steric strain. Sampling; nuclear magnetic resonance – basic principles, classification of nuclei, the shielding constant. <sup>1</sup>H spectra, areas and integrals, chemical shifts and coupling. Sampling.

Courses: ED50, SC30

Prerequisite: CHB282

Credit Points: 12 Contact Hours: 5 per week

**■ CHB353 ORGANIC CHEMISTRY 3A**

The chemistry of carboxylic acids and their functional derivatives, carbanion chemistry including aldol and Claisen condensations; optical and geometrical isomers, stereochemical formulae, the sequence rules and nomenclature, the polarimeter and specific rotation; conformation of ethane, butane, small rings, cyclohexane and substituted cyclohexanes; ultraviolet spectroscopy; infrared spectroscopy; nuclear magnetic resonance.

Course: CH32 Prerequisites: CHB183, CHB283

Credit Points: 12 Contact Hours: 5 per week

**■ CHB372 PHYSICAL CHEMISTRY 3**

Equilibrium electrochemistry: models of the electrified interface, absolute electrode potential. Ionic absorption, electrocapillary curves, surface excess, molecular adsorption; phase rule: derivation of phase rule, applications to one component, binary, condensed and ternary systems; thermodynamics: second and third laws; free energy and chemical equilibrium ideal systems; chemical kinetics: order and molecularity of reactions, temperature effects. Reaction rate theories, complex reactions; bonding theory: orbitals and energies of the hydrogen atom; many electron atoms, molecular orbitals; spectroscopy: interaction of radiation with matter. Principles, instrumental design and applications of rotational, vibrational and electronic spectroscopy.

Courses: ED50, SC30

Prerequisite: CHB282 or CHB283

Credit Points: 12 Contact Hours: 5 per week

**■ CHB373 PHYSICAL CHEMISTRY 3A**

Equilibrium electrochemistry; applied phase chemistry; applied thermodynamics: 2nd and 3rd laws; kinetics: complex reactions, mechanisms; spectroscopy: interaction of radiation with matter.

Course: CH32

Prerequisite: CHB282 or CHB283

Credit Points: 12 Contact Hours: 5 per week

**■ CHB382 CHEMISTRY 3**

Biochemical relevance of pH; instrumental analytical techniques used in the pathology laboratory; the coordination chemistry of biological systems; dyes and stains; thermodynamics and kinetics.

Course: LS36 Prerequisites: CHB142, CHB242

Credit Points: 4 Contact Hours: 2 per week

**■ CHB402 CHEMICALS IN SOCIETY**

This unit provides students with an introduction to the role of Chemistry and its products in our society. Historical and societal aspects are incorporated in the study of a number of relevant applications of chemistry in consumer products. Topics include: chemical hazards, drugs and medicine, water purity, food chemistry, synthetic substances and resources and the environment.

Course: ED50 only

Prerequisite: CHB182

Co-requisite: CHB282

Credit Points: 12 Contact Hours: 5 per week

**■ CHB411 ENVIRONMENTAL ANALYTICAL CHEMISTRY**

Lectures and practical in the biological sciences dealing with the principles and application of sampling, and electrometric/spectroscopic/flame separation to the analysis of materials from the biosphere.

Courses: PU42, PU44, SC30

Prerequisite: CHB242 or CHB282

Incompatible with: A major in Chemistry or CHB313

Credit Points: 8 Contact Hours: 4 per week

**■ CHB423 CHEMICAL TECHNOLOGY 4**

The chemical industry; process flowsheets; sources and interpretation of data; industrial stoichiometry; material and energy balance calculations for both principles of particle mechanics and their applications in solids handling, crushing and grinding; classification; solid-liquid separation operations; solid-fluid contacting operations; fluid mechanics and their applications in storage, transport, mixing and dispersing operations; liquid-liquid extraction operations.

Courses: CH32, ED50, SC30

Prerequisites: PHB122, (CHB373 or CHB372)

Credit Points: 12 Contact Hours: 5 per week

**■ CHB453 ORGANIC CHEMISTRY 4**

A critical analysis of the chemistry of five- and six-membered heterocyclic systems with a single hetero atom; preparation, stability and applications to organo synthesis of the main group organometallic compounds; rearrangement reactions which involve 1, 2-shifts to electron-deficient elements; principles and practice of thin-layer chromatography, gas-liquid and high-performance liquid chromatography in the separation and analysis of organic compounds.

Courses: CH32, ED50, SC30

Prerequisite: CHB352 or CHB372

Credit Points: 12 Contact Hours: 5 per week

**■ CHB466 ENVIRONMENTAL CHEMISTRY**

An introduction to environmental chemistry for engineers. Introduces chemistry of environmental processes in atmosphere and hydrosphere. Effects of pollutants on the environment. Review of analytical techniques. Global issues including greenhouse, acid rain and ozone depletion.

Course: CE42

Credit Points: 6 Contact Hours: 3 per week

**■ CHB473 PHYSICAL CHEMISTRY 4**

Thermodynamics; surface chemistry; dynamic electrochemistry; chemical kinetics.

**Courses:** CH32, ED50, SC30

**Prerequisite:** CHB372 or CHB373

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ CHB513 INSTRUMENTAL ANALYSIS 5**

Quality assurance, data analysis, trace analysis, methods reliability, accuracy, precision, sensitivity, selectivity, limit of detection, comparative studies; atomic spectroscopy, theory and instrumentation; mass spectrometry, introductory theory and instrumentation; liquid chromatography, ion chromatography, practices and principles.

**Courses:** CH32, SC30

**Prerequisites:** CHB313, CHB372, CHB373, CHB453

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ CHB523 CHEMICAL TECHNOLOGY 5**

Principles of heat transfer and their applications in heat exchange and evaporation operations; distillation; principles of mass transfer in gas absorption psychrometric, drying and membrane operations; sources of chemicals, petrochemical processes, hydrogen economy; chemical engineering process analysis and its applications to industrial processes; topics include: equilibrium thermodynamics and kinetics, ideal reactors, reactor design.

**Courses:** CH32, SC30

**Prerequisites:** CHB423, CHB473

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ CHB533 INORGANIC CHEMISTRY 5**

Chemistry of selected metalloids; organometallic chemistry; inorganic reaction mechanisms; special interest metals; development of principles of group theory; symmetry operations and inorganic IR spectra; UV-visible spectra; bioinorganic chemistry of special molecules; lasers and inorganic chemistry.

**Courses:** CH32, SC30

**Prerequisite:** CHB333

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ CHB553 ORGANIC CHEMISTRY 5**

A course in advanced organic chemistry which emphasises the solution of synthetic problems. Topics may include principles of retrosynthesis, concepts of functional group equivalence and interconversions, disconnections, synthons, strategy and tactics, selectivity and control, protecting groups. Synthesis of the major classes of organic compounds, including difunctional compounds, by carbon-carbon bond formation. Selectivity in oxidation and reduction. Introduction to the use of computers in synthesis design. Sources of raw materials for organic chemicals preparation of synthesis ('syn') gas, chemical conversions using syn gas, reactions of alkenes and aromatic feedstocks to produce common chemicals, preparation and chemistry of polymers, the industrial preparation of selected pharmaceuticals.

**Courses:** CH32, SC30

**Prerequisite:** CHB453

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ CHB573 PHYSICAL CHEMISTRY 5**

Kinetics; colloid chemistry; phase equilibria; quantum mechanics; statistical mechanics.

**Courses:** CH32, SC30

**Prerequisite:** CHB473

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ CHB603 PROJECT**

See CHB601.

**Courses:** CH32, SC30

**Prerequisites:** One of CHB573, CHB553 or CHB533

+ CHB513 or CHB523

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ CHB613 INSTRUMENTAL ANALYSIS 6**

Instrumental analysis including the principles and practices of XRF, thermal analysis, electrometric methods including voltammetry, amperometry; data acquisition, methods of automated analysis, flow-based analysers, robotics, computer networks, laboratory information management systems, chemical databases; chemometrics, optimisation techniques, multiple regressions, advanced quality assurance, inter-laboratory comparisons; computer interfacing, microprocessor controlled instruments, A-D/D-A convertors, I/O methods including polling, interrupt techniques, direct memory access.

**Courses:** CH32, SC30

**Prerequisite:** CHB513

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ CHB623 CHEMICAL TECHNOLOGY 6**

Economic concepts, engineering costing, profitability evaluation, investment decision making, process economic appraisal using network analysis, optimisation using linear, non-linear, and dynamic programming. Steady-state process analysis, simulation and design, with the aid of ASPEN software system; modelling process flow-sheets and chemical reactors; case study problem solving using ASPEN.

**Courses:** CH32, SC30

**Prerequisite:** CHB523

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ CHB643 APPLIED SPECTROSCOPY**

Nuclear magnetic resonance spectroscopy; vibrational spectroscopy; remote spectroscopy; Uv/vis and fluorescence spectroscopies.

**Courses:** CH32, ED50, SC30

**Prerequisites:** CHB372 or CHB373 + (CHB352 or CHB353)

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ CHB653 APPLIED BIOLOGICAL CHEMISTRY**

Overview of molecular cell biology and chemistry; biochemistry of proteins and cells; amino acids, peptides and proteins; conformation, structure, reactivity of peptides, proteins and enzymes; protein engineering; enzyme reaction mechanisms; bioinorganic chemistry including structural, spectroscopic, and functional properties of metallo-proteins; catalytic roles in metallo-biochemistry; bioenergetics, biosynthesis and biotransformation.

**Course:** CH32

**Prerequisite:** CHB553

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ CHB663 ENVIRONMENTAL CHEMISTRY**

Toxicology; water quality, its assessment; modeling reactions in water bodies; air quality; criteria pollutants and health effects; indoor pollutants; monitoring; dispersion of pollutants; control techniques.

**Courses:** CH32, SSC30

**Prerequisite:** CHB372 or CHB373

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ CHB693 MATERIALS CHEMISTRY**

Properties of materials; metals and alloys; metallic corrosion; crystalline materials; cements, ceramics and glasses; polymers.

**Courses:** CH32, SC30

**Prerequisite:** CHB473

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ CHB700 RESEARCH PROJECT**

All students undertaking Honours are required to select and undertake, in consultation with a supervisor, a substantial project in an appropriate area. Each project will be assessed on the basis of an extensive written report and an oral presentation.

**Course:** SC60

**Credit Points:** 48

### ■ CHB701 COMPLEMENTARY STUDIES FOR CHEMISTS

Studies may include a selection from: participation in research seminars; oral communication skills; written communication skills; formal coursework in occupational health and safety, scientific and industrial ethics, development of research management strategies; and coursework material from other accredited courses as directed by the course coordinator and Head of School.

Course: SC60  
Credit Points: 8

### ■ CHB780 ADVANCED TOPICS IN CHEMISTRY 1

See CHB880.  
Course: SC60

Credit Points: 24      Contact Hours: 6 per week

### ■ CHN701 TOPICS IN ADVANCED CHEMISTRY 1

A series of lectures and/or reading program and/or selected laboratory exercises designed to provide the student with the appropriate theoretical and practical background, at an advanced level, necessary for the completion of a research program.

Course: SC80  
Credit Points: 12

### ■ CHN704 RESEARCH TECHNIQUES

Development of theoretical and laboratory skills required to enable rapid progress with the research proposed for Stage 2 of the program.

Course: SC80  
Credit Points: 44

### ■ CHN710 CHEMICAL INSTRUMENTATION

Chemical instrumentation and electronics required for advanced civil operation of scientific instrumentation.

Course: SC80  
Credit Points: 12

### ■ CHN720 CHEMOMETRIC

The concepts of chemical data acquisition and interpretation; computational methods and existing software packages for statistical analysis in chemistry; statistical methods in quality and process control; sampling procedures; multivariate analysis and optimisation techniques.

Course: SC80  
Credit Points: 12

### ■ CHN730 ADVANCED PHYSICAL METHODS IN CHEMISTRY

The theoretical and practical principles of selected physical methods in chemistry.

Course: SC80  
Credit Points: 12

### ■ CHN740 LABORATORY TECHNIQUES FOR PREPARATIVE CHEMISTRY

The experimental techniques for the preparation and isolation of pure substances.

Course: SC80  
Credit Points: 12

### ■ CHN801 TOPICS IN ADVANCED CHEMISTRY 2

See CHN701.  
Course: SC80

Credit Points: 12

### ■ CHP120 BIOCHEMICAL ENGINEERING

The application of biological organisms, systems and processes to productive level activities; specific areas

are in fermentation, bioprocessing and enzyme technology. Topics include: fermentation processes; microbial physiology and environmental factors in processing operations; fermentation kinetics and modelling; aeration and agitation; sterilisation; bioreactors; and scale-up. Other topics are selected from animal cell culture, protein biotechnology, downstream processing and bio-process economics.

Courses: LS65, LS70, SC60, SC80  
Credit Points: 12      Contact Hours: 5 per week

### ■ CHP320 DOWNSTREAM PROCESSING

Introduction to the fundamental problems of separation operations important to the recovery of commercial products from biological processes. Topics include: cell recovery and disruption, membrane technology, chromatographic techniques, electrochemical separation and new bio-separation techniques. Instruction includes case studies, and Aspen bio-process simulation.

Course: LS70  
Credit Points: 12      Contact Hours: 5 per week

### ■ CHP691 ENVIRONMENTAL CHEMISTRY

The nature and composition of natural and polluted waters; metal ions, gases, redox equilibria complexation and microbial transformation of chemicals in water; water pollution and trace-level substances in water. Environmental chemistry of soils; acid-base equilibria and ion-exchange; chemicals in soil. The nature and composition of the atmosphere; chemical and photochemical reactions in the atmosphere; the oxides of carbon, sulphur and nitrogen in the atmosphere; organic pollutants and photochemical smog; particulate matter. Water and atmospheric monitoring.

Courses: CE63, CE74  
Prerequisites: CHB551, CHB571  
Credit Points: 8      Contact Hours: 2 per week

### ■ CHS200 CHEMISTRY

Introduction to general and organic chemistry; atoms, molecules, ions; chemical bonding; chemical reactions and equations; solution chemistry; acids, bases and chemical equilibrium; gases; electrochemistry and nuclear chemistry; basic chemistry of organic compounds, aliphatic and aromatic.

Course: BN10  
Credit Points: 6      Contact Hours: 3 per week

### ■ CNB005 MEASUREMENT OF CONSTRUCTION 1

Introduction to Quantity Surveying including the work of the Quantity Surveyor and his relationship with other members of the building industry. A study of mensuration and formulae involved in the calculation of length, area and volume. Detailed study and instruction in the process and methods of taking off and billing of quantities in the trades roofer and roof plumber, plasterer, paviour, tiler and terrazzo worker, joiner, ironmonger, glazier and painter.

Courses: CN31, CN33  
Prerequisites: CNB151, CNB154  
Credit Points: 6      Contact Hours: 3 per week

### ■ CNB006 MEASUREMENT OF CONSTRUCTION 2

The process and methods of taking off and billing quantities in the trades excavator, concreter, bricklayer and blocklayer, and carpenter.

Courses: CN31, CN33      Prerequisite: CNB005  
Credit Points: 6      Contact Hours: 3 per week

### ■ CNB009 MEASUREMENT OF CONSTRUCTION 3

Detailed study and instruction in the process and methods of taking off and billing quantities in more

complex building solutions in the trades excavator, concreter, bricklayer and blocklayer, underpinning, pier and beam RC frame and suspended slabs.

**Courses:** CN31, CN33

**Prerequisites:** CNB006, CNB254

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CNB010 MEASUREMENT OF CONSTRUCTION 4

Detailed study and instruction in the process and methods of taking off and billing quantities in the trades asphalter and built up roofing, demolisher, mason, structural steel and precast concrete.

**Courses:** CN31, CN33

**Prerequisite:** CNB009

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CNB013 BUILDING SERVICES 1 – HVAC

Minimum standards of ventilation, centrifugal and axial flow fan applications; ductwork, accessories, layout, construction and installation; requirements for human comfort in air-conditioning; the ASHRAE Comfort Chart; refrigeration; air-conditioning systems, composition, cost, application, construction and installation; heating, fuel types, efficiency, capital and annual costs; effect of building ordinances.

**Courses:** CN31, CN33, PU42

**Co-requisite:** CNB253

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CNB014 BUILDING SERVICES 2 – ELECTRICAL

Electricity supply and distribution; high and low tension supply; measuring current, cut-outs, intake and distribution; internal distribution; large supply installation, sub-station; fuse and switch gear; wiring systems and circuits; conduit and cables; joint boxes. Multi-box switching; heading circuits; earth connections, protection of conduit, conductor and accessories against mechanical damage, weather dampness, fire, electric shock; fibre optic cables in building supervisory systems; assessment of maximum demand and voltage drop; earth tests; tools and handling equipment, fastenings and supports; measurement, control and lighting equipment; accessibility and protection; domestic, industrial and commercial appliances; testing and fault locating;

**Courses:** CN31, CN33

**Prerequisite:** CNB253 **Co-requisite:** CNB254

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CNB103 MATERIAL SCIENCE 1

Properties, manufacture, use and analysis of timber, steel, concrete and clay products; investigation of their strength, density, hardness, porosity, plasticity, elasticity and deterioration; investigation and protection against corrosion and fire.

**Courses:** CN31, CN33

**Co-requisite:** CNB151

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CNB104 MATERIAL SCIENCE 2

Physical and chemical properties of materials and their effect on construction and structural qualities; laboratory and field testing of bricks, mortar, brickwork, concrete, timber, steel; protection of material against corrosion and fire.

**Courses:** CN31, CN33

**Prerequisite:** CNB103

**Co-requisite:** CNB154

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CNB131 MEASUREMENT OF CONSTRUCTION 1A

Subject description as for CNB005.

**Courses:** CN31, CN33

**Prerequisite:** CNB151

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ CNB145 STRUCTURES 1

The needs of constructors; statics; bending theory for simple and continuous beams, approximate analysis methods; properties of sections; load transfer; design of simple timber and steel beams and columns for model projects; W33 framing manual for member sizing, tiedown and timber connection.

**Courses:** CN31, CN33

**Co-requisite:** CNB151

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CNB146 STRUCTURES 2

Concepts of masonry design; design theory for reinforced concrete; design of simple concrete footings, slabs of ground, beams, columns, suspended slabs; design of slab for Construction 3 project; concept of PSC design; design of simple steel connections.

**Courses:** CN31, CN33

**Prerequisite:** CNB145

**Co-requisite:** CNB154

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CNB151 CONSTRUCTION 1

Materials, methods and construction in single and two-storey domestic structures, site information and investigation, foundations, columns, upper floors, external and internal walls, finishes, etc. Environmental, structural and aesthetic requirements accounting for costs, dimensional requirements, statutory regulations, life and adaptability and manufacturing and erection requirements; draughting typical details and working drawings; environmental science, comfort situations in varying climatic zones and their effects.

**Courses:** CN31, CN33

**Co-requisites:** CNB103, CNB145

**Credit Points:** 12 **Contact Hours:** 6 per week

### ■ CNB154 CONSTRUCTION 2

Continuation of CNB151; properties of materials, and behaviour in manufacturing and construction, effect on form and structure; workshop and studio working details of building components, coordination of building elements.

**Courses:** CN31, CN33

**Prerequisite:** CNB151

**Co-requisites:** CNB104, CNB146

**Credit Points:** 14 **Contact Hours:** 7 per week

### ■ CNB161 BUILDING STUDIES 1

The uses of materials and construction in single and two-storey domestic structures – site information, substructure, columns, upper floors, external and internal walls, finishes, etc. Environmental, structural, aesthetic, cost, statutory, dimensional, manufacturing and erection requirements. Factors in creating comfort situations in various climatic zones and their effect on building construction. Draughting: preparation of typical details and working drawings. Physical and chemical properties of materials such as timber, steel, concrete and clay products and how they affect their construction and structural qualities.

**Course:** CN32

**Credit Points:** 14 **Contact Hours:** 5.5 per week

### ■ CNB162 BUILDING STUDIES 2

The uses of materials and construction in single and two-storey domestic structures under the elements: staircase, roof, internal and external walls, windows, doors, finishes; fireplaces. Environmental, structural and aesthetic requirements, taking account of constraints such as costs, dimensional requirements, statutory regulations, life and adaptability and manufacturing and erection requirements. Draughting: preparation of construction details and drawings.

**Courses:** CN31, CN32

**Prerequisite:** CNB161

**Credit Points:** 9 **Contact Hours:** 3.5 per week

### ■ CNB166 URBAN ECONOMICS

Economic processes and spatial context of the city; differentiation of competing land use; location decisions in the urban market; intra-urban location; market failures, externalities and government involvement; transport in the urban environment, urban management; urban issues. Economics of the Australian construction industry.

Course: CN32

Credit Points: 4 Contact Hours: 2 per week

### ■ CNB171 CONSTRUCTION 1

Materials, methods and construction in single and two-storey domestic structures, site information and investigation, foundations, columns, upper floors, external and internal walls, finishes, etc. Environmental structural and aesthetic requirements accounting for costs, dimensional requirements, statutory regulations, life and adaptability, and manufacturing and erection requirements; draughting typical details and working drawings; environmental science, comfort situations in varying climatic zones and their effects.

Course: PU42

Credit Points: 12 Contact Hours: 6 per week

### ■ CNB172 CONSTRUCTION 2

Continuation of CNB171. The properties of materials and how they behave in the manufacturing and construction process and how these considerations relate to form and structure. It includes a studio and practical back-up to the lecture program. Students are required to prepare working details of building components, coordination of building elements for specific building use.

Course: PU42

Credit Points: 8 Prerequisite: CNB171 Contact Hours: 4 per week

### ■ CNB173 MATERIAL SCIENCE 1

Properties, manufacture, use and analysis of timber, steel, concrete and clay products including investigation into their strength, density, hardness, porosity, plasticity, elasticity and deterioration; investigation and protection of materials against corrosion and fire.

Course: PU42

Credit Points: 4 Co-requisite: CNB171 Contact Hours: 2 per week

### ■ CNB174 MATERIAL SCIENCE 2

The physical and chemical properties of materials and how they affect construction and structural qualities; laboratory and field testing of bricks, mortar, brickwork, concrete, timber and steel; investigation and protection of materials against corrosion and fire.

Course: PU42

Credit Points: 4 Prerequisite: CNB173 Contact Hours: 2 per week

### ■ CNB175 STRUCTURES 1

The needs of constructors; statics; bending theory for simple and continuous beams, approximate analysis methods; properties of sections; load transfer; design of simple timber and steel beams and columns for model projects; W33 framing manual for member sizing, tiedown and timber connection.

Course: PU42

Credit Points: 4 Contact Hours: 2 per week

### ■ CNB176 STRUCTURES 2

Concepts of masonry design; design theory for reinforced concrete; design of simple concrete footings, slabs of ground, beams, columns, suspended slabs; design of slab for Construction 3 project; concept of PSC design; design of simple steel connections.

Course: PU42

Credit Points: 4 Prerequisite: CNB175 Contact Hours: 2 per week

### ■ CNB243 LAW 1 – BUILDING ACTS & REGULATIONS

Passing and resolving Acts, regulations and by-laws; knowledgeable site representatives; study of building code of Australia, Queensland Home Building Code and Standard Building by-laws which control the design, construction and building works in Queensland; emphasis on building codes in the by-laws; a study of the Health Act, Factories and Shops Act, Liquor Act, Acts Interpretation Act, Fire Safety Act and Town Planning acts.

Courses: CN31, CN33, PU42

Co-requisite: CNB254

Credit Points: 5 Contact Hours: 2 per week

### ■ CNB245 MEASUREMENT OF CONSTRUCTION 1B

Methods of taking off and billing quantities in the trades of excavator, concreter, bricklayer, blocklayer and carpenter for simple building.

Courses: CN31, CN33

Co-requisite: CNB253

Prerequisites: CNB131, CNB151, CNB154

Credit Points: 6 Contact Hours: 3 per week

### ■ CNB246 MEASUREMENT OF CONSTRUCTION 2B

Methods of taking off and billing quantities in more complex building in the trades excavator, concreter, bricklayer, blocklayer in simple basement, underpinning, pier and beam, RC frame and suspended slab; taking off and billing in the trades asphalt, built-up roofing, demolisher, mason, structural steel and precast concrete.

Courses: CN31, CN33

Co-requisite: CNB254

Prerequisites: CNB146, CNB245, CNB253

Credit Points: 8 Contact Hours: 4 per week

### ■ CNB247 MATERIAL SCIENCE 3

Atomic structure and bonding and its effects on a material's engineering property; elementary metallurgy of iron and steel; non-ferrous metals and alloys; joining of metals, fatigue, creep, brittle and ductile fracture, corrosion and protection; properties, manufacture, use and analysis of fibrous cement, wood products, ceramics, polymers, paints, sealants and mastic products; investigation into the material's strength, density, hardness, porosity, plasticity, elasticity, deterioration, optical, electrical, thermal and acoustic properties.

Courses: CN31, CN33

Co-requisite: CNB253

Prerequisites: CNB103, CNB104

Credit Points: 4 Contact Hours: 2 per week

### ■ CNB253 CONSTRUCTION 3

Study of industrial and multi-storey residential buildings; management, planning, and coordination of construction, site layout, site establishment and material handling processes; draughting and detailed drawings, site visits and/or workshop.

Courses: CN31, CN33

Co-requisites: CNB247, CNB259

Prerequisites: CNB103, CNB104, CNB154

Credit Points: 10 Contact Hours: 5 per week

### ■ CNB254 CONSTRUCTION 4

An extension of CNB253, dealing with multi-storey residential commercial buildings.

Courses: CN31, CN33

Prerequisite: CNB253

Credit Points: 12 Contact Hours: 6 per week

### ■ CNB259 STRUCTURES 3

Portal behaviour; plastic versus elastic design; structural bracing; truss analysis; stability of structures during construction; stability of cranes, loads in lifting



systems; unbalanced loads during construction; stability of marine equipment; stability of multi-storeyed buildings; loading and design of simple retaining structures.

**Courses:** CN31, CN33 **Co-requisite:** CNB253  
**Prerequisites:** CNB103, CNB104, CNB145, CNB146  
**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CNB261 BUILDING STUDIES 3

The materials and construction of a range of structures from industrial single to multi-storey residential buildings: substructure, columns and upper floors, staircases, roof, external and internal walls, windows and doors, finishes, fire protection and fittings. Environmental, structural, aesthetic, cost, statutory, dimensional, manufacturing and erection requirements. Draughting: preparation of typical details and working drawings. Material science: a study of the non-structure materials such as building boards, ceramics, glass, plastics, paint from the manufacturing process through to the effects of ageing and problems of cleaning, repair and maintenance.

**Course:** CN32 **Prerequisite:** CNB162  
**Credit Points:** 9 **Contact Hours:** 3 per week

### ■ CNB262 BUILDING STUDIES 4

An extension of CNB261, dealing with multi-storey commercial buildings. It also looks at design appraisal: effect of design on user comfort, safety, energy usage, orientation, materials, layout, services, ageing and aesthetic composition.

**Course:** CN32 **Prerequisite:** CNB261  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ CNB263 VALUATION 1

Basic concepts and principles of real property value. Definitions of value. Process and methods used in property valuation. Ethics Factors influencing accuracy of valuations. The comparative approach. Valuations of vacant land and residential property. Valuation inspection and reports. Practical valuation assignments. Summation. Investment valuation; rental value, outgoing.

**Course:** CN32 **Prerequisite:** CNB261  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ CNB268 VALUATION 2

See CNB263.  
**Course:** CN32 **Prerequisite:** CNB263  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ CNB301 PMI – ADVANCED CONSTRUCTION METHODS

Construction and site management problems encountered by a project manager; case studies having unusual construction problems or techniques; site planning and organisation of projects; material handling and site equipment selection.

**Course:** CN31, CN33 **Co-requisite:** CNB440  
**Prerequisites:** CNB341, CNB254  
**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CNB341 BUILDING & CIVIL ENGINEERING CONSTRUCTION

Large project bulk excavation, earth and rock retaining systems, rock excavation and explosive handling; dewatering, pile driving, bored pier and special foundation construction; demolition of structures; roadworks, techniques, stabilised construction, surface sealing and associated bridge construction; falsework and temporary works.

**Courses:** CN31, CN33 **Prerequisite:** CNB254  
**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CNB342 LAW 2 – PRINCIPLES & PROPERTY

Legal principles and process, the legal system and process; sources and divisions of the law; rules of precedence; interpretation of statutes and regulations; legal practice and procedure; law of property, ownership and possession, estates and interests in land; easements, rights and restrictive covenants; party walls, boundary walls, fences and encroachments.

**Courses:** CN31, CN32, CN33  
**Credit Points:** 3 **Contact Hours:** 1.5 per week

### ■ CNB343 ECONOMICS OF THE CONSTRUCTION INDUSTRY

Economics and applied economics; features of the macroeconomy; demand, supply, prices and stocks; market structures, competition, collusion, integration and concentration; real property markets, tenure, markets and sub markets; construction and housing industries composition and characteristics; demand for dwellings, the deposit gap, public housing, rental markets; pricing mechanism, application to land, contract and speculative projects, etc.; cost analysis, cost components in housing, problems of rising costs and time delays; finance industries, types and use of finance, use of gearing, risk considerations, cash flow; failure of developer and builder firms.

**Courses:** CN31, CN33  
**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CNB347 HYGIENE & SANITATION

A study of macro services to the community including water supply, sewerage, power, gas, telephone and other public services. Requirements of headworks and reticulations. A study of sanitation, septic tanks, absorption and transpiration beds, stormwater and sewerage disposal and garbage and refuse disposal. Hydraulic engineering services associated with buildings. Water supply (including fire fighting and hot water), sewerage and sanitary plumbing with a study of relevant Acts and laws, including sizing and testing of main and gravity-fed services.

**Courses:** CN31, CN33, PU42  
**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CNB362 PROPERTY AGENCY

Characteristics of the Australian property market, the nature of the marketing problems. The marketing plan: the mix, implementation of plan and sales forecast; pricing decisions, approach to selling; consideration of sales particulars and auction catalogues. Promotional decisions: determination of budget size; media decision and sales promotion; technological advances and market changes. Real estate brokerage and the application of marketing principles to residential, commercial, industrial, special and overseas properties. Negotiation skills development.

**Courses:** CN32, PS47  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ CNB363 VALUATION 3

Valuation formula; time value concepts; investment approach, basic capitalisation and cash flow techniques. Assumptions. Practical applications of investment approach to suburban and CBD properties.

**Course:** CN32 **Prerequisite:** CNB268  
**Credit Points:** 9 **Contact Hours:** 3 per week

### ■ CNB364 VALUATION 4

See CNB363.  
**Course:** CN32 **Prerequisite:** CNB363  
**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ CNB367 REAL ESTATE ACCOUNTING 1

Financial accounting: period versus project income determination, inventory valuation and costs of goods sold, introduction of asset valuation theories, depreciation, intangible asset determination, effects of taxation. Analysis and interpretation of financial statements: multiple factors in interpretation, analysis principles for business brokerage. Asset valuation: conventional bases for valuation, current cost, replacement cost, general price level changes, effects in depreciation and taxation. Business structures: sole trader, partnerships, companies and appropriate accounting procedures. Business analysis and assessment of value for business brokerage. Project accounting, contracts, part-payments, interim project determination, development costs.

Courses: CN32, PS47

Credit Points: 9 Contact Hours: 3 per week

#### ■ CNB368 REAL ESTATE ACCOUNTING 2

Budgeting and cost accounting, the production function, decision and control aspects of production, cost accounting, cost flows, cost types, cost classification, costing systems, standard costing and variance analysis, flexible budgets and budgetary control, performance and evaluation. Company finance: objectives of the finance function, use of financial indicators, debt equity sources of funds, financial versus capital structure, financial risk and gearing, cost of capital. Cash flow management; decision making using cash flow management techniques viz purchase versus lease, etc. Working capital management and short-term investment criteria. Capital budgeting for an ongoing business. Project sorting and budgeting.

Courses: CN32, PS47

Prerequisite: CNB367

Credit Points: 8 Contact Hours: 3 per week

#### ■ CNB401 BUILDING ECONOMICS & COST PLANNING

Cost control building outputs and costs; comparison of cost planning and approximate estimating; cost implications of design variables, perimeter/floor area ratio, size of building, circulation space, storey height; cost, effects of site conditions, prefabrication and standardisation; approximate estimating, types and uses; measurement of variations, adjustment of prime costs and provisional sums; cost analyses, indices and data; applications and use of cost analyses; progress payments and final accounts.

Course: CN31

Prerequisites: CNB010, CNB013, CNB014, CNB254, CNB443, CNB444, CNB446, CNB540

Credit Points: 4 Contact Hours: 2 per week

#### ■ CNB403 BUILDING MANAGEMENT 1

Management in principle, planning, leading, organising, controlling and applied communication; fundamentals of management; roles of policy maker and executive; accountability; problem solving; organisation structures and relationships, formal and informal structures; management in practice, building industry participants, client to builder; systems in the building industry; contract, and head office management of small and large contracts; management, job description, contracts, plant, estimating, purchasing, planning and accounting section; tenders and contracts; controlling incoming work, securing contracts.

Courses: CN31, CN33

Co-requisite: CNB253

Credit Points: 4 Contact Hours: 2 per week

#### ■ CNB404 BUILDING MANAGEMENT 2

More advanced management principles and their application to site administration and management.

Courses: CN31, CN33

Credit Points: 4

Prerequisite: CNB403

Contact Hours: 2 per week

#### ■ CNB405 PROJECT EQUIPMENT & SAFETY

Construction Safety Act 1971-73 and regulations; fixed, mobile and portable equipment, hoarding, gantries, scaffolding; crane, hoist and other relevant code; responsibilities and certification of site operatives; safety problems in erection, demolition and excavation work; accident investigation, analysis and preventive techniques; frequency and severity rates and training, management responsibilities.

Course: CN31

Credit Points: 4

Co-requisite: CNB254

Contact Hours: 2 per week

#### ■ CNB440 LAW 3 – BUILDING CONTRACTS

Building and engineering agreements, practices relating to the building industry; contract law, elements, formation and discharge of a contract; contents of a valid contract, misrepresentation, collateral contract implied terms; contract documents and their interpretation; breach of contract; major provisions in Australian Standard Forms of Building Contract.

Courses: CN31, CN33

Credit Points: 6

Co-requisite: CNB404

Contact Hours: 1 per week

#### ■ CNB442 VALUATION & DILAPIDATIONS

Nature of value; effect of supply and demand of land and buildings; investment value and occupational value; types of landed property, incidents of their tenure, outgoings and comparison with other forms of investment; rates of interest required from different types of property; calculating rental value and net income and capitalisation of net income; use of valuation tables; liability for dilapidations; legal and equitable waste; implied, express contract covenants and statutory obligations to repair between landlord and tenant; landlords' remedies for breach of covenant to repair; liability for injuries to third parties.

Courses: CN31, CN33

Contact Hours: 2 per week in Semester 1, 1 per week in Semester 2

Credit Points: 6

#### ■ CNB443 BUILDING SERVICES 3

Transportation of people and goods, passenger, goods and service lifts, planning disposition, control systems and construction; regulatory requirements, approximate traffic calculations; escalators and moving walks, use, widths and ratings, regulatory requirements and construction; planning of lift contracts and ancillary building work; cost of lifts; fire protection, sprinklers, detectors, alarms, extinguishers; telephone and sound systems; intrusion alarm systems; clock and time systems; acoustics.

Courses: CN31, CN33

Credit Points: 5

Co-requisite: CNB253

Contact Hours: 2.5 per week

#### ■ CNB444 MECHANICAL & ELECTRICAL ESTIMATING

Mechanical and electrical systems, parameters influencing their design and application; types estimates and tenders; preliminaries, trade awards and wage rates; take-off procedures, costing and estimating make-up calculations; system costs in relation to total building, floor area, operating and maintenance cost, builders allowance for each system.

Courses: CN31, CN33

Prerequisites: CNB013, CNB014

Credit Points: 4

Contact Hours: 2 per week

**■ CNB446 ESTIMATING 1**

Building trades award and wages rates; hourly rate build up for equipment and trade services; calculation of preliminaries for a small suburban project.

**Courses:** CN31, CN33 **Co-requisite:** CNB246

**Prerequisites:** CNB006, CNB245

**Credit Points:** 5 **Contact Hours:** 2.5 per week

**■ CNB451 COMPUTER SOFTWARE APPLICATIONS 1**

Preparation of bills of quantities using computer software packages; hands-on experience in set-up of base accounts, trades, headings; measurement input; editing, correction and data manipulation; report generation in various bill of quantities formats; pricing using estimated and/or tendered rates; elemental analyses; computer measurement of contractual systems; specification and preamble development.

**Course:** CN33 **Prerequisites:** CNB246, ISB180

**Credit Points:** 4 **Contact Hours:** 2 per week

**■ CNB452 COMPUTER SOFTWARE APPLICATIONS 2**

Cost plan/estimates using computer software packages, including set-up of base accounts, parameter specifications; elemental and detailed estimate measurement; editing, correction and data manipulation; report generation and formatting; development of labour constants, standard rates and items; pricing, tendering, spreadsheet application; contract administration, variation control, rise and fall of final accounts; progress payments; cash flow forecasts.

**Course:** CN33

**Prerequisite:** CNB647 **Co-requisite:** CNB648

**Credit Points:** 4 **Contact Hours:** 2 per week

**■ CNB461 MEASUREMENT OF CONSTRUCTION 5**

Methods of taking off and billing quantities in complex basement and foundation work in the trades underpinning, excavator, concreter, piling systems, structural systems in suspended slabs and walls.

**Course:** CN33 **Co-requisite:** CNB341

**Prerequisites:** CNB246, CNB254

**Credit Points:** 3 **Contact Hours:** 1.5 per week

**■ CNB462 MEASUREMENT OF CONSTRUCTION 6**

Methods of taking off and billing quantities in the trades plumber and drainer.

**Course:** CN33

**Prerequisite:** CNB347

**Credit Points:** 3 **Contact Hours:** 1.5 per week

**■ CNB464 VALUATION 5 – RURAL**

The physical and economic factors of rural land and its development, land utilisation and degradation, farm management and productivity, factors influencing rural valuations. Rural sales, valuation procedures and inspections. Practical assignments.

**Course:** CN32 **Prerequisite:** CNB268

**Credit Points:** 8 **Contact Hours:** 3 per week

**■ CNB465 PROPERTY INVESTMENT ANALYSIS 1**

Investment principles and strategy, property investment financing and evaluation, property investment market, time value of money concepts, cash flow techniques over time, application of CF techniques to property, feasibility studies, market analysis, risk analysis applied to property; the structure of detailed risk and return viability studies; portfolio theory applied to property; computer applications.

**Course:** CN32, PS47

**Prerequisites:** CNB363, CNB667

**Credit Points:** 8 **Contact Hours:** 3 per week

**■ CNB466 PROPERTY INVESTMENT ANALYSIS 2**

See CNB465.

**Course:** CN32

**Prerequisites:** CNB363, CNB465, CNB667

**Credit Points:** 8 **Contact Hours:** 3 per week

**■ CNB470 VALUATION 6 – RURAL**

See CNB464.

**Course:** CN32

**Prerequisite:** CNB464

**Credit Points:** 8 **Contact Hours:** 3 per week

**■ CNB471 PROPERTY PRACTICE LAW**

Legal concepts and statutory requirements relevant to the property professional; legislation governing property valuation and real estate practice; the effect of relevant statutes on real property; standard real property contracts; law of torts; negligence; arbitration.

**Courses:** CN32, CN81 **Prerequisite:** CNB342

**Credit Points:** 8 **Contact Hours:** 2.5 per week

**■ CNB472 PROPERTY TAXATION ISSUES**

The implications of taxation on the overall profitability of property investments and developments. The distinction between developer and investor, project funding, the interpretation of ordinary income and capital gains tax. Deductions for project expenditure, in particular interest, negative gearing, depreciation and building amortisation.

**Courses:** CN32, CN81 **Prerequisite:** CNB368

**Credit Points:** 8 **Contact Hours:** 2 per week

**■ CNB501 BUILDING MANAGEMENT 3**

Construction accounting methods and management of on and off site financial transactions; construction industry accounting procedures, profit and balance sheets.

**Courses:** CN31, CN33

**Credit Points:** 4 **Contact Hours:** 2 per week

**■ CNB502 BUILDING MANAGEMENT 4**

Search and selection of construction projects; the discount rate cost of capital, return on investment; cash flows and contract mark-up; risk uncertainty and inflation in capital investment decisions; analysis and interpretation of financial statements; sources of funds and classifications; bidding theory and strategy; prescribed payments taxation system.

**Courses:** CN31, CN33

**Prerequisites:** CNB404, CNB501

**Credit Points:** 4 **Contact Hours:** 2 per week

**■ CNB520 SPECIFICATIONS**

Compilation of specifications complementing architectural documents; definitions, objects and purpose of a specification; specification as a contract legal and working document; reference material and specification writing; use of Master specifications; outright and performance specifications and preparation of specified bills of quantities.

**Course:** CN33

**Prerequisite:** CNB254

**Credit Points:** 3 **Contact Hours:** 1.5 per week

**■ CNB524 MEASUREMENT OF CONSTRUCTION 7**

Methods of taking off and billing quantities in the trades of mechanical and electrical engineer, external works and preliminaries.

**Course:** CN33 **Prerequisites:** CNB013, CNB014

**Credit Points:** 4 **Contact Hours:** 2 per week

**■ CNB526 POST CONTRACT SERVICES 1**

Method of adjustment of provisional items, rise and fall entitlements; preparing valuation certificates for

progress payments; cost control techniques used during the construction period; review of applicable contractual clauses; quantity surveying practice, adjustment to the contract sum for variations; feasibility studies; different types of contractual arrangement and selection of contractors.

**Course:** CN33 **Prerequisites:** CNB440, CNB540  
**Credit Points:** 5 **Contact Hours:** 2.5 per week

#### ■ CNB527 PM2 – QUANTITATIVE TECHNIQUES

Operations research techniques applied to the construction industry; linear programming; transportation and assignment methods; dynamic programming, decision trees; descriptive and inductive statistical methods applied to the construction/development industry and research; frequency distributions, measures of central tendency, dispersion; probability of variance, correlation and regression, sampling.

**Courses:** CN31, CN33

**Prerequisites:** CNB403, CNB404

**Credit Points:** 3 **Contact Hours:** 1.5 per week

#### ■ CNB540 ESTIMATING 2

Build up of typical rates for demolition, dewatering, piling, underpinning, shoring/formwork to columns, beams, walls and slab systems; reinforcement tying and fixing; concrete placing rates; precast erection; scaffolding, gantries, hoists and cranes, etc.; calculations of preliminaries for country and city projects.

**Courses:** CN31, CN33

**Prerequisites:** CNB009, CNB010, CNB246, CNB446

**Credit Points:** 5 **Contact Hours:** 2.5 per week

#### ■ CNB543 LAW 4 – TORTS & ARBITRATIONS

Law of tort, negligence, professional negligence, duty of care, liability, occupiers' liability, nuisance, fraud and conversion; arbitration, nature of and comparison with actions of law; reference by consent; the arbitration agreement, parties subject matter, appointment of arbitrators; conduct of an arbitration; powers and duties of an arbitrator; rules of evidence; validity of publication and enforcement of an award; costs.

**Courses:** CN31, CN33

**Prerequisite:** CNB440

**Credit Points:** 3 **Contact Hours:** 1.5 per week

#### ■ CNB545 PM3 – CONSTRUCTION PLANNING TECHNIQUES 1

Application of construction planning and control techniques; bar charts; critical path networks, arrow and precedence diagrams; updating control and reporting techniques; line of balance.

**Courses:** CN31, CN33

**Co-requisite:** CNB540

**Prerequisites:** CNB246, CNB254, CNB404, CNB446

**Credit Points:** 7 **Contact Hours:** 3.5 per week

#### ■ CNB548 PM4 – CONSTRUCTION PLANNING TECHNIQUES 2

Resource management; basic and production planning techniques; planning and control for various types of projects; misuse and abuse of planning and legal problems associated with CPM.

**Course:** CN31

**Prerequisite:** CNB545

**Credit Points:** 8 **Contact Hours:** 4 per week

#### ■ CNB550 PM5 – PROJECT COST CONTROL

Financial planning and cost control of the construction project; the development time relationships, cost consequences of design decision; preconstruction budget, budget management, materials control; performance analysis; trend evaluation; forecasting tech-

niques, progress reports, cost reports; financial status reports; computer applications in expenditure; equipment policy, equipment economics, maintenance management; contract administration, processing payments, negotiating extensions and prolongation claims, rise and fall, prescribed payments.

**Course:** CN31

**Prerequisites:** CNB403, CNB404, CNB501

**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ CNB552 OFFICE MANAGEMENT

Scale of fees and professional charges; code of ethics; letters of engagement; law involving the quantity surveyor and client, professional indemnity; image and status; office management and procedures.

**Course:** CN33

**Credit Points:** 2 **Contact Hours:** 1 per week

#### ■ CNB561 PROPERTY MAINTENANCE

Technological, legal and financial factors in property maintenance, including taxation issues; the nature and importance of building maintenance; concept of building maintenance, liability for defects; capital, maintenance and running costs; quality control; government policy; planning of maintenance including inspections, long and short term; maintenance policies, cycles and profits, maintenance audits, maintenance manuals; building stock age and conditions, statistics; maintenance standards: application, attitude, quality control, responsibility; statutory requirements: Building Act, defective premises, Factories Act, fire precautions, health and safety; cost control: estimates and budgets, performance measures; life cycle costing.

**Course:** CN32

**Prerequisite:** CNB261

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ CNB563 STATUTORY VALUATION

Capital taxation as it affects property transactions. Valuations for: tax and taxation of capital gains; for statutory rating purposes under relevant legislation appeals procedure; for compulsory acquisition; assessment of compensation resulting from acquisition, resumption and damage. Evidence; the expert witness and professional liability; mock court.

**Course:** CN32

**Prerequisites:** CNB363, CNB364

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ CNB564 VALUATION 7

Valuation of specialist-type properties including licensed premises, hotels, service stations, entertainment and public properties. The valuation of corporate assets for organisational and balance sheet purposes. The future role of the valuer.

**Courses:** CN32, CN81

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ CNB565 LAND MANAGEMENT

Land resource management, ecology, regional land systems, coastal and riverine development issues; environmental degradation, land contamination; heritage values and management.

**Courses:** CN32, PS47

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ CNB567 REAL ESTATE MARKET ANALYSIS

Review of theory of price, and applied economics of markets: determinants and conditions of supply and demand, market equilibrium, competition, economic cycles. Real property markets, identification of sub-markets: Residential and non-residential markets. Significance of tenure. Impact of government policies, sources of data; analysis of ABS data. Ap-

plied studies of nominated submarkets. Market analysis techniques, trends and studies: local, national and overseas. Future trends.

Courses: CN32, PS47

Credit Points: 4 Contact Hours: 2 per week

### ■ CNB568 REAL ESTATE PRACTICE

Management concepts in real estate; a business plan; office administration; staff recruitment and training; trust accounts; a composite real estate practice.

Courses: CN32, PS47

Credit Points: 5 Contact Hours: 2.5 per week

### ■ CNB601 FORMWORK DESIGN & CONSTRUCTION

Formwork building, quality, safety, control; formwork planning, re-use, materials and hardware; cost hire or buy; erecting and stripping; scheduling, loads and pressures on slab, beams, column and wall forms; form design and design tables; formwork drawing and detailing; building and erecting formwork, architectural forms, precast concrete; special techniques and pre-stressing; propriety formwork systems, simple falsework design.

Courses: CN31, CN81

Prerequisite: CNB146 Co-requisite: CNB253

Credit Points: 4 Contact Hours: 2 per week

### ■ CNB603 BUILDING MANAGEMENT 5

The construction labor market, supply and demand, awards, conditions and earnings differentials; role of the construction trade unions and negotiations between employer and unions; construction conciliation and arbitration systems; strikes and lockouts; workers compensation acts and regulations etc.

Courses: CN31, CN33

Credit Points: 4 Contact Hours: 2 per week

### ■ CNB606 PM8 – LAND DEVELOPMENT STUDIES

The structure, operation and control of the land development industry including the politico-economic framework; land use plans and approval mechanisms of subdivisible land; financial aspect of development projects, trends and prospects in the housing development industry.

Course: CN31

Prerequisite: CNB623

Credit Point: 4 Contact Hours: 2 per week

### ■ CNB623 PM6 – BUILDING DEVELOPMENT TECHNIQUES 1

Feasibility, market and location surveys; cost analysis; evaluation techniques, conventional and discounting; cash flows and sensitivity analysis; authorities, development restrictions, services; profitability, commercial assessment, land values, options; purchase, terms, legal documentation, consolidation, surveys; commissioning design team, building use, facilities, quality, staging; instruct consultants, analyse alternatives, value engineering, marketability, income and outgoings; cost and time control from sketch design to completion; tender procedures and negotiations, contract documentation; leasing, brochures, publicity, letting agents, targets; authorisation of payments, monthly reports, coordination meetings; financing projects and cash flow.

Courses: CN31, CN33

Credit Points: 4 Contact Hours: 2 per week

### ■ CNB624 PM7 – BUILDING DEVELOPMENT TECHNIQUES 2

See CNB623.

Courses: CN32, CN33

Credit Points: 4 Prerequisite: CNB623 Contact Hours: 2 per week

### ■ CNB626 LAND DEVELOPMENT STUDIES

See CNB606.

Courses: CN32, CN81

Credit Points: 4

Co-requisite: CNB623

Contact Hours: 2 per week

### ■ CNB642 APPLIED COMPUTER TECHNIQUES

Evaluation of a range of commercial computer programs designed for the construction industry.

Course: CN31

Credit Points: 6

Prerequisite: CNB548

Contact Hours: 3 per week

### ■ CNB643 LAW 5 – COMMERCIAL LAW

The law as it affects the construction industry; sale of goods, hire purchase; negotiable instruments; insurance law; partnership law and general principles of company law; bankruptcy and liquidation.

Courses: CN31, CN32, CN33

Prerequisites: CNB404, CNB502

Credit Points: 3 Contact Hours: 1.5 per week

### ■ CNB647 COST PLANNING & COST CONTROL 1

The significance of construction economics for the client, the professions, the industry and society; historical development, need for and main aims of cost control; comparing cost planning and approximate estimating; cost implication of design variable, shape, size, perimeter, storey height; cost implications of construction methods of site and market conditions, or prefabrication and industrialisation; types of approximate estimates; cost analyses, indices and data; cost in use, maintenance and running costs, the life of buildings and components; taxation and insurance.

Course: CN33

Prerequisites: CNB005, CNB006, CNB009,

CNB010, CNB446, CNB461, CNB462, CNB524,

CNB540

Credit Points: 4

Contact Hours: 2 per week

### ■ CNB648 COST PLANNING & COST CONTROL 2

Continuation of CNB647.

Course: CN33

Prerequisite: CNB647

Credit Points: 4

Co-requisite: CNB452

Contact Hours: 2 per week

### ■ CNB653 POST CONTRACT SERVICES 2

Continuation of CNB526.

Course: CN33

Credit Points: 5

Prerequisite: CNB526

Contact Hours: 2.5 per week

### ■ CNB656 BUILDING RESEARCH

History of building research; definition of research; Australian and international building research organisations; nature of the building industry and implications for research; financing research; future developments in building research; research management; research process; development and presentation of a bibliographic report.

Course: CN31, CN33

Credit Points: 18

Prerequisite: final year

Contact Hours: 4.5 per week

### ■ CNB661 RESEARCH DISSERTATION 1

Develop an ability to disseminate and evaluate information and specialised knowledge and acquire an understanding of research methodology. Encompasses the definition, history, financing, future prospects and management of research. Students select a research subject, test its workability, develop procedures, prepare an outline for the study, draft the preliminary section and, after a series of critiques, present a bibliographic report, prepare a case study or project based upon an unusual or complex process

within a relevant professional area, prepare a report and give an oral presentation.

Course: CN32

Credit Points: 8 Contact Hours: 4 per week

#### ■ CNB662 RESEARCH DISSERTATION 2

See CNB661.

Course: CN32

Prerequisite: CNB661

Credit Points: 8 Contact Hours: 4 per week

#### ■ CNB663 PROPERTY DEVELOPMENT 1

An overview of the project development process from inception to occupancy as a prelude to detailed study of discrete parts of the process. See CNB623/4.

Course: CN32

Prerequisite: CNB626

Credit Points: 5 Contact Hours: 2 per week

#### ■ CNB664 PROPERTY DEVELOPMENT 2

See CNB663.

Course: CN32

Prerequisite: CNB663

Credit Points: 6 Contact Hours: 2 per week

#### ■ CNB665 PROPERTY MANAGEMENT 1

The role and importance of property management. The legal and physical parameters governing the establishment, holding, use and income generation of property assets. Theoretical and practical knowledge of the operation of components of property management. The management of residential, retail, industrial and commercial buildings. Main statutory provisions relating to above tenancies. Tenancy agreements, management records and accounts. Insurance. Cash flow and credit control.

Courses: CN32, PS47

Credit Points: 9 Contact Hours: 3 per week

#### ■ CNB666 PROPERTY MANAGEMENT 2

See CNB665.

Courses: CN32, PS47

Prerequisite: CNB665

Credit Points: 8 Contact Hours: 3 per week

#### ■ CNB667 APPLIED COMPUTER TECHNIQUES

Designed to give students hands-on experience and to demonstrate contemporary commercial software; on completion, students should be able to evaluate a range of commercial and non-commercial computer programs designed for the property development and construction industry; covers accounting and cost control packages; feasibility studies; maintenance packages; CPM, network analysis techniques.

Course: CN32

Prerequisite: CNB363

Credit Points: 8 Contact Hours: 3 per week

#### ■ CNN441 DISSERTATION

See CNN442.

Courses: BN73, CN77

Credit Points: 48 Contact Hours: 4 per week

#### ■ CNN442 DISSERTATION

The dissertation may be of a research or investigative nature on any approved area related to project management. Suitable topics will be discussed and arranged with course members each year. Each student will be assigned a supervisor and will be examined by means of a dissertation by that supervisor and the unit moderator. Incorporates IFN001 Advanced Information Retrieval Skills which must be taken.

Courses: BN73, CN77

Credit Points: 48 Contact Hours: 2 per week

#### ■ CNP417 DESIGN MANAGEMENT

The nature of design and the factors which influence the process of design. It includes planning, managing

and controlling the design process from inception to detailed documentation; decision sequences in design; appreciation of the consequence of design decisions on the total project; the inter-relationships between architectural design and engineering and service design requirements; briefing techniques.

Courses: BN73, CN64, CN77, CN81

Credit Points: 6 Contact Hours: 2 per week

#### ■ CNP422 SPECIALIST VALUATIONS

Theory of value, valuation types and approaches, practical approaches to the following valuation types: rating, compensation for compulsory purchase, investment, own-use, property assets, portfolios, public and specialist properties. Assessment of potential.

Courses: BN73, CN64, CN77, CN81

Credit Points: 6 Contact Hours: 2 per week

#### ■ CNP426 PROJECT DEVELOPMENT

Site selection/acquisition; securing the land; authority negotiation and approvals; authority approvals; resource planning; acquisition/procurement; project coordination; construction management; commissioning and occupation; property management; project finalisation; post control evaluations; project management objectives of cost time and quality; process overview; project stages; management principles; feasibility/justification; preliminary brief; development objective, motivation and needs; feasibility studies; project feasibility/justification; finance for projects; marketing.

Courses: BN73, CN64, CN77, CN81

Credit Points: 12 Contact Hours: 2 per week

#### ■ CNP429 COST MANAGEMENT & ECONOMICS

Financial statements; investment decisions; economic evaluation; financing decisions; life cycle costing; control systems; management accounting and reporting; information systems; cost planning theories and techniques; the economy.

Courses: BN73, CN64, CN77, CN81

Credit Points: 12 Contact Hours: 2 per week

#### ■ CNP430 CURRENT ISSUES

The unit is very much an integrative study area. There are two main strands: the integration, under the project management umbrella, of areas already studied; and the integration of recent and topical developments in the area of project management. Areas may include: quality management, buildability, value analysis, case studies, industrial relations, computer applications and selection, technology, information systems IT and AI, international project management, simulation exercises (Arousal, Bicep), recent developments in law, and englobal land development. Many of these topics will be covered by guest speakers from industry or presented in seminars.

Courses: BN73, CN64, CN77, CN81

Credit Points: 18 Contact Hours: 3 per week

#### ■ CNP431 PROJECT MANAGEMENT

Introduction to basic theory in the areas of communication, management and organisation as it applies to the project situation. Communication – process, skills, environment, applications; management theory and organisation theory. Negotiation. Project team building. Motivation theory. Construction and project leadership. Change. Strategic management and planning. Personnel. Decision-making strategies. Stress management.

Courses: BN73, CN64, CN77, CN81

Credit Points: 12 Contact Hours: 2 per week

**■ CNP433 PROJECT MANAGEMENT LAW**

Introduction to the legal system; contract law; elements of contract; contents of valid contract; legal issues and problems associated with project management contracts; arbitration; property law; international law; planning law.

Courses: BN73, CN64, CN77, CN81

Credit Points: 12 Contact Hours: 2 per week

**■ CNP434 TIME MANAGEMENT 1**

Use of planning techniques for project control; critical path method for planning; precedence networks; activity on the arrow; time scaled networks; bar charts; resource loading and levelling; line of balance; introduction to computing packages; control and reporting techniques; resource time and cost analysis.

Courses: BN73, CN64, CN77, CN81

Credit Points: 6 Contact Hours: 2 per week

**■ CNP437 FIELD TRIP**

An experiential field trip of five days duration in an adventure-style environment. The emphasis will be on team building, working in a stressful environment, communication skills, personal discovery and extension, and building trust and relationships. The activities will be oriented to achieving greater awareness of and competence in the above areas.

Courses: BN73, CN64, CN77, CN81

Credit Points: 12 Contact Hours: 5 days

**■ CNP438 REAL ESTATE INVESTMENT ANALYSIS**

Investment principles, characteristics, goals and strategies; investment alternatives, property investments and evaluation techniques; current property investment market in Australia; basic risk and return measures and financing; time value of money concepts, PV, FV, PMT, and dual rates; cashflow models and partial interests; NPV's and IRR's and their applications; cash flow assumptions and rates of return; practical cash flow applications and spreadsheets; financial feasibility study models; tax issues related to property investment; property type selection.

Courses: BN73, CN64, CN77, CN81

Credit Points: 12 Contact Hours: 2 per week

**■ CNP439 PROPERTY MANAGEMENT**

The motivation, instrumentation and application of property management for commercial and industrial real estate, including lease construction, rental valuations, rent review, review types, budgeting, outgoings and physical management. Trends and prospects.

Courses: BN73, CN64, CN77, CN81, PS69

Credit Points: 6 Contact Hours: 2 per week

**■ CNP667 APPLIED COMPUTING**

The application of computer programs in the financial and physical management process of property development, management and investment.

Courses: BN73, CN64, CN77, CN81

Credit Points: 6 Contact Hours: 2 per week

**■ COB100 ORGANISATIONAL COMMUNICATION INTERNSHIP**

The identification and critical analysis of organisational communication issues through planning a course of action; using research to monitor change; applying problem-solving skills.

Course: BS50

Prerequisite: COB103 or COB112 or COB123

Credit Points: 12 Contact Hours: 3 per week

**■ COB101 COMPUTER-MEDIATED COMMUNICATION**

Information access and distribution; organisational networks; computerised text analysis and style replicators; the human-machine interface and interpersonal relationships.

Course: BS50

Credit Points: 12 Contact Hours: 3 per week

**■ COB102 CONSULTING FOR ORGANISATIONAL CHANGE**

Models of planned change; the change agent; change project management; diagnostic interventions; collecting, analysing and feeding back data; designing interventions; interpersonal and group process interventions; organisational process interventions; organisational strategy interventions; technostructural interventions; transition processes; professional ethics; evaluating and institutionalising change.

Courses: BS50, BS78

Prerequisite: COB106 or HRB104, nil for postgraduate students

Credit Points: 12 Contact Hours: 3 per week

**■ COB103 PERSPECTIVES ON ORGANISATIONS & ENVIRONMENT**

Contemporary views of organisations, work and management; concepts and skills necessary for analysing and understanding organisations and organisational processes.

Courses: BS50, BS78

Prerequisite: COB129

Credit Points: 12 Contact Hours: 3 per week

**■ COB104 DRAMATURGY FOR PROFESSIONALS**

The relational level of communication; structure and style of message with special emphasis on non-verbal language; dramaturgical and experiential models; the theoretical perspectives of semiotic message analysis and action research underpin practical exercises.

Course: BS50

Credit Points: 12 Contact Hours: 3 per week

**■ COB105 BUSINESS ETHICS**

An overview of the diverse ethical theories which may be used in analysing business ethics problems.

Course: BS50

Credit Points: 12 Contact Hours: 3 per week

**■ COB106 GROUP COMMUNICATION: THEORY & PRACTICE**

Exploration and practice in interpersonal communication skills such as listening, assertion and negotiation. Business and media interviewing and small group communication in organisational settings provide the focus for the program. Group dynamics and systems theory as a theoretical base for analysing communication performance. Students practice problem-solving strategies by rehearsing vocational situations.

Courses: BS50, BS72

Prerequisite: COB134

Credit Points: 12 Contact Hours: 3 per week

**■ COB107 INTERCULTURAL COMMUNICATION**

The social and cultural factors which affect communication with people in other countries for business and related purposes; the influence of values, beliefs and customs on the communication process.

Course: BS50

Credit Points: 12 Contact Hours: 3 per week

**■ COB108 INTER-ORGANISATIONAL RELATIONS**

The ways organisations interact; classic views reflecting competitive relationships contrasted with emerg-

ing forms, including cooperatives and strategic alliances; cross-cultural aspects of organisational forms and relationships; reference to Pacific rim nations.

**Courses:** BS50, BS78

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB109 ISSUES IN PUBLISHING

The processes involved in book and magazine publishing; changing media habits and literacy skills of consumers; the impact of technology and economics; strategic positioning; editorial concepts and steps in production.

**Courses:** BS50, BS72

**Prerequisites:** COB138, COB157

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB110 ORGANISATION & SOCIETY

The broad context (the society and culture) within which organisations operate; students develop an awareness of the influence of Australian society on the nature and operation of formal organisations and of the impact of various organisations – government, business and non-profit – on our society.

**Courses:** BS50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB112 ORGANISATIONAL COMMUNICATION

Identifies and explores a range of issues of importance in organisations: organisational climate, organisational culture, power and politics, influence strategies, organisational change, gender issues, impact of technology, ethics. Functional, interpretive, and critical perspectives will provide a focus for this exploration.

**Courses:** BS50, BS72, BS78

**Prerequisite:** COB106 (may be co-requisite); nil for postgraduate

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB113 THEORETICAL PERSPECTIVES ON COMMUNICATION

An overview of the major theoretical and methodological approaches in the study of communication within a professional context.

**Courses:** BS50, BS72

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB114 TRENDS IN ORGANISATIONAL DESIGN

New perspectives in organisational design. Topics include: the future of work; classical perspective on design; open systems perspectives; sociotechnical systems perspectives; remote working; organisation learning; collaboration within and between organisations; experiments in work design; cooperatives; networks; the problem of power; distribution.

**Courses:** BS50, BS73

**Prerequisite:** COB129

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB118 COMMUNICATION TECHNOLOGY IN ORGANISATIONS

Concepts and applications of communication technology which impact on information processing and communication in organisations.

**Courses:** BS50, ED50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB119 TEXT FORMATTING & TRANSCRIPTION

The use of technology for document preparation, analysis of underlying principles of skills acquisition; traditional and technological perspectives on: document design, document formatting, business correspondence, tabulation, financial statements, busi-

ness forms, document formatting for specialised businesses and transcription.

**Course:** ED50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB120 BUSINESS COMMUNICATION

The way in which electronic production and transmission is complementing traditional methods of communication in organisations.

**Course:** BS50, ED50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB121 RECORDS MANAGEMENT

The paper-based and electronic records and information systems operating within and between organisations; the impact that changes in communication technology have had on these systems.

**Course:** ED50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB122 OFFICE PROCEDURES

The impact of communication technology on work structures and job design, and the social issues resulting from its adoption and implementation.

**Course:** ED50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB123 ISSUES IN COMMUNICATION TECHNOLOGY

The impact of communication technology on work structures and job design; the social issues resulting from its adoption and implementation.

**Course:** BS50, ED50

**Prerequisite:** COB118

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB124 OFFICE TRANSCRIPTION A

Students analyse the process of skills acquisition and gain a knowledge and understanding of skill development as it applies to shorthand and other forms of transcription.

**Course:** ED50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB125 OFFICE TRANSCRIPTION B

Students analyse the process of skills acquisition; provides a knowledge and understanding of skill development as it applies to shorthand and other forms of transcription. Students will have previous knowledge of shorthand.

**Course:** ED50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB126 SUPERVISION & ADMINISTRATION

The impact of technological change on the supervision and administrative practices as they relate to communication processes in organisations; the role and duties of supervisory and administrative personnel in information processing; the impact on these roles and duties through changes in technology.

**Course:** ED50

**Prerequisite:** COB123

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB129 ORGANISATIONAL PROCESSES

Organisations are examined from four perspectives: individual, group, organisational and community; emphasis on developing skills for making organisations effective, efficient and humane.

**Course:** BS50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB134 SPEECH COMMUNICATION: THEORY & PRACTICE

Based on the rhetorical perspective; oral, non-verbal and visual modes of communication in their application to business speaking; develops students ability



and confidence to successfully communicate in contemporary business and professional situations, such as: face-to-face business interviews; presentations to small groups, i.e. clients, boards of directors, etc.; persuasive presentations to large groups e.g. the public, company meetings, etc.

**Courses:** BS50, IF52, IS43, IT20

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB136 PROFESSIONAL COMMUNICATION (SERVICE)

Communicating successfully in writing and orally in professional situations. An understanding of the concepts and skills required for effective formal reporting and persuasive writing, oral reporting and persuasive speaking, group decision making and meeting procedures, leadership and participation.

**Courses:** ME46, PH38

**Credit Points:** 6      **Contact Hours:** 3 per week

#### ■ COB138 WRITTEN COMMUNICATION: THEORY & PRACTICE

The principles of expository and persuasive writing in academic and business contexts.

**Courses:** BS50, BS72, IT20

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB144 CREATIVE LANGUAGE FOR COMMUNICATORS

Development of advanced skills in written communication, and in dealing with a variety of communicative and textual forms; the various forms of effective communication; communication theory and critical theory.

**Courses:** BS50, IF52, IS43      **Prerequisite:** COB138

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB147 CREATIVE WRITING & PUBLISHING

Creative writing involves the communication of ideas and values within a social framework; students examine the creative writing process with emphasis on the short story; problems of publishing and marketing as a professional writer are considered, especially for the professional communicator.

**Course:** BS50

**Prerequisite:** COB138

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB152 ANALYSIS & METHODOLOGY IN MANAGEMENT

The first part of the unit is designed to establish a conceptual base suitable for the analysis of both abstract and empirical argument. The second part of the unit builds upon the concept of a valid argument by introducing the notion of the empirical research process, both historical and scientific.

**Course:** BS50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB153 ORGANISATIONAL ANALYSIS & MANAGEMENT

How modern organisations operate and their import for the study and practice of management; focuses on two key areas: analysis and understanding of organisational theory and social processes in organisations; specific skills valuable to managers are identified and discussed; the major processes with a focus on decision making and communication processes.

**Course:** BS50

**Prerequisite:** COB152

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB154 ORGANISATIONAL SOCIOLOGY

Organisations in the public sector; builds upon the Introduction to Sociology and Theory and Ad-

ministration units to provide a detailed understanding of organisation theory.

**Course:** BS50

**Prerequisite/Co-requisite:** Eight units in the Bachelor of Business degree including either Administrative Theory or Psychology.

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB156 ADVANCED SECRETARIAL STUDIES

Extends the professional education of teachers of Secretarial Studies and provides an opportunity to broaden knowledge of concepts and application of technology, its impact on functions, procedures and supervisory practices in organisations.

**Course:** ED26

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB157 CORPORATE WRITING & EDITING

The specific requirements of writing in the corporate environment; principles and procedures in writing management submissions, reports, and manuals, as well as letters, memos and resumes; the content, style and presentation of documents for specific readers.

**Courses:** BS50, BS72

**Prerequisite:** COB138

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB158 ADVANCED SPEECH COMMUNICATION (THEORY & PRACTICE)

Based on the semiotic perspective using practical drama as the tool for learning; communication theory: verbal structure, paralanguage, proxemics, kinesics, etc. through this medium; the development of expressive self-presentation skills in the business environment; aims to develop communicators with an understanding of communicator style who are creative and risk-taking in their presentations; who, having an understanding of the multiple message levels of oral communication, will approach a presentation with a prepared control over visual, verbal, paralinguistic, and kinesic elements of performance.

**Course:** BS50      **Prerequisites:** COB113, COB134

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB159 RESEARCH CONCEPTS & TECHNIQUES

Main conceptual and theoretical traditions of research and practical techniques; qualitative approaches include focus groups and action research; quantitative techniques include surveys and experimental studies. Research institutions; ethical issues; relationship between consumers and researchers.

**Course:** BS50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB160 PROFESSIONAL COMMUNICATION

Principles and strategies that enable students to cope with the complex rhetorical demands of writing and speaking within the organisational culture.

**Courses:** AA21, BS50, IT32

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ COB161 INDEPENDENT STUDY UNIT

An opportunity for advanced level undergraduate students to undertake individual research in an area which is complementary to their course work.

**Course:** BS50

**Prerequisite:** 8 units

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **COB162 COMMUNITY BASED ORGANISATION: STRUCTURE & PROCESS**

Community improvement, service, cultural and economic development organisations and associations in Australian society; their background, purposes, means of operation and relationship with their environment and wider society; the skills necessary to develop and maintain success organisations.

Course: BS50

Prerequisite: COB129

Credit points: 12

Contact Hours: 3 per week

■ **COB163 PROFESSIONAL WRITING**

The principles of, and strategies for, writing effective technical, business and academic documents.

Courses: AR41, AR48, BN30, CN31, CN32, CN33, EE43, IF23, IF53, ME35

Credit Points: 6

Contact Hours: 1.5 per week

■ **CON101 COMMUNICATION STRATEGIES**

Communication theory put into practice. Examples of policy and plans; how to produce the appropriate change through communication. The ethics of persuasion and the problems of cooperation explored in the process of policy formation and planning. Students take into account the social implications of producing change, the role of the change agent and ways to monitor the effects in Australia as well as developing societies. Alternative perspectives for strategic thinking and application in the environments of marketing, advertising, editorial journalism, organisational communication, public relations, public affairs and public information.

Course: BS84

Credit Points: 12

Contact Hours: 3 per week

■ **CON102 ADVANCED ORGANISATIONAL COMMUNICATION**

How people relate in modern organisational settings, from small businesses to multi-national organisations in the public and private sector; communication up, down and across the organisation, among divisions and work units, among different professional and vocational specialities and within work teams; a problem-solving, interdisciplinary approach with reference to social psychology, sociology, culture theory, systems thinking and network analysis.

Courses: BS72, BS84

Credit Points: 12

Contact Hours: 3 per week

■ **CON103 ADVANCED COMMUNICATION MANAGEMENT**

Allows students, after an exposure to the diverse field of communication, to review aspects of this field in depth. Current issues in the theory and practice of human communication. Student and lecturing staff use the various perspectives, theories and applications explored in the program to consider the management of communication programs and systems.

Course: BS84

Credit Points: 12

Contact Hours: 3 per week

■ **COP106 COMMUNICATION THEORY 1**

Interpersonal, group, organisational, interorganisational and mass communication; attention is paid to human systems and interaction in human relationships; provides an integrative view of the classical and emerging studies and theories in communication; lays the theoretical foundation for research projects.

Courses: BS61, BS72, BS84

Credit Points: 12

Contact Hours: 3 per week

■ **COP108 COMMUNICATION TECHNOLOGIES & SOCIETY**

Overviews the state of the art and studies current and future applications, basic models and theories, the common technical terms, the economics of the fundamental electronics behind the research and the practice of telecommunications, other hardware delivery systems and information technology.

Courses: BS61, BS84

Credit Points: 12

Contact Hours: 3 per week

■ **COP110 SOCIAL & ORGANISATIONAL CHANGE**

The origins, nature and effect of social change on individuals, organisations and communities; theories and models of change will be used to explore planned and unplanned changes currently occurring, particularly as these relate to possible futures; emphasis will be on the strategies and skills required to initiate and participate in effective change management.

Course: BS73

Credit Points: 12

Contact hours: 3 per week

■ **COP115 PROFESSIONAL COMMUNICATION**

Oral and written presentation. Clarity and the selection and management of relevant data. Report writing. Structure and content of reports. Summaries and sub-division of material. Precise.

Course: PS67

Credit Points: 4

Contact Hours: 2 per week

■ **COP118 MANAGING HUMAN SERVICE ORGANISATIONS 1**

The management task in human service organisations; managerial paradigms and the development of an empowering managerial framework; analysis of cultures in human service organisations, personal and interpersonal skills including career, time and stress management, and working collaboratively with co-workers and managers.

Course: BS73

Credit Points: 12

Contact Hours: 3 per week

■ **COP119 MANAGING HUMAN SERVICE ORGANISATIONS 2**

Managerial skills in human service organisations: action planning, recruitment and selection, staff support and development, dealing with problem workers, developing collaborative work groups, decision making, leading meetings, managing conflict.

Course: BS73

Prerequisite: COP118

Credit Points: 12

Contact Hours: 3 per week

■ **COX100 INTRODUCTION TO ORGANISATION**

Examination of basic management and organisational skills and their application to the workplace.

Courses: BS10, JS21

Credit Points: 12

Contact Hours: 3 per week

■ **CPB202 EDUCATION & CHANGE**

Examination of change as an adjunct of the character and values of society and the nature and needs of human beings. Existing and developing agendas for change are examined in several fields such as: multiculturalism; equity; employment; educational assessment; teaching and learning with a view to encouraging students to develop personally effective responses to the demands of change.

Course: ED41

Prerequisite: CPB201

Credit Points: 8

Contact Hours: 3 per week

**■ CPB280 EDUCATIONAL LEADERSHIP**

The foundations of leadership: systems theory; social systems; values; organisations; role theory; the leaders and the program; models of leadership; identifying and investigating leadership situations.

Course: ED41

Credit Points: 8 Contact Hours: 3 per week

**■ CPB281 ETHNICITY & RACISM IN EDUCATION**

Students are introduced to the theoretical concepts of ethnicity, prejudice, ethnocentrism and racism; examines the history of cultural relations in Australia and the development of institutional racism in education; informed, perspectives in Aboriginal and multi-cultural education, and positive approaches to cultural relations in the school setting are emphasised to develop appropriate teacher practices.

Course: ED41

Credit Points: 8 Contact Hours: 3 per week

**■ CPB330 ABORIGINAL & TORRES STRAIT ISLANDER EDUCATION POLICY**

Historical, economic, social factors influencing the position of Aborigines and Torres Strait Islanders; cultural factors and educational policies and programs; development of policies and programs appropriate for these people.

Courses: ED37, ED50, ED51, ED52

Credit Points: 12 Contact Hours: 3 per week

**■ CPB331 ASIAN CULTURE & EDUCATION**

The Queensland Department of Education requires that all teachers have an awareness of contemporary Asian cultures and skills for promoting Asian orientations in classroom practice. This is designed to provide pre-service teachers with knowledge and skills for working in the Asian context of Australian education. Content includes: cultural forms in Asia; contemporary socio-political developments; past and present educational strategies; promoting informed Asian awareness in curriculum and classrooms.

Courses: ED37, ED50, ED51, ED52

Credit Points: 12 Contact Hours: 3 per week

**■ CPB332 EDUCATION & THE COMMUNITY CONTEXT**

The range of inter-relationships between communities and educational activities; comparative studies; policy and its implications for developing strategies; techniques and skills for analysing community needs; some skills to improve effectiveness in working with the community.

Courses: ED37, ED50, ED51, ED52

Credit Points: 12 Contact Hours: 3 per week

**■ CPB333 POLICY ANALYSIS FOR EDUCATORS**

This unit aims to assist educational workers understand the relevance of contemporary policy initiatives for classroom and school practices, to demonstrate how policy may be used strategically to enhance professional practice and to provide skills in critical policy analysis. Particular attention is given to how beginning teachers may respond critically and constructively to pressures within devolved education systems to participate in policy formation, assessment and implementation.

Courses: ED37, ED50, ED51, ED52

Credit Points: 12 Contact Hours: 3 per week

**■ CPB334 POWERFUL TEACHERS, POWERFUL STUDENTS**

This unit explores from an interdisciplinary perspective thematic questions about teaching; understand-

ing the current notion of teacher/student power; ways of understanding teacher/student power and teaching through powerful and empowering teaching/learning models; the practical knowledge needed to empower beginning teachers.

Courses: ED37, ED50, ED51, ED52

Credit Points: 12 Contact Hours: 3 per week

**■ CPB335 TEACHER AS RESEARCHER**

This unit assists future educational practitioners to understand the role that research can play in improving their everyday practice. It draws on advocacy models of research to develop actual strategies by which practitioners can inform their own educational work and evaluate its effectiveness.

Courses: ED37, ED50, ED51, ED52

Credit Points: 12 Contact Hours: 3 per week

**■ CPB336 EDUCATION & CULTURAL DIVERSITY**

For teachers and students education settings are places of cultural interaction. This unit is designed to provide educators with an understanding of the complex issues involved in catering for cultural diversity in schools and other education settings and strategies for professional practice in contexts of cultural diversity. Contents include: cultural change in education; racism in schooling; curriculum issues; English as a second language; school-community relations.

Courses: ED37, ED50, ED51, ED52

Credit Points: 12 Contact Hours: 3 per week

**■ CPB337 GENDER & EDUCATION**

This unit provides students with a critical awareness of the significance of gender issues in education, together with knowledge of relevant research and policy developments. There will be an emphasis on the implications for school organisation, curriculum and teaching strategies.

Courses: ED37, ED50, ED51, ED52, NS48

Credit Points: 12 Contact Hours: 3 per week

**■ CPB338 IDENTIFYING & RESPONDING TO STUDENT DIFFERENCE**

This unit analyses the range of perceptions and reactions to individual difference; the psychological explanations for the sociocultural contexts of difference in schools; perspectives on the identification and classification of special educational needs. From a commitment to social justice and equity, it examines policy initiatives which impact on learners and teachers; identifies appropriate strategies.

Courses: ED37, ED50, ED51, ED52

Credit Points: 12 Contact Hours: 3 per week

**■ CPB339 TEACHING ABORIGINAL & TORRES STRAIT ISLANDER STUDENTS**

An examination of the cultural, linguistic and social background of Aboriginal and Torres Strait Islander students and their current educational needs. Curriculum issues and classroom strategies for more effective teaching of Aboriginal and Torres Strait Islander students, together with strategies for working with parents and the community.

Courses: ED37, ED50, ED51, ED52

Credit Points: 12 Contact Hours: 3 per week

**■ CPB420 CONTEMPORARY ISSUES IN EDUCATION**

The cultural and social contexts and psychological factors relevant to the processes of education and schooling in an era of change; application of the principles of social justice to the evaluation of educa-

tion policy and practice, and analysis of social and personal action relevant to educational change.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPB421 PHILOSOPHICAL PERSPECTIVES ON SCHOOLING

Developments in philosophy of education which account for the micro-institutional practices of schooling, school prospectuses, timetables, school architecture, classroom work, equity issues.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPB422 PHILOSOPHY IN THE CLASSROOM

Philosophical belief systems underlying approaches to learning, knowledge and curriculum. Justice and fairness to both teachers and students in the classroom. Current developments in classroom practices.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPB423 SOCIETY, SOCIAL POLICY & EDUCATION

Education as social policy; historic, economic and political context of educational policy making; education and social justice; policy, change and practice.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPB424 SOCIOLOGY OF THE SCHOOL

Using a sociological framework, this unit provides teachers and administrators with an opportunity to analyse schools and classrooms within a social context; students are able to draw implications to assist them in carrying out their teaching and administration practices more effectively.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPB425 AESTHETIC EDUCATION

An examination of aesthetics, both traditional and contemporary, and the relevance they have for understanding the role the arts plays in education; the democratisation of culture, encouraging more representative forms of cultural production; evaluation of the arts, particularly in the classroom; theory of creativity and the imagination; the deficiencies of an individualistic ethic in the arts.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPB440 THE COMMUNITY & SCHOOL ADMINISTRATION

Provides students with an opportunity to broaden their understanding of the community context in which schools operate; examines examples of successful community-school linkages such as school advisory councils and develops students' capacities to manage and develop these linkages.

Courses: ED23, ED26, ED65

Prerequisites: Minimum of one year's teaching experience.

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPB441 HISTORY OF AUSTRALIAN EDUCATION

The growing involvement of the State in education during the nineteenth century; factors which led to the State accepting responsibility for elementary education; growth of educational bureaucracies; State involvement in secondary education; establishment of

tertiary education in Australia; the influence of particular reports on Australian education.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPB442 EDUCATION FOR A MULTICULTURAL SOCIETY

Over the last decade, multiculturalism has replaced assimilation as an approach to migrants. In this unit teachers are given specialist knowledge and skills to prepare students for life in a multicultural society.

Courses: ED26, ED72

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPB443 COMPARATIVE & INTERNATIONAL EDUCATION

Australia's identity in the international community has significant implications for education. This unit introduces the major international issues in education through studies of global developments and by comparing Australian education with other cultures; develops skills and knowledge appropriate for teachers of the 1990s and the next century.

Courses: ED26, ED72

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPB444 ISSUES IN ABORIGINAL EDUCATION

Factors influencing the position of Aborigines and Islanders in Australian society; government policies; Aboriginal culture and education; current initiatives; participation of Aborigines in policies and programs.

Courses: ED26, ED72

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPB445 CAREER & LIFE PATTERNS OF WOMEN TEACHERS

The relevance of theories of adult development and career development for understanding the personal and professional life patterns of women teachers. Emphasis on acquiring personal coping strategies. This unit is also of relevance to male teachers seeking to understand the conflicts facing female teachers.

Courses: ED23, ED26, ED72

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPB446 WOMEN, EDUCATION & SOCIAL CHANGE IN AUSTRALIA

Education and other social policy initiatives relating to women; current debates on the status of women and education's intervening role; ideology and the position of women; effects of economic and technological change; educational implications.

Courses: ED26, ED72

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPN603 CHANGING AGENDAS IN LEADERSHIP EDUCATION

Addresses the differing approaches to the study of leadership, including organisation theory, cultural analysis, critical theory, the increasing number of women in leadership positions and the very essence of leadership itself; enhances the student's understanding of leadership in the 1990s and provides a broad base for work in the leadership area.

Courses: ED11, ED13, ED73

Credit Points: 12      Contact Hours: 3 per week

#### ■ CPN 604 EQUITY & EDUCATIONAL MANAGEMENT: ISSUES & STRATEGIES

The implications of equity, theory and practice at all levels of educational management; issues of gender and educational leadership, disability, race and ethnicity; focuses on processes for overseeing the implementation of change; accountability and the measurement of progress according to equity indicators;

organisational culture from the perspectives of leaders, line managers and senior administrators.

**Courses:** ED11, ED13, ED73

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ CPN605 ORGANISATIONAL CULTURES & EDUCATION LEADERSHIP

Investigates dimensions of culture in educational organisations and works through cultural analyses, design, strategic management and leadership; the rhetoric of policy versus the reality of practice; explores different leaders and their communities.

**Courses:** ED11, ED13, ED73

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ CPN606 EDUCATIONAL LEADERSHIP, POWER & CAREERS

Focuses on crucial issues in the nature of work and an understanding of the concept of career in the changing world in the 1990s; provides an overarching view of discontinuity in social change and a basis for individuals to reconsider their own self-development and the management of their own careers.

**Courses:** ED11, ED13, ED73

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ CPN607 INTERNATIONAL & DEVELOPMENT EDUCATION: POLICY & PRAXIS

Perspectives on global political economy and the role of education; education and culture; education, hegemony and resistance: issues of gender, class and race; education and development; strategies of social and economic change in developing countries; transformative education: theory pedagogy and curriculum; social justice and policy issues in global context.

**Courses:** ED11, ED13, ED71

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ CPN608 GENDER EQUITY & EDUCATION POLICY

Feminist theory, social policy and education policy; gender equity policies in education; approaches to gender equity policy in international and comparative contexts; historical perspectives; contemporary debates; analysing gender equity policies; gender reform and strategies for change.

**Courses:** ED11, ED13, ED71

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ CPN609 ADVANCED POLICY ANALYSIS IN EDUCATION

Social policy, educational policy and social theory; competing theoretical approaches towards the role of the state; education policy issues in Australia and the broader policy context; key influences on policy developments; approaches to policy analysis; case studies analysed from a variety of approaches; strategies for change; relationship between theory and practice.

**Courses:** ED11, ED13

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ CPN610 YOUTH POLICIES & POST-COMPULSORY EDUCATION

The field of debate; a critical examination of responses and controversies around current policy trends in post-compulsory and higher education; critical policy analysis: assumptions underlying current trends and competing definitions of key concepts; reconceptualisation of youth policy in relation to increased retention and participation rates; case study analysis.

**Courses:** ED11, ED13, ED71

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ CPP501 SOCIO-CULTURAL ISSUES IN EDUCATION

Examines socio-cultural contexts of schooling; the pastoral care and special needs industries; resistance and disruption in schools; disability and integration.

**Course:** ED24

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ CPP510 SOCIO-CULTURAL CONTEXTS OF HUMAN RELATIONSHIPS EDUCATION

Poverty, marriage and partnerships, divorce and separation; family violence; disability.

**Courses:** ED22, ED24, ED67

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ CSA259 INTRODUCTION TO COMPUTING

An overview of computing ranging from the impact of computers on society through to the details involved in database organisation and the inter-relationship between these facts; emphasis is on demystifying computers; an understanding of the abilities of computers and their role in health science.

**Courses:** LS15, SC10

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ CSB087 PROGRAMMING LANGUAGES FOR TEACHERS

Further software development; techniques of program development; top-down design and modularity; computer programming using appropriate languages.

**Course:** ED50

**Prerequisite:** ISB095

**Incompatible with:** CSB013 and CSB015

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ CSB155 INTRODUCTION TO COMPUTING

The computer as a processor of information; an overview of computers, computer organisation, systems software, programs and the range of programming languages; the design of algorithms using structured techniques and stepwise refinement; implementation and execution of such algorithms using PASCAL.

**Courses:** BS50, MA34, SC30

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ CSB191 INTRODUCTION TO COMPUTING

Introduction to technical computer programming; teaching programming techniques for the writing of correct and efficient programs for limited, but typical engineering problems; using structured programming techniques to write, modify and enhance program applications on selected computer systems using the PASCAL programming language.

**Courses:** CE42, EE43, EE44, IF53, ME45, ME46

**Co-requisites:** MAB193, CEB184

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ CSB263 COMPUTING

Introduction to computer programming; simple applications in the BASIC language. Topics include: computer utilisation; organisation; hardware; software; data organisation; information storage retrieval; computer systems; programming in BASIC; problem solving; analysis of numerical and non-numerical problems; introduction to FORTRAN; use of WordPerfect, VP Planner and dBase III Plus.

**Courses:** CH32, SC10

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ CSB280 PROGRAMMING PRINCIPLES

Continuation of the material included in CSB155; develops structured program design techniques; intro-

duces advanced algorithms and methods of proving program correctness.

**Courses:** BS55, SC30      **Prerequisite:** CSB155  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CSB291 INTRODUCTION TO FORTRAN

Mainframe and industry standard micro-based systems, applying the programming techniques acquired in CSB191 to the FORTRAN programming language.

**Courses:** CE42, EE44, IF53, ME45  
**Prerequisite:** CSB191  
**Credit Points:** 4      **Contact Hours:** 2 per week

#### ■ CSB490 SOFTWARE ENGINEERING

The structure and syntax of well-designed programs as well as programming techniques for use in electronics, communications and electrical engineering, using examples from C and UNIX.

**Courses:** EE43, EE44      **Prerequisite:** CSB191  
**Credit Points:** 6      **Contact Hours:** 3 per week

#### ■ CSB860 COMPUTER SYSTEMS FOR TEACHERS

Single and multi-user operating systems; interaction with computer systems and management of stored information; definition and implementation of algorithms in suitable language; selection of computable representation for real world concepts and application in computer programs; hierarchy of levels of abstraction; adoption of abstracted views of real world information processing or problem-solving situations; capabilities and limitations of conventional, sequential processing machine architectures.

**Course:** ED50  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CSB980 PROJECT

Students in IF23 only, either individually or in small groups, undertake a substantial project relevant to the needs of industry and designed to provide insight into industrial requirements. Each project is carried out under the supervision of a staff member whose interests lie in the field of the project. Before work commences on the project, student(s) and supervisor must agree on the topic of the project and the scope of the work to be attempted.

**Course:** IF23  
**Co-requisite:** This unit must be done in the final year of the course  
**Credit Points:** 30

#### ■ CSN100 THEORY OF COMPUTING 1

Formal properties of programs; the view of programs as predicate transformers is developed as a method of constructing provably correct algorithms; methods of software development based on formal specifications.

**Courses:** CS36, CS55  
**Prerequisite:** ITB431 (or equivalent)  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CSN110 COMPILER CONSTRUCTION

The organisation and structure of language translators and compilers. Some emphasis is placed on those parts of these software tools which are amenable to formal analysis. The material extends undergraduate studies in algorithm design and in the semantics of formal languages. Special attention is paid to techniques which are applicable in the implementation of special purpose languages such as database query languages and production systems.

**Courses:** CS36, CS55  
**Prerequisite:** ITB440 (or equivalent)  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CSN202 PROJECT

This is a two semester unit. In the first semester students must attend lectures/seminars for one hour every two weeks (on average). They also engage in literature search and other design aspects of their research project. The topic of research is to be decided by agreement between the student and a Faculty staff member acting as project supervisor. The second semester is a continuation and completion of the research project initiated in the first semester.

**Course:** CS55  
**Credit Points:** 24

#### ■ CSN210 DISTRIBUTED SYSTEMS

Provides a thorough understanding of the rationale for distributed computer systems, their domain of application and the principles of distributed control underlying their construction. A number of representative systems will be examined.

**Courses:** CS36, CS55  
**Prerequisites:** ITB430, ITB450 or equivalent  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CSN220 ARTIFICIAL INTELLIGENCE

Artificial intelligence in the computing industry; aspects of artificial intelligence which have given rise to commercial products; background research efforts which promise to have major impact on the use of computers in the near future.

**Courses:** CS36, CS55  
**Prerequisite:** ITB442 or equivalent  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CSN300 THEORY OF COMPUTING 2

Formal language theory; investigation of various types of simple automata and pushdown automata and their relation to context free languages; discussion of some aspects of computational complexity.

**Courses:** CS36, CS55  
**Prerequisite:** ITB440 or equivalent  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CSN301 MINOR PROJECT

#### ■ CSN302 MINOR PROJECT

#### ■ CSN303 MINOR PROJECT

#### ■ CSN304 MINOR PROJECT

Students may undertake a number of minor projects to pursue specialised areas, or broaden their knowledge in areas of relevance to their employment. Topics are decided by agreement between the student and a staff member acting as supervisor.

**Course:** CS36  
**Credit Points:** 12

#### ■ CSN310 PARALLEL PROCESSING

The modelling of parallel systems and the design methodologies used in their construction; applicable software systems and methodologies; the formal analysis of concurrent systems is based on the theory of communicating sequential processes.

**Courses:** CS36, CS55      **Prerequisite:** CSN210  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CSN340 COMPILER LABORATORY

In-depth treatment of topics of contemporary translator construction in a practical setting; code generation methods for advanced computer architecture.

**Courses:** CS36, CS55      **Prerequisite:** CSN110  
**Credit Points:** 12      **Contact Hours:** 3 per week

**■ CSN350 ADVANCED GRAPHICS 1**

Advanced level extension of the material in the undergraduate curriculum; the use of facilities provided by existing graphics systems.

**Courses:** CS36, CS55 **Prerequisite:** ITB441  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ CSN360 ADVANCED GRAPHICS 2**

Specialised areas of computer graphics. Topics will be agreed between staff and students.

**Course:** CS36 **Prerequisite:** CSN350  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ CSN370 SPECIAL TOPIC**

Aspects of scientific interest at that time. See School noticeboards for further information.

**Courses:** CS36, CS55 **Prerequisite:** To be advised.  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ CSN380 NEURAL NETWORKS**

The purpose, scope, and history of neurocomputing; various models of artificial neurons and a number of learning rules for supervised and unsupervised learning. Pattern classifiers, associative and auto associative neural network arrays are treated.

**Courses:** CS36, CS55  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ CSN450 MAJOR PROJECT**

This year long unit enables students to pursue a specialised topic in greater depth. Topics are decided by agreement between the student and a faculty member acting as supervisor.

**Course:** CS36  
**Prerequisite:** Completion of eight units of the Master of Applied Science (Computing).  
**Credit Points:** 24

**■ CUB212 TEACHERS AS CURRICULUM DECISION MAKERS**

Analysis of state policies and curriculum frameworks to gain an understanding of the responsibility which teachers are expected to take with respect to curriculum development and school community involvement. Ways in which literature deals with curriculum decision-making. The social and political nature of curriculum decision making. The role of parents and other members of the wider community in curriculum decision-making and the development of skills necessary to facilitate a collaborative approach to curriculum and school development.

**Course:** ED41 **Prerequisite:** CUB211  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ CUB281 NEGOTIATED STUDY IN TEACHING**

Students identify a particular area within the teaching role which they would like to explore in more depth. This may be related to the career pathway they plan to take or the teaching and curriculum implications of a particular problem or specific teaching context in which they are interested. The lecturer determines if the student has the necessary prerequisite knowledge and skills to pursue the topic and determines a suitable program of reading. The lecturer meets with the student on a regular basis to discuss progress. The negotiated study may take the form of an investigative study within a particular school context.

**Course:** ED41  
**Credit Points:** 8 **Contact Hours:** 3 per week

**■ CUB282 MANAGING EXCEPTIONAL CHILDREN**

Teachers need to develop approaches, strategies, programs and modifications to develop an inclusive curriculum which enhances learning and fosters the abilities for all children. This is designed to refine education students' theories and practices related to the management of the diverse range of children found within the primary classroom. Understanding the range of exceptional children. Essential knowledge and practices in classroom organisation, student motivation, curriculum modification processes and classroom management.

**Course:** ED41 **Prerequisite:** CUB212  
**Credit Points:** 8 **Contact Hours:** 2 per week

**■ CUB330 EDUCATION LAW AND THE BEGINNING TEACHER**

Legal literacy; sources of education law; students and rights; students law and schools; parents law and education; teachers rights and obligations; teachers and school-based accidents; educational malpractice.

**Courses:** ED50, ED51, ED52  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ CUB331 MAINSTREAM INTEGRATION OF CHILDREN WITH DISABILITIES**

Historical and philosophical analysis of the evolution of education and education policy related to children with special needs and disabilities. Individuals exhibiting learning problems: identification, diagnosis, profiling and program development. Curriculum issues related to integration: communication; classroom management; use of resources; Individual Educational Programs (IEP); team teaching; networking; curriculum design and modification; the multifaceted role of a consultant/adviser in school.

**Course:** ED50  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ CUB410 TEACHERS & THE CURRICULUM**

Development of concepts and strategies essential to the processes of school-based curriculum development and the design, implementation and evaluation of relevant school programs. It relates the significance of curriculum in the broader sense to a spectrum of individual professional teaching perspectives.

**Courses:** ED26, ED63  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ CUB413 CURRICULUM, MAKING IT HAPPEN AT SCHOOL**

Implementing curriculum programs in specific school settings; in-depth study of the literature and reflection on practice and experience; the practical application of specific approaches and strategies for effective curriculum implementation.

**Courses:** ED26, ED63  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ CUB414 ADULT EDUCATION**

The design and implementation of educational programs for adults. Theories relating to adults as educational participants, the educational process and the environment in which it takes place. Emphasis is on the provision of effective adult education.

**Course:** ED26  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ CUB431 CLASSROOM MANAGEMENT: MODELS & PRACTICE**

Practical and research-based approaches to classroom management and discipline for teachers. Includes

techniques that motivate pupils in daily teaching, rule development, teaching for responsibility, dealing with parents and communication and settings for on-task behaviour and meeting student needs.

**Courses:** ED26, ED64

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CUB432 TEACHERS & ISOLATED LEARNERS

The isolated community; the isolated learner; consideration of various types of teaching situations in rural schools, especially small schools and distance education; teaching strategies; support services.

**Course:** ED26

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CUB433 TEACHING STRATEGIES

Evaluation of the student's teaching strategies; the literature on teaching strategies; critical evaluation of strategies/models of teaching available.

**Courses:** ED26, ED64

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CUB435 FACILITATING PROFESSIONAL DEVELOPMENT & INSTITUTIONAL CHANGE

Professional development as a central factor in the facilitation of institutional change; authentic case studies used to examine collaborative supervision and facilitative leadership within the context of change with the goal of developing quality institutions.

**Courses:** ED24, ED26, ED64

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CUB436 ANALYSING EDUCATIONAL PRACTICE

The concepts and skills to analyse educational practice; analytical frameworks drawn from evaluation and comparative education; optional overseas field study.

**Courses:** ED26, ED63

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CUB442 INTRODUCTION TO EDUCATIONAL ADMINISTRATION

Introduction to educational administration with particular reference to the theory and practice of work roles, motivation, leadership, decision making, change, conflict, needs assessment and presentation of written reports for various educational settings.

**Course:** ED26

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CUB443 CLASSROOM ASSESSMENT PRACTICES

Examination of the nature and purposes of classroom assessment; analysis of main approaches to assessing student progress; developments in assessment practices in Queensland with particular reference to the ROSBA and Viviani reports; improving teacher-made tests; advantages and disadvantages of a wide range of test instruments used in classrooms.

**Courses:** ED26, ED64

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CUB444 EDUCATORS & THE LAW

Legal literacy; sources of education law; students and rights; students' law and schools; parents' law and education; educators rights and obligations; educators and school-based accidents; educational malpractice; educational administration and law.

**Courses:** ED23, ED26, ED63

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CUN601 CURRICULUM INVESTIGATIONS

The ways in which questions about curriculum are analysed in various contexts; reviews trends in research methodologies specific to the field of curriculum and issues which are raised in the curriculum research literature; analyses traditional research methodologies; explores the impact on curriculum of approaches such as action research and teacher as researcher; investigates curriculum evaluation.

**Courses:** ED11, ED13

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CUN602 PROFESSIONAL DEVELOPMENT

A dynamic process of learning that leads to new factual knowledge; this is designed for individual educators as they seek to be both proactive and responsive to the challenge of curriculum change; it cultivates their uniqueness and virtuosity, guided by the individual's judgement, and leads to increased personal understanding and awareness and informs and supports professional action at a higher level and in a more integrated way.

**Courses:** ED11, ED13

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CUN603 EMPOWERMENT FOR CURRICULUM CHANGE

The process of curriculum decision-making and change from the perspectives of 'Who benefits from the change?' and 'Whose values are involved?'; theories of educational change and conceptions of the leadership role as they relate to curriculum change; theoretical framework for considering issues related to power and empowerment.

**Courses:** ED11, ED13

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CUN604 COLLABORATIVE SUPERVISION IN CURRICULUM PRACTICE

Collaborative approaches to supervision designed to empower educators from a variety of professional contexts in relation to the ongoing improvement of curriculum practice in teaching/learning environments; defines supervision; critically evaluates models of supervision; studies in depth collaborative approaches and applies these to teaching/learning environments in a variety of contexts.

**Courses:** ED11, ED13

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ CUP420 PROFESSIONAL & CURRICULUM STUDIES 1

The theories and practices which make up the educational repertoire of a classroom teacher; development of a coherent conceptual understanding of teaching and managing learning, particularly as it applies to arts education and physical education.

**Course:** ED36

**Credit Points:** 12      **Contact Hours:** 4 per week

#### ■ CUP421 PROFESSIONAL & CURRICULUM STUDIES 2

Investigation of the process of curriculum development, particularly in social environment, human relationships education, health studies, and science in primary schools.

**Course:** ED36

**Credit Points:** 12      **Contact Hours:** 3 per week



**■ CUP501 CURRICULUM FOUNDATIONS**

Examination of the personal and generic theories of curriculum practice, and the foundations for teachers and consultants to develop a framework for curriculum thinking and decision making which emerges from contemporary curriculum theory.

Course: ED22

Credit Points: 12      Contact Hours: 3 per week

**■ CUP502 CURRICULUM DEVELOPMENT & INNOVATION**

Application of the curriculum development process in specialist teaching areas; the process of innovation and change appropriate for particular educational settings. Frameworks and skills for evaluating existing programs and their implementation.

Course: ED22

Prerequisite: CUP501

Credit Points: 12      Contact Hours: 3 per week

**■ CUP503 CURRICULUM: LEARNERS WITH SPECIAL NEEDS**

Introduction to curriculum development and situational/self analysis; innovative program approaches for learners with special needs; changing ourselves and our educational environments; evaluation of curriculum development; resource teacher support for school based curriculum development, human relationships education and participation and equity; communication about improved programs.

Course: ED24

Credit Points: 12      Contact Hours: 3 per week

**■ EAB103 AUSTRALIAN FAMILIES & EARLY EDUCATION**

Family and community analysis, historical view, economic, political, social and cultural factors; issues affecting families in Australia today employment patterns, ideology of family, effect of technological change, inequalities and social justice; personal approaches and critical reflection.

Courses: ED40, ED42

Prerequisite: LEB240

Credit Points: 8      Contact Hours: 2 per week

**■ EAB105 EARLY CHILDHOOD EDUCATION CONTEXTS**

Exploration of childhood services; relationships of early childhood services to Australian and overseas contexts; implication of beliefs for practice in early childhood education; the early childhood teacher as an agent for empowering parents and their children.

Course: ED40

Credit Points: 8      Contact Hours: 2 per week

**■ EAB112 INTEGRATED CURRICULUM FOR 3-5 YEAR OLDS**

Total program planning and implementation in kindergarten and preschool settings; extension of pedagogical content to an advanced level; philosophy; alternative curriculum models; child development in practical curriculum decision-making; integration across content areas; working with parents and members of the community.

Course: ED40

Credit Points: 12      Contact Hours: 3 per week

**■ EAB113 INTEGRATED ROUTINES & LEARNING FOR UNDER 3s**

Practical aspects of providing physical care and nutrition for young children; individualised quality care for young children (basic trust, bonding, attachment); adults as responsive, sensitive, interactive partners; creating a safe, stimulating and supportive environment (space, resources, time, health and nutrition); the

importance of the contribution of all adults involved with children aged birth to three years.

Course: ED40

Credit Points: 12      Contact Hours: 3 per week

**■ EAB125 EARLY CHILDHOOD CURRICULUM: MUSIC & MOVEMENT**

Music and movement as a way of learning and knowing for young children; the child-centred music learning environment; experience within the creative process itself; development of sensitivity to sounds and movement, and their interaction; understanding the basic concepts of musical and movement elements; acquisition of the simple skills, teaching techniques and curriculum principles which allow the child to operate as a creative musician and mover; and the development of positive attitudes toward music, movement and the self.

Course: ED40

Credit Points: 8      Contact Hours: 3 per week

**■ EAB126 EARLY CHILDHOOD CURRICULUM: SCIENCE/HEALTH EDUCATION**

The organisation of physical and interpersonal environments which support young children's natural enquiry activity in the sciences; ways in which early childhood environments can be organised to support active, enquiry learning; varied and relevant resources for the content of biological, social and physical sciences; the immediate classroom, the outdoors and the local neighbourhood and the social, cultural and physical features of these environments.

Course: ED40

Credit Points: 8      Contact Hours: 3 per week

**■ EAB127 EARLY CHILDHOOD CURRICULUM: LANGUAGE & LITERACY 2**

Planning, implementation and evaluation of developmentally appropriate programs to promote the spoken and written language of children from birth to eight years of age; development of learning environments, teaching strategies and learning experiences to assist children's linguistic knowledge, understanding and use in a variety of contexts and for a variety of purposes; monitoring and reporting individual progress, with particular emphasis on the early years of primary school.

Course: ED40

Credit Points: 12      Contact Hours: 3 per week

**■ EAB128 EARLY CHILDHOOD CURRICULUM: MATHEMATICS & SCIENCE**

Preparation of learning environments for the development of mathematics and science for children from birth to eight years of age; development of learning centres and associated methods characteristic of environments that foster active, enquiry learning; use of content knowledge in concert with the needs of individual children in culturally relevant ways; monitoring and reporting individual progress; with particular emphasis on the early years of primary school.

Course: ED40

Credit Points: 12      Contact Hours: 3 per week

**■ EAB144 INTEGRATING THE EXCEPTIONAL CHILD IN EARLY CHILDHOOD**

Foundations for least restrictive early education; philosophical and policy issues; integrating early intervention; nature of exceptionalities; methods for meeting special needs; team work with support per-

sonnel; evaluation of individualised programs and teaching strategies; management of behaviour; family dynamics and parental needs.

Courses: ED40, ED42, NS48

Credit Points: 8 Contact Hours: 2 per week

#### ■ EAB154 TEACHING STRATEGIES 4: CHILD CARE

Monitoring and reporting on children's progress; managing children's behaviour; developing a personal philosophy; integrating across content areas; advanced data gathering techniques for teachers. A negotiation approach allows students to focus their studies in the selected context of early childhood education of child care. Eighteen days teaching practice in a child care centre.

Course: ED40

Prerequisite: EAB153

Credit Points: 12 Contact Hours: 2 per week

#### ■ EAB155 TEACHING STRATEGIES 4: KINDERGARTEN/PRESCHOOL

Monitoring and reporting on children's progress; managing children's behaviour; developing a personal philosophy; integrating across content areas; advanced data gathering techniques for teachers. A negotiation approach allows students to focus their studies in the selected context of early childhood education of kindergarten. Eighteen days teaching practice in a child care centre.

Course: ED40

Prerequisite: EAB153

Credit Points: 12 Contact Hours: 2 per week

#### ■ EAB156 TEACHING STRATEGIES 4: YEARS 1-3

Monitoring and reporting on children's progress; managing children's behaviour; developing a personal philosophy; integrating across content areas; advanced data gathering techniques for teachers. A negotiation approach allows students to focus their studies in the selected context of early childhood education of P-3. Eighteen days practice in an early primary school setting.

Course: ED40

Prerequisite: EAB153

Credit Points: 12 Contact Hours: 2 per week

#### ■ EAB157 TEACHING STRATEGIES 5

Preparing for a teaching career; teacher as professional practitioner; ethical and legal issues; administration and leadership; career paths in early childhood education; advocacy; government policies; common and specialised studies across the full range of early childhood education and care services. Twenty days teaching practice in a child care, kindergarten, preschool or Years 1-3 setting.

Course: ED40

Credit Points: 12 Contact Hours: 3 per week

#### ■ EAB160 ESL IN EARLY CHILDHOOD SETTINGS

The nature and functions of language; grammar of English from a teaching/learning perspective, particularly in relation to English learners; teaching English as a second language; teaching specific language skills; evaluation and assessment.

Courses: ED40, NS48

Credit Points: 8 Contact Hours: 2 per week

#### ■ EAB161 CULTURAL INCLUSIVITY IN EARLY CHILDHOOD

Aspects of diverse disciplines and the emergent common principles, aims, objectives and practices that enhance the development of the professional; culturally inclusive practices; cultural bias; criteria for evaluating resources and curricula; cultural in-

clusivity: sociology, multicultural studies, aboriginal studies, gender studies and early childhood education and history.

Courses: ED40, NS48

Credit Points: 8 Contact Hours: 2 per week

#### ■ EAB166 SPECIAL PROGRAMS FOR YOUNG CHILDREN

Meeting particular needs of young children through special programs; procedures for setting up, obtaining funding, assessing needs, formulating objectives, devising programs, evaluating outcomes of programs including those for isolated children, socially disadvantaged children and culturally different children.

Course: ED40

Credit Points: 8 Contact Hours: 3 per week

#### ■ EAB167 CHILDREN'S LITERATURE FOR EARLY CHILDHOOD SETTINGS

The significance of children's literature as it increasingly influences the content of literacy and language programs; origins and antecedents of stories as they reflect society; critical evaluation of books being produced nationally and internationally; acquisition of skills of selection for use in early childhood settings; planning quality long-term literature programs for children in early childhood settings.

Course: ED40

Credit Points: 8 Contact Hours: 3 per week

#### ■ EAB176 MEDIA FOR EARLY CHILDHOOD TEACHERS

Examination of media selection, use and evaluation; integration of learning through media; planning and production in areas of graphics, audio, projected and photographic media and television; development of media for early childhood teaching situations.

Course: ED40

Credit Points: 8 Contact Hours: 2 per week

#### ■ EAB180 DANCE EDUCATION FOR YOUNG CHILDREN

Study of alignment and physiology of young bodies; increasing movement awareness for children through games and simple dance structures.

Course: ED40

Credit Points: 8 Contact Hours: 2 per week

#### ■ EAB281 EARLY CHILDHOOD 2

Combination of the theoretical underpinnings of child growth and development in a range of interdisciplinary settings for children from three to eight years with the practical application of a child study. This unit provides the students with the opportunity to develop skills as observers in a range of settings in order to see and record what is happening as accurately and objectively as possible to increase their understanding of child behaviour and development. This unit provides the opportunity to interpret the observational data in a range of educational settings.

Course: ED41

Prerequisite: EAB280

Credit Points: 12 Contact Hours: 3 per week

#### ■ EAB282 EARLY CHILDHOOD 3

Student teachers compare and contrast similarities and differences in early childhood environments with teaching in other educational environments. The teacher's role in the classroom and outside the classroom is explored. Students are encouraged to examine their own personal qualities through self-awareness activities and to confront their attitudes and biases as they explore teaching practices that are developmentally appropriate. Students draw on concepts from psychology and sociology in undertaking these tasks.

**Course:** ED41 **Prerequisite:** EAB281  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EAB283 EARLY CHILDHOOD EDUCATION

The issue of developmentally appropriate practice in early childhood education is investigated for all areas of a child's development through an integrated approach. Appropriate curriculum planning based on teacher's observations and recordings of each child's special interests and developmental progress. Curriculum planning as an interactive process.

**Course:** ED41 **Prerequisite:** EAB280  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ EAB300 EARLY CHILDHOOD ARTS 1

Introductory principles, practices, philosophies and theories in the visual and performing arts as they relate to young children in various contexts; the arts as a way of knowing and expressing; creativity versus artistry; an overview of artistic development from birth to adolescence; the arts, culture, education and the young child; aesthetics and aesthetic development in early childhood; introduction to the integration of the arts. A main focus will be on the elements and concepts in the areas of the visual arts, music, drama, movement and dance with specific emphasis given to the visual arts: the development of the visual arts for children under five years of age and for school aged children; assisting artistry with children under five years of age and with school aged children.

**Course:** ED52  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EAB301 EARLY CHILDHOOD ARTS 2

Application of principles, practices, philosophies and theories in the areas of music, drama, movement and dance, with specific examples provided for how these arts areas provide unique opportunities for knowing and understanding. Children's development and ways in which this development may be assisted is examined in the areas of music, dance, and drama across two age categories - under five years of age and school age. The integration of the arts in relation to the unique, shared elements and concepts across the various domains, and advocacy in the arts.

**Course:** ED52  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EAB302 EARLY CHILDHOOD FOUNDATIONS 1

This subject addresses the biological processes which are the foundation of physical, motor and perceptual development of children from birth to eight years; prenatal factors which affect physical, and motor development; growth patterns and changes in body systems which occur in infancy and in young children; the effects of maturation on development; development of perceptual systems (visual, auditory, tactile-haptic, kinaesthetic and vestibular); sensitivity and organisation of these systems; phases and patterns in motor development and the factors affecting that development; observational methods and techniques through which physical, motor and perceptual features of development of children can be analysed.

**Course:** ED52  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EAB303 EARLY CHILDHOOD FOUNDATIONS 2

Review and analysis of current knowledge of the processes and features of language and cognitive development of children birth to 8 years of age; language acquisition and communication; interrelation-

ships between language and thought; the knowledge base and cognitive processes; analysis of observational data on children's behaviour in the area of language and cognition and using such analysis to plan for children's needs, interests and abilities; links with other aspects of development.

**Course:** ED52  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EAB304 EARLY CHILDHOOD FOUNDATIONS 3

Theories of social, emotional and creative development and their application; theoretical and empirical approaches to the study of creativity and self-expression from birth to eight years; the nature of creativity and its relationship to other areas of development; children's recognition and production of emotions; processes involved in the socialisation of emotions; sex differences and contextual influences on development; individuality, self-knowledge and the development of personal identity; socialisation in the context of relationships, in particular, those within the family, the peer context and the classroom.

**Course:** ED52  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EAB305 EARLY CHILDHOOD LANGUAGE EDUCATION 1

Theories of development and learning of language and literacy from early years through emergent literacy to fluency with the use of a variety of genres of written language; early literacy learning processes, and the teaching practices, strategies and resources to support these in preschools and primary schools; working with parents of children to enhance literacy learning in home, child care, kindergarten and other settings; planning based on observations in order to assist children in educational contexts.

**Course:** ED52  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EAB306 EARLY CHILDHOOD LANGUAGE EDUCATION 2

Review of previous experiences in literacy education from practica and the earlier subject; observation and assessment of the literacy learning abilities of a child as a basis for the development of a profile for planning; reporting to parents; development of frameworks for and planning of integrated language and literacy education programs appropriate to a range of children and a variety of educational contexts; modification of programs for children with special needs; study of issues in literacy and literacy education in early childhood contexts for children from birth to eight years of age.

**Course:** ED52  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EAB307 EARLY CHILDHOOD MATHEMATICS EDUCATION

Approaches to the teaching and learning of mathematical concepts are reviewed with a focus on the development of the child; the sequence of development from early mathematical understandings to the application of number within in a problem-solving framework; applications of technology.

**Course:** ED52  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EAB308 EARLY CHILDHOOD SCIENCES, MATHEMATICS & TECHNOLOGY

Overview of early childhood science, social studies and maths topics, concepts and processes; investigation of appropriate monitoring strategies; use of a

variety of technologies; ways in which early childhood environments can be organised to support integrated, active, enquiry learning, with relevant resources from the immediate classroom, the outdoors, families and the local neighbourhood.

Course: ED52

Credit Points: 12 Contact Hours: 3 per week

**EAB309 INTEGRATED EARLY CHILDHOOD CURRICULUM 1**

Investigation of distinctive curriculum practices in use in Australian early childhood settings such as preschool/kindergarten, child care centres and the first years of primary school; ideas informing practice; curriculum principles which emphasise the importance of children, parents, community and teachers work collaboratively; play as an integrating force in children's learning; teaching and learning occurring within responsive relationships where difference is valued; the nature of teacher decision making and the knowledge bases teachers bring to their curriculum implementation work.

Course: ED52

Credit Points: 12 Contact Hours: 3 per week

**EAB310 INTEGRATED EARLY CHILDHOOD CURRICULUM 2**

Current practices in Australian early childhood settings, understood within philosophical and historical perspectives; examination of key ideas informing the holistic curriculum approaches of the field; theories and practices associated with play; the celebration of difference with particular attention given to practices which are responsive to the values and needs of Aboriginal and Torres Strait Islanders; personalised teaching and learning; indepth study of the knowledge base of the early childhood teacher practitioner; critical analysis of approaches to designing curriculum for the expanding range of services for young children and families in Australia.

Course: ED52

Credit Points: 12 Contact Hours: 3 per week

**EAB311 ALTERNATIVE PROGRAMS IN EARLY CHILDHOOD**

This subject will aim to broaden students' knowledge of a wide range of community programs which support the needs of children and families outside of mainstream early childhood settings (e.g., visits to community Aboriginal and Torres Strait Islander programs). A resource file of programs will be established by students to aid in future teaching, to help refer families to appropriate services, to build up a deepened awareness of models of parent-professional communication and to suggest alternative career paths in early childhood.

Course: ED52

Credit Points: 12 Contact Hours: 3 per week

**EAB312 CASE STUDIES IN EARLY CHILDHOOD & FAMILY LITERACY**

Introduction to case study methods, adult literacy and intergenerational and family literacy, including clients from English and Non-English speaking backgrounds; planning and implementing an intergenerational literacy program with a client and the young children; reporting and reflecting upon the program; contributing to ongoing research in family literacy.

Course: ED52

Credit Points: 12 Contact Hours: 3 per week

**EAB313 CHILDREN'S LITERATURE FOR EARLY CHILDHOOD SETTINGS**

A study of the significance of children's literature as it furnishes literacy and language programs: origins

and patterns of stories both traditional and contemporary as they reflect society; critical evaluation of books published nationally and internationally; acquisition of skills of selection for use in early childhood settings; planning appropriate long term quality-literature programs that include a wide range of genre and current issues.

Course: ED52

Credit Points: 12 Contact Hours: 3 per week

**EAB314 CHILDREN, TEACHERS & THE ENVIRONMENT**

The exploration of interactions between individuals and their environments; the development of "whole school/whole centre" policies and practices in Environmental Education in early childhood settings; consideration of ecologically sustainable development and social justice through education about, in and for the environment; a strong focus on teachers of young children exploring their own attitudes, values and actions regarding these goals. The unique perspectives of Aboriginals and Torres Strait Islanders with regard to environmental issues will be examined.

Course: ED52

Credit Points: 12 Contact Hours: 3 per week

**EAB315 CREATING CURRICULUM WITH YOUNG CHILDREN**

In this subject students will examine dilemmas arising when teachers plan to negotiate the curriculum with children and parents in child care, preschool/kindergarten and primary school settings. Students will critically analyse strategies teachers use to create 'spaces' where children are able to construct knowledge in personally relevant ways.

Course: ED52

Credit Points: 12 Contact Hours: 3 per week

**EAB316 EARLY CHILDHOOD ART EDUCATION**

Historical and contemporary trends in art education; philosophy and practice in early childhood visual arts education; in-depth exploration of young children's artistic development and learning; assessment and evaluation of visual arts in early childhood; curating children's art exhibitions; public information about children's artistry; advocacy for improving options for young children in the visual arts.

Course: ED52

Credit Points: 12 Contact Hours: 3 per week

**EAB317 EARLY CHILDHOOD DRAMA IN EDUCATION**

This subject will develop skills and understandings of drama in education; indepth exploration of techniques and strategies to enhance young children's dramatic ways of knowing and learning; assessment and planning for drama across the early childhood curriculum.

Course: ED52

Credit Points: 12 Contact Hours: 3 per week

**EAB318 EARLY CHILDHOOD EDUCATION & FAMILY ISSUES IN AUSTRALIA**

The subject examines contemporary issues facing families such as changing employment patterns, changing family forms, ethnic and cultural diversity and new technologies; in-depth analysis of contemporary issues as they impact on families and on early childhood education; strategies for responding to families and the key issues they face in the context of early childhood education.

Course: ED52

Credit Points: 12 Contact Hours: 3 per week

### ■ EAB319 EARLY CHILDHOOD SOCIO-CULTURAL CONTEXTS

Opportunity to investigate a broad range of issues currently affecting early childhood educators and their clients, with in-depth study of an issue selected from this broad range. Issues include work based child care and the effect on children, families and teachers; vacation care programs and before and after school programs and what this means for primary school children and teachers; early childhood educators as agents of social change; policy decisions made at state and federal levels which affect early childhood education; how changing patterns of work/employment have affected early childhood education; the low status of caregivers in society who are entrusted with children, 'our investment for the future'; the debate about whether child care is a tool for the liberation of women or the repression of other women; children, poverty and early childhood services; children, ethnicity and early childhood services.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

### ■ EAB320 EARLY CHILDHOOD TRANSACTIONS 1

Analysis of interpersonal communications in terms of the students' own socio-cultural context; basic theories, definitions, principles and models of interpersonal communication related to the role of the early childhood educator; interacting empathically and assertively with children, their families, other professionals, and the wider community; awareness of the range of communication skills; accepting the responsibility to lead, delegate and negotiate with individuals and groups; understanding contemporary Australian families, ethical considerations and social justice issues in early childhood education.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

### ■ EAB321 EARLY CHILDHOOD TRANSACTIONS 2

Insights into Australian families and interpersonal processes extended from Early Childhood Transactions 1; diversity and commonality in family childrearing values and practices; the parental role in young children's development; dimensions of parenting behaviour; family-teacher roles; interpersonal skills in practical contexts with families: effective collaborative procedures and skills of listening, giving and receiving feedback, assertion, negotiation and group leadership.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

### ■ EAB322 ETHICAL RESPONSIBILITIES IN EARLY CHILDHOOD

In-depth examination of legal and ethical responsibilities of early childhood educators; historical overview of changing trends in legislation relating to children; current issues in children's rights, including welfare, human rights, child care; professional ethics and the responsibility of the early childhood educator to children, parents, the community, society, colleagues and the profession; advocacy for improved opportunities for young children; case studies of Australian issues in advocacy, ethics and the law.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

### ■ EAB323 EVERYDAY FOOD & SCIENCE FOR YOUNG CHILDREN

An overview of science topics, concepts and processes as experienced in everyday life, in the home and

various early childhood educational settings; exploration of a food cycle approach to learning, with consideration of space, time, resources and teaching strategies; current early childhood policies and practices which affect the needs of children from birth to age eight years; staff health in relation to early childhood program delivery.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

### ■ EAB324 INTEGRATING YOUNG CHILDREN WITH DISABILITIES INTO EARLY CHILDHOOD PROGRAMS

The main focus of this subject is on the integrated approach to teaching children with disabilities through an effective and cooperative team approach of teachers, families and support personnel; philosophical and policy issues for the least restrictive early education for young children with disabilities; the range and nature of disabilities early childhood teachers may encounter in their practice; development, implementation and evaluation of individualised programs; teaching strategies for integration into regular programs; needs and concerns of families; the range of support services available to families and teachers.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

### ■ EAB325 MANAGEMENT OF EARLY CHILDHOOD SERVICES

General management theory and practice; organisational and leadership styles; management of various early childhood services; setting policies and planning for services; implementing day to day tasks and operations; managing and working with people; considering ethical issues and conduct; working outside early childhood services.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

### ■ EAB326 MUSIC EDUCATION & YOUNG CHILDREN

In depth exploration of musical elements in relation to concept development in young children; application of specific techniques for guiding children's understanding, such as solfege, ostinato with Orff-type instruments, and listening with a musical focus; extension of personal musicianship and creativity; integration of music with other areas.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

### ■ EAB327 PRACTICAL CHILD CARE ISSUES

This subject investigates the practical day to day aspects of designing, communicating, implementing and evaluating developmentally appropriate programs for children from birth to eight years. It will focus on B-3 and 5-8 year old care programs.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

### ■ EAB328 RESEARCH IN EARLY CHILDHOOD DEVELOPMENT

Research design, methodology and analysis as applied to the study of young children's development. This elective is recommended for students considering enrolment in postgraduate research courses in Early Childhood. Longitudinal, cross-sectional and cross-sequential designs; experimental, quasi-experimental, and naturalistic designs; hypothesis generation; ethical issues in conducting research with young children; measurement and sampling; intro-

duction to descriptive and inferential statistics; report writing and organisation.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

**EAB329 ROUTINES FOR INCLUSIVE EARLY CHILDHOOD CURRICULUM**

The subject focuses on routines for daily living in kindergartens, preschools, child care centres and primary schools. Students create routines which will foster inclusivity of difference based on race, gender, social class and intellectual capabilities; particular attention is given to contexts which are inclusive of Aboriginal and Torres Strait Islander values and beliefs. Investigations of practices currently in use in early childhood settings will form the basis for critical analysis of possibilities for improving practice.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

**EAB330 STORYTELLING IN EARLY CHILDHOOD**

This subject will identify and explore the craft of the storyteller. In particular it will focus on a range of storytelling techniques, identification of suitable stories that can be told; cultural influences on storytelling and storytelling across the curriculum.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

**EAB331 TECHNOLOGY & THE YOUNG CHILD**

The use of computers, calculators and other examples of technology in the learning of young children; links between technology and problem-solving, applications of number concepts and the use of computers in language development and the publication of documents.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

**EAB332 TECHNOLOGY IN EARLY CHILDHOOD CONTEXTS**

Students become involved in an investigation which incorporates the use of technology with young children. This investigation would be designed, carried out and reported on as in a small scale research project or an independent study.

Course: ED52

Credit Points: 12      Contact Hours: 3 per week

**EAB410 EARLY EDUCATION: DECIDING THE CURRICULUM**

Examination of the curriculum decision-making processes promoted and in use among teachers working in early childhood settings such as kindergartens, child care and schools. Students have an opportunity to reflect on, and seek to improve, personal ability to decide the curriculum for young learners.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

**EAB411 EARLY EDUCATION: LITERACY**

A study of current understandings about the nature of literacy, literacy development in early childhood and the ways in which this development can be fostered both within the home and at a range of educational and care settings. The broad topic areas addressed comprise language foundations, processes and patterns of development, the classroom context and program development. Students are expected to build on their preservice studies in the area of language and literacy development and learning.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

**EAB440 WORKING WITH PARENTS & THE COMMUNITY**

Parental roles in childhood; review of research on child rearing; the use of interpersonal skills in relating to parents; planning for parent involvement; parent involvement approaches; resources for parents; meeting the needs of parents and programs; future trends.

Courses: ED23, ED26

Prerequisite: Relevant studies at Diploma of Teaching level.

Credit Points: 12      Contact Hours: 3 per week

**EAB441 EARLY EDUCATION DEVELOPMENT & LEARNING**

Ecological orientation of child development; forces shaping the development of children from birth to eight years of age; the psychosocial and cultural perspectives of development and learning in the early childhood years; ecological analysis of early childhood settings impacting on development.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

**EAB501 ADVANCED CHILD CARE DEVELOPMENT & LEARNING**

Theoretical perspectives on development and learning of children 0-12 years; investigation of aspects of development, developmental sequences and patterns; factors influencing development and learning; observation measurement and research methods in development and learning.

Course: ED42

Credit Points: 16

**EAB502 ADVANCED CURRICULUM THEORY & DESIGN FOR CHILD CARE**

Frameworks for curriculum decision making; establishing curriculum policies and evaluation strategies; characteristics of learning environments which foster communicative competence, creativity and problem solving; levels of decision making, federal and state governments, employing authorities, particular child care and education services.

Course: ED42

Credit Points: 16

**EAB503 TEACHING STRATEGIES FOR CHILD CARE**

The planning-implementing-evaluating cycle; managing learning environments; the teaching/caring role; facilitating children's development and learning through the human environment; dimensions of curriculum decision-making; adult/adult and adult/child interactions; teacher as a professional.

Course: ED42

Credit Points: 16

**EAB504 PROGRAMS & TEACHING STRATEGIES FOR CHILDREN UNDER THREE YEARS**

Facilitating children's development and learning through the physical environment; mathematics and science concepts in the learning environment; physical care, education and nutrition for infants and toddlers; creating a safe, stimulating and supportive environment for learning; day care programs for infants and toddlers in Australia and overseas; parent-infant programs; policies and trends.

Course: ED42

Credit Points: 16

### ■ EAB505 LEARNING TEACHING & INTEGRATED CURRICULUM FOR 3-5 YEARS

Language and cognitive development; communication with children; early mathematics and science concepts; total program planning implementation and evaluation; integration across content areas involving parents and community.

Course: ED42

Credit Points: 16

### ■ EAB506 FIELD PROJECT (CHILDREN 0-5 YEARS)

Observations, analysis and implementation of the teaching and management program; teaching file of recorded observations, summaries, records, organisation strategies and evaluated plans; provision of a safe, caring and challenging learning environment; competency in leadership and responsibility.

Course: ED42

Credit Points: 16

### ■ EAB507 EARLY CHILDHOOD LEADERSHIP & MANAGEMENT IN THE SOCIOCULTURAL CONTEXT

Administration of early childhood services; leadership styles; managing people; professional issues; selection of personnel; outcomes for children and families; management theory and practice; program administration; financial matters; features of comprehensive programs, planning and communication.

Course: ED42

Credit Points: 16

### ■ EAB508 FIELD PROJECT (CHILDREN 0-12 YEARS)

A significant social, political or curriculum issue affecting the delivery of a child care and education service; teaching file of recorded observations, summaries, relevant centre records, management and teaching strategies, community resources, parent and staff communications, evaluated plans; competence in providing a safe caring learning environment which reflects the cultural and social backgrounds of the children; competence in leadership and responsibility for the total program for a period of time.

Course: ED42

Credit Points: 16

### ■ EAB601 EARLY CHILDHOOD CURRICULUM: DESIGN ISSUES

Key concepts and themes in the development of early childhood curriculum; processes associated with decision making of early childhood teachers; critical analysis of early childhood curriculum theorising; research methods used to study curriculum and teacher's application of knowledge bases.

Courses: ED11, ED13

Credit Points: 12 Contact Hours: 3 per week

### ■ EAB602 EARLY CHILDHOOD SERVICES & POLICIES

Analysis of early childhood services from a social, political and cultural context; early childhood services for families and children in contemporary Australia; key issues affecting the development of these services, critical analysis of current policies.

Courses: ED11, ED13

Credit Points: 12 Contact Hours: 3 per week

### ■ EAB603 RESEARCH SEMINAR IN EARLY CHILDHOOD ISSUES

Development of skills for critical evaluation of research in early childhood issues; knowledge of methodological approaches; skills for a pilot study or

review of selected research issues in early childhood; critical discussion of implications of research for early childhood education; knowledge of broad research issues regarding child development, family, education and care contexts and interventions.

Courses: ED11, ED13

Credit Points: 12 Contact Hours: 3 per week

### ■ EAN604 YOUNG CHILDREN, FAMILIES & COMMUNITY

The interactions between children, families and the wider social and cultural community in the past, present and future; key issues facing families within community contexts; application of research findings to the analysis of transactions involving children, families and community; aspects of family diversity; professionals and families.

Courses: ED11, ED13

Credit Points: 12 Contact Hours: 3 per week

### ■ EAP411 CREATIVITY & LANGUAGE 1

Developmental processes in the expressive and language arts; principles of learning; the development of personal identity in young children; creative and expressive processes for language and literacy in early childhood programs.

Course: ED35

Credit Points: 12 Contact Hours: 3 per week

### ■ EAP412 THINKING & PROBLEM SOLVING 1

The processes of interest in active learning, enquiry and problem solving; environments and strategies which promote the development of active learning and enquiry by young children; monitoring progress.

Course: ED35

Credit Points: 12 Contact Hours: 3 per week

### ■ EAP413 PROGRAM PLANNING & TEACHING STRATEGIES 1

Development of those areas of knowledge and skills essential to the practical decision making of early childhood teachers. An off-campus component of this unit includes two practicums each of twelve days in two early childhood settings (child care, preschool, kindergarten or early primary).

Course: ED35

Credit Points: 12 Contact Hours: 3 per week

### ■ EAP416 CREATIVITY & LANGUAGE 2

Discipline-based processes; the interrelated and unique contribution of each of the arts; the teacher's role as a curriculum decision maker in the development of language and literacy programs.

Course: ED35

Credit Points: 12 Contact Hours: 3 per week

### ■ EAP417 THINKING & PROBLEM SOLVING 2

The child as explorer, problem solver and meaning maker; organising for active learning, enquiry and problem solving; linking home and early childhood educational environments.

Course: ED35

Credit Points: 12 Contact Hours: 3 per week

### ■ EAP418 PROGRAM PLANNING & TEACHING STRATEGIES 2

The development and integration of student teachers' knowledge, skills and attitudes from the curriculum development and socio-cultural units to assist them in performing and justifying their diverse roles in teaching practice. An off-campus component of this unit includes two practicums each of sixteen days in two

early childhood settings (child care, preschool, kindergarten or early primary).

Course: ED35

Credit Points: 12      Contact Hours: 3 per week

**■ EAP500 EARLY CHILDHOOD LEADERSHIP & ADVOCACY**

This unit initially reviews the foundations of early childhood services in Australia. The principles of leadership, empowerment plus change are considered along with advocacy for the early childhood field.

Courses: ED23, ED65

Credit Points: 12      Contact Hours: 3 per week

**■ EAP520 CHANGE IN CHILDREN BIRTH TO AGE EIGHT**

Techniques for observing and analysing child behaviour; major theories of development and learning; cognitive, social/emotional, language, physical development and learning in children 2-9 years.

Course: ED20      Incompatible with: EAP528

Credit Points: 8

**■ EAP521 EARLY CHILDHOOD EDUCATION 1**

The development of problem solving, explanation, investigation, self-expression, originality, divergent thinking, and risk-taking in young children in relation to communication, movement the expressive arts, mathematics, science, social studies and health curriculum; approaches and suitable materials for these curriculum areas within various early childhood settings.

Course: ED20      Incompatible with: EAP529

Credit Points: 12

**■ EAP522 EARLY CHILDHOOD EDUCATION 2**

The development of problem solving, explanation, investigation, self-expression, originality, divergent thinking, and risk-taking in young children in relation to communication, movement and the expressive arts; analysis of teaching strategies.

Course: ED20

Incompatible with: EAP529

Credit Points: 12

**■ EAP523 THE CONTEXT OF EARLY CHILDHOOD EDUCATION**

Examination of the bases and scope of education in early childhood, the role of psychological theories, curriculum models, policies and programs; case studies of early childhood programs.

Course: ED20      Incompatible with: EAP530

Credit Points: 8

**■ EAP524 RESEARCH IN EARLY CHILDHOOD**

Examination of the research literature in development and learning; research techniques in early childhood; and their application; application of research techniques to research proposals; experimental research in one aspect of development and learning of children aged 3-8 years; contributions to early childhood research from other fields.

Course: ED20      Prerequisite: EAP520

Incompatible with: EAP531

Credit Points: 8

**■ EAP525 EARLY CHILDHOOD PROGRAM PLANNING**

Planning and evaluating early childhood programs for children 3 to 8 years; organisation and administration of programs for young children; examination of approaches to teaching; early intervention programs;

inter-disciplinary teamwork and support services; strategies for working with parents and community agencies; professional behaviour and ethics.

Course: ED20

Credit Points: 12

**■ EAP526 EARLY CHILDHOOD EDUCATION 3**

Current approaches to the teaching of literacy and numeracy in the early years; diagnosis and assessment in early literacy and numeracy; the expressive arts and the sciences as modes of learning and teaching in the early years; the use of microcomputers and educational software with young children; planning and teaching for individual and group needs.

Course: ED20

Credit Points: 12

**■ EAP527 TRANSACTIONS IN EARLY CHILDHOOD EDUCATION**

Examination of the implications of social, cultural and geographical factors for early childhood education; consideration of the effects of technology and media, and ethical and legal obligations; analysis of procedures and techniques for case studies; formulating a personal philosophical statement.

Course: ED20      Prerequisite: EAP523

Incompatible with: EAP532

Credit Points: 8

**■ EAP528 CHANGE IN CHILDREN BIRTH TO AGE EIGHT**

See EAP520.

Course: ED20      Incompatible with: EAP520

Credit Points: 12

**■ EAP529 EARLY CHILDHOOD EDUCATION 1 & 2**

See EAP521 and EAP522.

Course: ED20

Incompatible with: EAP521 and EAP522

Credit Points: 12

**■ EAP530 THE CONTEXT OF EARLY CHILDHOOD EDUCATION**

See EAP523.

Course: ED20      Incompatible with: EAP523

Credit Points: 12

**■ EAP531 RESEARCH IN EARLY CHILDHOOD**

See EAP524.

Course: ED20      Incompatible with: EAP524

Credit Points: 12

**■ EAP532 TRANSACTIONS IN EARLY CHILDHOOD EDUCATION**

See EAP527.

Course: ED20      Incompatible with: EAP527

Credit Points: 12

**■ EAP551 DANCE EDUCATION IN EARLY CHILDHOOD**

The study of movement and dance in early childhood, the influence of home and culture, the awareness of space, time, energy and body performance in the movement and dance curriculum; the approaches underpinning philosophical and professional practice.

Course: ED22

Credit Points: 12      Contact Hours: 3 per week

**■ EAP552 FROM PLAY TO DRAMA IN EARLY CHILDHOOD EDUCATION**

The developmental relationship that exists between children's play and drama in early childhood,



children's language development through drama; theories/approaches and methods in drama contexts.

Course: ED22

Credit Points: 12 Contact Hours: 3 per week

### ■ EAP553 MUSIC IN EARLY CHILDHOOD EDUCATION

Examination of the influence of home, formal learning contexts, society and culture on music education for young children; children's development and learning through music; musical elements, approaches/methods and learning contexts.

Courses: ED22, ED26

Credit Points: 12 Contact Hours: 3 per week

### ■ EAP554 THE ARTISTIC PROCESS & THE VISUAL ARTS IN EARLY CHILDHOOD EDUCATION

The value of the visual arts – for culture, and for children; education versus educated, children's development and learning through the visual arts; visual arts media and curricula, philosophical and historical underpinnings.

Course: ED22

Credit Points: 12 Contact Hours: 3 per week

### ■ EDB254 PRACTICE TEACHING 4

During this four-week period in schools, students extend their involvement to include periods of continuous teaching. The experience widens to encompass both the school and community domains. Wider contexts eg. small schools are also considered appropriate venues for practical experience in this semester. Students also have the opportunity to implement the knowledge and skills gained in major study areas. Finally, other practical experiences eg. attendance at P & C meetings is required.

Course: ED41

Prerequisite: EDB253

Credit Points: 12

### ■ EDB255 PRACTICE TEACHING 5

For the four-week period of school experience, students prepare the curriculum program. Selected parts of the program are implemented during weeks 1 & 2, and for the second half of the practice the full program is taught. Additionally, students involve themselves in other activities within the school and community domains. Finally, throughout the semester, other practical activities are undertaken.

Course: ED41

Prerequisite: EDB254

Credit Points: 12

### ■ EDB305 EARLY CHILDHOOD PRACTICES 1

Within the focus of the teacher and children learning together, the following topics will be introduced: the planning cycle; why observe? what/when/how?; techniques of recording observable behaviour with specific emphasis on language and thinking; creating positive language environments; play as a means of learning; basic skills for teachers.

Course: ED52

Prerequisite: EDB323

Credit Points: 12 Contact Hours: 2.5 per week

### ■ EDB306 EARLY CHILDHOOD PRACTICES 2

Continuing the interactive focus there will be further development of Semester 3 topics in order to deepen understanding and extend teaching strategies.

Course: ED52

Prerequisite: EDB305

Credit Points: 12 Contact Hours: 2.5 per week

### ■ EDB307 EARLY CHILDHOOD PRACTICES 3

Within the focus of teacher/child decision making, emphasis will be placed on: observing social interac-

tions and children's making of meaning; teaching strategies relating to conflict management and discipline; the monitoring of children's progress; the creation of positive learning environments.

Course: ED52

Prerequisite: EDB306

Credit Points: 12 Contact Hours: 2.5 per week

### ■ EDB308 EARLY CHILDHOOD PRACTICES 4

Further analysis of the complexities of interactions within learning environments, particularly relating to: Maths/Science; the arts; teaching strategies for the appropriate use of technology within the educational setting; the integrating role of play.

Course: ED52

Prerequisite: EDB307

Credit Points: 12 Contact Hours: 2.5 per week

### ■ EDB309 EARLY CHILDHOOD PRACTICES 5

Within the focus of negotiation, teacher-child-parent-community, this subject will review and analyse a variety of teaching approaches in early childhood, extending strategies for supporting children's play with a particular emphasis on literature and the arts; recognising emerging professionalism; research skills and independent adult learning.

Course: ED52

Prerequisite: EDB308

Credit Points: 12 Contact Hours: 2 per week

### ■ EDB310 EARLY CHILDHOOD PRACTICES 6

Synthesis of knowledge gained to date in terms of developing a personal teaching style and philosophy; ethical responsibility; the roles of the teacher as reflective practitioner, action researcher, advocate, administrator and leader; preparing for a teaching career and examining career paths in early childhood.

Course: ED52

Prerequisite: EDB309

Credit Points: 12 Contact Hours: 2 per week

### ■ EDB311 PROFESSIONAL PRACTICE 1

The school experience program of 25 days provides students with opportunities to continue their observations of educational settings and to apply their professional and discipline studies to the planning, resourcing, teaching and evaluation of a series of related lessons. While observations focus on the development and implementation of school wide curriculum, in the teaching of lessons emphasis is given to formulation of objectives, communication skills, motivation and management of learners, and self evaluation. Students develop their skills in personal and professional relationships within the school community.

Course: ED50

Prerequisite: EDB323

Credit Points: 12

### ■ EDB312 PROFESSIONAL PRACTICE 2

This 20 day school experience program concentrates on developing those generic skills needed for teaching effectively units of work planned by supervising teachers. It challenges students to cater for the individual learning styles of their pupils by incorporating a rich variety of teaching strategies and classroom management approaches in their unit planning and implementation. The further consolidation of the teaching role of teachers enables students to extend their interests in teachers' broader professional roles in areas such as pastoral care and collegial decision making. Students are expected, through analysis and reflection, to promote praxis between their study of Education and Curriculum subjects and their school and teaching experiences.

Course: ED50

Prerequisites: Curriculum Studies X/Y, EDB311

Credit Points: 12

### ■ EDB313 PROFESSIONAL PRACTICE 3

This program of 20 days in conjunction with the 10 days school experience of Professional Practice 4 is the final practice teaching component of the Bachelor of Education course. Aims to extend confidence and competence in the teachers' roles to a level commensurate with entry to successful beginning teaching. This program subsequently immerses students in the real world of teaching. Students assume, as far as practicable, full responsibility for units of work from planning through to assessment. In addition, students are challenged to involve themselves fully in the organised day-to-day activities of the school that draw upon their teaming and other professional skills such as self-evaluation and critical reflection.

**Course:** ED50 **Prerequisite:** EDB312  
**Co-requisite:** Curriculum Studies XY  
**Credit Points:** 12

### ■ EDB314 PROFESSIONAL PRACTICE 4

This unit is structured so that integration is achieved between an on-campus program and an equivalent two weeks' off-campus experience in practising schools. It aims to promote students' conceptualisation of their final practice teaching experience as a trial at beginning teaching with the collection of primary data (eg. interviews, reflective journals) and the progressive application of selected educational frameworks, eg. the developmental nature of teachers' professional practice, analysis of 'beginning-experienced' teaching, empirical research, decision-making and planning. Students examine the total role of the beginning teacher within the ecology of various school systems.

**Course:** ED50  
**Prerequisite:** EAB312 **Co-requisite:** EDB313  
**Credit Points:** 12

### ■ EDB315 TEACHERS AS COMMUNICATORS & PROFESSIONAL PRACTICE 1

This unit, the first of five in the professional practice strand, is concerned with communication at various levels and in a range of contexts. Its focus is directed towards individuals and groups of learners in the primary school. The unit is operationalised on a 1 hour/week class on campus and 15 single days (1 introduction and 1 day/week) in schools.

**Course:** ED51 **Prerequisite:** EDB323  
**Contact Hours:** 1 hour per week and 1 day per week in Schools plus 1 day of initial contact.  
**Credit Points:** 12

### ■ EDB316 TEACHERS AS MANAGERS & PROFESSIONAL PRACTICE 2

This unit is the second of five in the Professional Practice Strand. Its foci are on the management of planning, implementation and evaluation in the classroom as well as on the relationship of management and classroom climate and control.

**Course:** ED51 **Prerequisite:** EDB315  
**Contact Hours:** 1 hour per week and 1 day per week in schools plus 1 day of initial contact.  
**Credit Points:** 12

### ■ EDB317 TEACHERS AS CURRICULUM DECISION MAKERS & PROFESSIONAL PRACTICE 3

This unit allows students to examine aspects of curriculum decision making and to acquire the knowledge, skills and processes necessary for short term and long range planning. Curriculum development, curriculum implementation, and curriculum

evaluations are investigated to refine daily, weekly and term programs. State and Federal initiatives in curriculum are assessed so that classroom teachers can confidently interpret curricula for the needs and capabilities of diverse groups of learners. The block practice component of the subject provides opportunities to design, test and refine personal decision-making models, approaches, strategies and programs.

**Courses:** ED51, EDB316

**Prerequisite:** EDB316

**Contact Hours:** 1 per week and 3 week block

**Credit Points:** 12

### ■ EDB318 TEACHERS AS RESPONSIVE PRACTITIONERS & PROFESSIONAL PRACTICE 4

This unit, the fourth of the Professional Practice Strand, is concerned with responding effectively to the many and varied teaching/learning contexts within today's classrooms and schools. Its focus is directed from traditional/open classroom to the wider communities encompassing state/private, rural/distance and aboriginal/migrant education.

**Course:** ED51 **Prerequisite:** EDB317

**Contact Hours:** 1 hour per week and 3 week block in schools following Easter vacation.

**Credit Points:** 12

### ■ EDB319 TEACHERS AS REFLECTIVE PRACTITIONERS & PROFESSIONAL PRACTICE 5

Prior to graduation, students need to synthesise the range of skills, attitudes and knowledge sources that they have experienced through the course, to ensure an effective transition into professional practice. This subject attempts to pursue this goal through further developing teachers as reflective practitioners, taking responsibility for the shaping of educational practice from their own perspective.

**Course:** ED51 **Prerequisite:** EDB318

**Contact Hours:** 1 hour per week and 3 week block in schools following September vacation.

**Credit Points:** 12

### ■ EDB321 EDUCATION IN CONTEXT

Education and change in a postmodern society; the implications for education of the complex and diverse nature of Australian society; the role of policy making in meeting the educational challenges of the 1990s.

**Courses:** ED50, ED51, ED52

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EDB322 HUMAN DEVELOPMENT & EDUCATION

Life span development for students interested in early childhood, primary, secondary, or adult education. Theoretical perspectives on human development; social, emotional and moral development; physical and motor development; cognitive and language development; current issues in human development.

**Courses:** ED50, ED51, ED52

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EDB323 INTRODUCTION TO PROFESSIONAL PRACTICE IN EDUCATION

The nature of teaching, and the role of teachers are studied using curriculum decision-making and critically reflective frameworks. Teaching is viewed as a complex personal and social process which is highly interactive, while the role of the teacher is elaborated with reference to the concepts of the teacher as observer, communicator and facilitator of learning.

**Courses:** ED50, ED51, ED52

**Credit Points:** 12 **Contact Hours:** 3 per week

**■ EDB324 LANGUAGE, TECHNOLOGY & EDUCATION**

Foundational perspectives on language, technology and communication in educational contexts; language as functional system and social semiotic; educational implications of the interconnections among language, technology, discourse and power; the student as reader and writer of academic prose; introduction to the language and technology of instruction.

**Courses:** ED50, ED51, ED52

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ EDB325 PSYCHOLOGY OF LEARNING & TEACHING**

This unit addresses theories of learning, together with related ideas and concepts, and their implications for educators, especially in terms of their capacity to respond to the needs of all learners and to design, organise and manage environments for learning.

**Courses:** ED50, ED51, ED52

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ EDB326 SOCIOLOGICAL & PHILOSOPHICAL ANALYSIS OF EDUCATIONAL PRACTICE**

By using the educational disciplines of sociology and philosophy, this subject examines the social, cultural, historical and political contexts of schooling; technologies, practices and strategies employed by schools; the curriculum as a contested site; the place of schooling in the modern state. It encourages critical reflection by students and allows them to engage with others as co-theorists in pedagogical work.

**Courses:** ED50, ED51, ED52

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ EDB330 INDEPENDENT STUDY**

Self-initiated and self-directed study in an area of interest which allows study either to a depth not possible in elective units or in an area not covered by the current Bachelor of Education (Pre-Service) course. An Independent Study can be undertaken by any student who has successfully completed 6 semesters of the pre-service BED or equivalent. Students must meet certain requirements laid down in the *Independent Study Guide* (QUT) available from the Faculty of Education. Students cannot enrol without the written approval of the Course Coordinator.

**Courses:** ED37, ED50, ED51, ED52

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ EDB331 LEARNING/TEACHING ENVIRONMENTS**

This unit enables students to: develop an understanding of the environmental context for learning/teaching; appreciate the range of learning environments in education; develop an understanding of how people interact in different learning environments; and offer opportunities to design learning experiences for people in non-formal learning contexts.

**Courses:** ED37, ED50, ED51, ED52

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ EDB333 DEVELOPING COOPERATIVE ENVIRONMENTS FOR DIVERSE LEARNERS' NEEDS**

This unit reviews and extends knowledge about managing learners to meet their needs in purposive and responsive learning environments. It encourages a reflective and research oriented evaluation of topics which include managerial, environmental and educational conceptions of developing positive relations, teaching for motivation, and contemporary models,

structures and frameworks for decision-making, relating to cooperative learning environments.

**Courses:** ED37, ED50, ED51, ED52

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ EDB334 GIFTED LEARNERS**

This unit provides a framework for understanding and evaluating the needs of gifted learners. It emphasises identification, learning and teaching styles, sound emotional issues, research findings and resources associated with gifted learners. Provision is also made for some practicum work with gifted learners.

**Courses:** ED37, ED50, ED51, ED52

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ EDB336 ABORIGINAL & TORRES STRAIT ISLANDERS, PAST & PRESENT**

This introductory unit is designed to give students a basic understanding and awareness of Murri and Torres Strait Islander cultures. Throughout the unit, students will be provided with a holistic approach to learning about the main features of both traditional and contemporary cultures. This knowledge would enhance and assist the individual's ability to develop effective relationships with the Murri and Torres Strait Islander communities.

**Course:** ED51

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ EDB337 ISSUES IN ABORIGINAL & TORRES STRAIT ISLANDER CULTURE**

This unit will continue to develop students' knowledge about Murri and Torres Strait Islander people, historically, socially and culturally in relation to these changes and will give them the opportunity to explore and investigate areas of interest.

**Course:** ED51

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ EDB338 MURRI & TORRES STRAIT ISLANDER STUDIES: AN INTEGRATED PERSPECTIVE**

This unit is intended for students who already have a solid grounding in Aboriginal and Torres Strait Islander history and culture and who have an understanding of the issues that concern Murri and Torres Strait Islander people today. Students will have the opportunity to develop a deeper understanding of the complexities of the cultures of these two distinct groups and to examine and evaluate issues of concern relevant to their areas of interest.

**Course:** ED51

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ EDB440 INDEPENDENT STUDY**

Self-initiated and self-directed academic study in an area of educational management interest which allows study either to a depth not possible in electives, or in an area not covered by the course; for requirements see the *Independent Study Guide*.

**Courses:** ED23, ED26, ED50, ED51, ED52

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ EDB490 RESEARCH METHODS IN EDUCATION**

Development of an awareness and understanding of the research process for an historical, sociocultural, ethical and theoretical perspective; the validity, applicability and suitability of various research strategies for specific educational endeavours; comprehension and evaluation of research findings drawn from a variety of perspectives, paradigms and

methodologies; development of skills to conduct research appropriate to answer questions.

**Courses:** ED23, ED24, ED25, ED26, ED37, ED50, ED51, ED52

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **EDN600 RESEARCH METHODS IN EDUCATION**

Development of an awareness and understanding of the research process from historical, sociocultural, ethical and theoretical perspectives; the validity, applicability and suitability of various research strategies for specific educational endeavours; comprehension and evaluation of research findings drawn from a variety of perspectives, paradigms and methodologies; development of skills to conduct research appropriate to answer questions critical to particular fields of interest.

**Courses:** ED11, ED13, ED61, ED71

**Co-requisite:** EDN601

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **EDN601 MAJOR ISSUES IN EDUCATION**

Using conceptual frameworks - well-documented perspectives which can be used to generate questions and provide methods for their exploration - as tools in the analysis of current educational debates, to broaden and sharpen an individual's perspective and act as a basis for improving practice; development of skills in accessing and presenting academic arguments.

**Courses:** ED11, ED13, ED61, ED71

**Co-requisite:** EDN600

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **EDN602 ADVANCED SEMINARS**

Students to participate in a unit organised around a particular interest or a visiting expert.

**Course:** ED13

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **EDN603 INDEPENDENT STUDY**

Opportunity to study an aspect or topic in a particular specialisation of special interest to students; working autonomously under the supervision of a lecturer.

**Courses:** ED11, ED13

**Credit Points:** 12

■ **EDN604 DISSERTATION STAGE 1**

Opportunity to extend and synthesise knowledge from the core and area of interest units in either a critical evaluation of a topic in the literature of the student's area of interest or the development of appropriate educational resources; provides the opportunity for formal course work to be synthesised and applied in a manner that reflects how it might be used in future work situations.

**Course:** ED13      **Prerequisites:** EDN600, EDN601

**Credit Points:** 12

■ **EDN606 DISSERTATION STAGE 2**

An application of coursework theory to a literature survey, a critical analysis, an evaluation of a portion of an educational program or the development of a curriculum package.

**Course:** ED13      **Prerequisites:** EDN600, EDN601

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **EDN615 THESIS 1**

Provides students with an opportunity to extend and synthesise knowledge from a particular area of interest into a research study; allows the skills and understandings gained from coursework units to be employed in a practical situation.

**Course:** ED13      **Prerequisites:** EDN600, EDN610

**Credit Points:** 12

■ **EDN616 THESIS 2**

See EDN615.

**Course:** ED13

**Prerequisites:** EDN600, EDN601, EDN615

**Credit Points:** 12

■ **EDN617 THESIS 3**

See EDN615.

**Course:** ED13

**Prerequisites:** EDN600, EDN601, EDN615, EDN616

**Credit Points:** 12

■ **EDN618 THESIS 4**

See EDN615.

**Course:** ED13

**Prerequisites:** EDN600, EDN601, EDN615, EDN616, EDN617

**Credit Points:** 12

■ **EDP401 UNDERSTANDING EDUCATION IN CONTEMPORARY AUSTRALIA**

The teacher as a professional; classroom practice; school culture and organisation; national issues affecting schooling.

**Courses:** ED35, ED36, ED37

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **EDP402 HUMAN DEVELOPMENT & LEARNING**

An analysis of human development through the life span; exploration of how students learn; factors influencing effective learning and teaching.

**Courses:** ED35, ED36, ED37

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **EDP403 TEACHING STUDIES**

Strategies for expository teaching and enquiry based learning; generic teaching skills; interactive classroom; basic language and text processing strategies; organisation of the learning environment; lesson and activity planning routines and models.

**Courses:** ED35, ED36, ED37

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **EDP404 TEACHING STUDIES**

Strategies for expository teaching and enquiry based learning; generic teaching skills; interactive classroom; basic language and text processing strategies; organisation of the learning environment; lesson and activity planning routines and models.

**Course:** ED37

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **EDP405 UNDERSTANDING EDUCATION IN CONTEMPORARY AUSTRALIA**

The teacher as a professional; classroom practice; school culture and organisation; national issues affecting schooling.

**Course:** ED37

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **EDP508 PRACTICUM IN EARLY CHILDHOOD 1**

See EDP510.

**Course:** ED20

**Incompatible with:** EDP510

**Credit Points:** 6

■ **EDP509 PRACTICUM IN EARLY CHILDHOOD 2**

See EDP511.

**Course:** ED20

**Prerequisite:** ED508

**Incompatible with:** EDP511

**Credit Points:** 6

**■ EDP510 PRACTICUM IN EARLY CHILDHOOD 1**

Observation; planning, implementation and evaluation of curriculum for children in early childhood; communication with children, parents and colleagues; the demonstration of organisational and administrative skills in an early childhood setting.

Course: ED20 Incompatible with: EDP508  
Credit Points: 8

**■ EDP511 PRACTICUM IN EARLY CHILDHOOD 2**

Observation; design, implementation and evaluation of programs for children in the early childhood age range; communication with children, parents and colleagues; increased responsibility for control and management in the early childhood setting; catering for children in the early childhood age range.

Course: ED20 Prerequisite: EDP510  
Incompatible with: EDP509  
Credit Points: 8

**■ EDP512 POLICIES & PRACTICES IN EDUCATIONAL MANAGEMENT**

Explores the nature of educational policies in Australia; analyses policies to consider social and political influences; addresses educational practices in relation to current policies at various government and organisational levels.

Courses: ED23, ED65  
Credit Points: 12 Contact Hours: 3 per week

**■ EDP513 EDUCATIONAL SERVICES MANAGEMENT**

Focuses on leadership roles by identifying various leadership skills and effective communication styles. The understanding and facilitation of change will be explored. Consulting, advocacy and empowerment strategies will be identified.

Courses: ED23, ED65  
Credit Points: 12 Contact Hours: 3 per week

**■ EDP514 FIELD PROJECT**

An applied action research project focussing on the development of a management-oriented program; the delivery and evaluation of the program within an existing educational service.

Courses: ED23, ED65 Incompatible with: EDP516  
Credit Points: 12 Contact Hours: 3 per week

**■ EDP515 HUMAN RESOURCE MANAGEMENT IN EDUCATION**

This unit investigates staff supervision and appraisal; staff development planning, implementation and evaluation; facilitative skills.

Courses: ED23, ED65  
Credit Points: 12 Contact Hours: 3 per week

**■ EDP516 EXTENDED FIELD PROJECT**

An applied action research project focussing on the development of a management-oriented program. The delivery and then evaluation of the program within an existing educational service will occur. The Extended Field Project will include a research report with greater breadth and depth than the 12 credit point field project.

Course: ED23 Incompatible with: EDP514  
Credit Points: 24

**■ EDP601 THE REFLECTIVE PRACTITIONER IN HIGHER EDUCATION**

Develops critical, reflective and proficient tertiary educators with a commitment to learning as a lifelong

process; begins with and builds upon the various experiences which the participants bring with them.

Course: ED68  
Credit Points: 12 Contact Hours: 3 per week

**■ EDP602 ADULT LEARNING & TEACHING IN HIGHER EDUCATION**

It is necessary to have a broad understanding of the theory and practice of teaching adults and critically reflect on the appropriateness of particular approaches to the needs, interests and learning styles of adult audiences; involves the application of theoretical perspectives to the practice of teaching adults in varied higher education and contexts.

Course: ED68  
Credit Points: 12 Contact Hours: 3 per week

**■ EDP603 HIGHER EDUCATION IN AUSTRALIA: CONTEXT & ISSUES**

History of higher education in Australia; current structure and funding of higher education in Australia; major stakeholders and key institutional interfaces; professional associations, TAFE, secondary education, industry, student groups, government.

Course: ED68  
Credit Points: 12 Contact Hours: 3 per week

**■ EDP604 PROGRAM DESIGN & EVALUATION IN HIGHER EDUCATION**

Identifies and describes the major theoretical underpinnings of educational planning and evaluation; trace the historical shifts within the practice of course design and evaluation; demonstrate skills in evaluation and subsequent planning for course integration; and demonstrate skills in critical analysis of evaluation designs and procedures.

Course: ED68  
Credit Points: 12 Contact Hours: 3 per week

**■ EDR700 ADVANCED SEMINARS IN INTERDISCIPLINARY STUDIES IN EDUCATION**

Aims to broaden and deepen the student's initial perspective to include elements derived from theoretical perspectives drawn from a number of disciplines; seeks to provide a context for learning for educators who seek the personal and professional benefits that the broadening and deepening of their professional knowledge affords. Includes negotiated seminars program, interdisciplinary study of education, a reading program and presentation of colloquia involving formulation and defence of positions within the context of a community of scholars.

Course: ED11  
Credit Points: 48 Contact Hours: 3 per week

**■ EDR701 ADVANCED SEMINARS IN APPLIED EDUCATIONAL RESEARCH**

Prepares students for the presentation of a thesis and provides breadth of knowledge in the application of research within the candidate's applied focus; provides experienced educators with advanced programs of study in research methods; the application of research methods to professional practice.

Course: ED11  
Prerequisite: EDN600 or equivalent  
Credit Points: 48 Contact Hours: 3 per week

**■ EDR702 THESIS**

Provides students with an opportunity to extend and synthesise knowledge from the coursework section; allows the coursework to be applied in a manner that reflects how it might be used in future work situations; provides a means of extending the skills and under-

standings gained from formal units to investigate in depth some aspects of the student's professional practice. Focuses on the extension of acquired knowledge to increase the understanding and competence of skilled professional educators; facilitates the application of innovative research but grows out of the professional coursework.

**Course:** ED11 **Prerequisites:** EDR700, EDR701  
**Credit Points:** 144

#### ■ EEB101 CIRCUITS & MEASUREMENTS

The concepts of voltage, current and electrical impedance, simple electrical circuits (R, L and C) and the measurement of electrical quantities using the oscilloscope, meters and bridges; AC theory, errors in measurement, traceability of measurement.

**Courses:** CE42, EE43, EE44, IF23, IF53, ME23, ME45, ME46

**Credit Points:** 7 **Contact Hours:** 3 per week

#### ■ EEB107 AERONAUTICAL INDUSTRIAL EXPERIENCE 1

Students must engage in two weeks of approved employment in the aviation industry at the end of the first semester with a view to gaining a general background in aviation; students must submit an industrial experience record which has been completed by both the student and the employer.

**Course:** EE43 **Contact Hours:** 2 weeks

#### ■ EEB202 ELECTROMAGNETICS

Introduction to engineering applications of current flow, electrostatic and electromagnetic fields; ideal and loosely coupled transformers – instrument and high frequency transformers; electrical power supply and safety; rotating electrical machines.

**Courses:** EE43, EE44, IF23, IF53, ME45, ME46

**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ EEB203 CIRCUIT ANALYSIS

Network theorems, mesh and nodal analysis, complex power; introduction to the concept of steady-state response; introduction to transient response of RL, RC and RCL circuits with step forcing functions; mutual inductance, three phase systems.

**Courses:** EE43, EE44, IF23 **Prerequisite:** EEB101

**Credit Points:** 5 **Contact Hours:** 3 per week

#### ■ EEB206 INDUSTRIAL EXPERIENCE 1

Students should engage in at least five weeks employment, approved by the Head of School; for the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.

**Courses:** EE43, EE44 **Contact Hours:** 5 weeks

#### ■ EEB209 ELECTRICAL ENGINEERING 2M

Introduction to the basic principles of microprocessors, microprocessor systems, electrical machines, power control and tariffs; basic level of presentation with heavy emphasis on practical applications.

**Course:** ME45

**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ EEB272 DIGITAL PRINCIPLES

Binary variables, number systems, Boolean algebra, minimisation of logic functions, logic gates, analysis and synthesis of combinational logic functions.

**Courses:** EE44, IF23, IF53

**Credit Points:** 3 **Contact Hours:** 1.5 per week

#### ■ EEB273 MICROCOMPUTERS IN ENGINEERING

Introduction to the physical, virtual and application levels of a microcomputer system; I/O devices and

interfacing; operating systems; programming and software packages; transducers and peripheral devices; hardware and software integration.

**Course:** ME45

**Credit Points:** 4 **Contact Hours:** 2 per week

#### ■ EEB302 ELECTROTECHNOLOGY

Magnetic circuits, magnetic materials, transformers and electro-magnetic devices. Power distribution, three phase, balanced and unbalanced loads.

**Courses:** EE44, IF23

**Prerequisites:** EEB202, EEB203

**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ EEB303 NETWORK THEORY 1

A detailed study of the basic theory of network analysis covering Laplace and Fourier analysis, four terminal network theory, frequency behaviour and transient response of networks.

**Courses:** EE43, EE44, IF23

**Prerequisites:** EEB203, MAB187, MAB188

**Co-requisite:** MAB493

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ EEB362 INTRODUCTION TO COMMUNICATION SYSTEMS

An introduction to the theoretical foundation of communication systems; using the theoretical foundation to develop the operation and characteristics of the basic forms of amplitude and angle modulation; the hardware associated with the generation and detection of the modulation systems.

**Courses:** EE43, EE44, IF23

**Prerequisites:** MAB187, MAB188, EEB371

**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ EEB371 ELECTRONIC DEVICES

Theory of operation and characteristics of semiconductor devices: diodes, the bipolar junction transistor and the field effect transistor; development and practical applications of small signal models.

**Courses:** EE43, EE44, IF23, ME46

**Prerequisite:** EEB101

**Credit Points:** 5 **Contact Hours:** 3 per week

#### ■ EEB372 SEQUENTIAL LOGIC

Flip-flops, counters, shift registers, asynchronous and synchronous sequential machines. Realisation of sequential machines using PROMs, GALs, etc.

**Courses:** EE44, IF23, IF53

**Prerequisite:** EEB272

**Credit Points:** 7 **Contact Hours:** 3 per week

#### ■ EEB373 DIGITAL ELECTRONICS PRINCIPLES

Binary variables to Boolean algebra; logic functions, gates and analysis; combined logic functions; flip-flops, counters, shift registers; sequential machines; sequential machinery using PROMs, GALs, etc.

**Course:** EE43

**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ EEB400 ELECTRICAL POWER SYSTEMS

Introduction to electrical power systems calculations; technology of overhead lines and cables; elementary electrical engineering economics.

**Course:** EE44

**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ EEB401 NETWORK THEORY 2

General transform theory; stability and realisability of networks; the synthesis of networks and filters; non-linear analysis techniques for simple networks.

**Courses:** EE43, EE44, IF23

**Prerequisites:** EEB303, EEB362

**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB404 ELECTRICAL MACHINES**

The fundamentals of torque production in rotating machines; the theory of operation and characteristics of most commonly used machines are then derived from common foundations.

**Course:** EE44 **Prerequisite:** EEB302  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB406 INDUSTRIAL EXPERIENCE 2**

Students should engage in at least five weeks employment, approved by the Head of School; for the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.

**Course:** EE44 **Contact Hours:** 5 weeks

**■ EEB407 AERONAUTICAL INDUSTRIAL EXPERIENCE 2**

Students must engage in five weeks of approved employment in the aerospace industry at the end of the fourth semester with a view to gaining detailed experience in several aspects of aerospace industry particularly in relation to concepts peculiar to that industry; students must submit an industrial experience record form which has been completed by both the student and the employer.

**Course:** EE43 **Contact Hours:** 5 weeks

**■ EEB430 ENGINEERING FIELDS**

Electrostatic and magnetic fields, Maxwell's Equations and electromagnetic waves.

**Courses:** EE43, EE44, IF23  
**Prerequisites:** MAB187, MAB188, PHB132, PHB232  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB471 ELECTRONICS**

A detailed study of transistor circuits and their applications; circuits fundamental to the understanding of integrated circuit amplifiers are studied in detail.

**Courses:** EE43, EE44, IF23 **Prerequisite:** EEB371  
**Credit Points:** 8 **Contact Hours:** 3 per week

**■ EEB473 INTEGRATED CIRCUITS**

The fundamental theory of operation of integrated circuits; the generalised concepts of feedback in electronic circuits; various operational amplifier configurations; oscillators and timing circuits.

**Courses:** EE43, EE44, IF23 **Prerequisite:** EEB471  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB474 MICROPROCESSORS**

Microprocessor architecture, instruction sets, assembly language programming; memories, input/output devices and interrupt systems.

**Courses:** EE43, EE44, IF23, IF53  
**Prerequisite:** EEB372 or EEB373  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB520 CONTROL ENGINEERING**

Measurement transducers, amplifiers, signal processors and final control elements; system components; application of micro-computers to closed-loop control; examples of closed-loop systems; system transfer function and time domain performance.

**Courses:** EE43, EE44, IF23  
**Prerequisite:** EEB302 **Co-requisite:** EEB401  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB531 ELECTRICAL POWER TRANSMISSION**

Equivalent circuits of power equipment; the pu method; power flows in networks, solution by Gauss Siedel; sequence components, fault analysis by se-

quence methods; power system harmonics; transients due to switching; transmission plant parameters.

**Course:** EE44 **Prerequisite:** EEB400  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB553 ELECTRICAL POWER EQUIPMENT**

Transmission line parameters, standing voltage and travelling waves on transmission lines; introduction to protection of systems, CTs, VTs protection methods of electrical equipment.

**Course:** EE44 **Prerequisite:** EEB400  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB562 TRANSMISSION & PROPAGATION**

Transmission line theory, terminated line, Smith Circle Chart usage and lattice diagram; propagation modes in wave guides and optical fibres; free-space propagation, ionospheric and ground wave propagation; basic antenna parameters.

**Courses:** EE43, EE44, IF23  
**Prerequisites:** EEB430  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB563 SIGNALS & LINEAR SYSTEMS**

A detailed study of Fourier theory applied to signals; an overview of systems and their representation; response of systems to signals.

**Courses:** EE43, EE44, IF23  
**Prerequisites:** EEB303, EEB362, MAB4493/1, MAB493/2  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB573 INDUSTRIAL ELECTRONICS**

Modern electronic devices and circuits with particular emphasis on industrial application.

**Courses:** EE44, IF23 **Prerequisite:** EEB471  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB580 AEROSPACE DESIGN 1**

The environmental factors affecting the design of aerospace equipment particularly in relation to USA and Australian standards and specifications (eg US Mil Specs, FAA requirements such as FAR 23, 25 and Technical Service Orders, Australian certification requirements both civil and military); the operating regime for avionic equipment such as the properties of the atmosphere (temperature, pressure, humidity); design load factors for aeronautical equipment, reliability and duplication requirements.

**Course:** EE43  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB587 DESIGN 1**

General principles of electronic circuit and electrical equipment design and the realisation of typical electronic circuits and equipment.

**Courses:** EE44, IF23 **Prerequisite:** EEB471  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB591 SYSTEMS PROGRAMMING LANGUAGES**

Introduction to embedded systems and software design using C, C++ and object oriented Pascal; engineering applications for embedded systems.

**Courses:** EE44, IF23 **Prerequisite:** EEB474  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ EEB600 STARTING A TECHNOLOGY BASED BUSINESS**

Business structures, forming a business team, marketing and market research, financing new high-risk business, selling yourself with business plans and

presentation skills, product development, manufacturing and distribution, inventions, networking.

**Courses:** EE44, ME45

**Credit Points:** 4      **Contact Hours:** 2 per week

### ■ EEB601 REAL-TIME OPERATING SYSTEMS

Theory and practical aspects of the use of microprocessors and computers as components in time critical engineering applications; methods of guaranteeing computer response within a specifiable time; applications related to embedded systems and some business applications; design of new systems and study of existing systems.

**Courses:** EE43, EE44, IF23      **Prerequisite:** EEB591  
**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ EEB602 SIGNAL PROCESSING

Develop techniques for the analysis of stationary random signals in linear systems. Review of probability theory and statistics; stochastic processes; correlation functions; power density spectrum; random signals and linear systems; matched filters; detection and estimation theory; overview of practical applications.

**Courses:** EE43, EE44, IF23

**Prerequisites:** EEB361, EEB401, MAB893

**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ EEB606 INDUSTRIAL EXPERIENCE 3

Students should engage in at least five weeks employment, approved by the Head of School; for the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.

**Course:** EE44

**Contact Hours:** 5 weeks

### ■ EEB607 AERONAUTICAL INDUSTRIAL EXPERIENCE 3

Students must engage in 5 weeks of approved employment in the aerospace industry at the end of the sixth semester with a view to gaining specific information and experience in some aspect of aerospace industry; for the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.

**Course:** EE43

**Contact Hours:** 5 weeks

### ■ EEB620 CONTROL SYSTEMS ANALYSIS

Time-domain, frequency-domain, and complex-domain analysis of systems; closed-loop control system performance and system compensation; digital computer control of closed-loop systems; analogue and digital simulation of systems.

**Courses:** EE43, EE44, IF23      **Prerequisite:** EEB520

**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ EEB621 ADVANCED CONTROL SYSTEMS

System performance specification format; selection of control system elements; design of linear system compensation using analogue and digital techniques; system non-linearities and non-linear system analysis and design; examples of typical control systems.

**Courses:** EE44, IF23

**Prerequisite:** EEB620

**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ EEB652 POWER ELECTRONICS

Review of modern switching components, characteristics and device control methods; principles of operation of controlled rectifiers and chopper techniques for DC motor control; quasisquare and PWM inverters for induction and synchronous motor control; static switches for induction motor soft start control and static VAR compensation; induction

motor drive and DC motor drive control strategies; harmonic analysis and waveform modelling analysis.

**Course:** EE44

**Prerequisite:** EEB573

**Credit Points:** 7

**Contact Hours:** 3 per week

### ■ EEB661 INFORMATION THEORY & NOISE

Information in discrete and continuous channels, coding efficiency, statistical description of noise, effects of transformations on signal parameters, error rates, effect of noise in information transfer.

**Courses:** EE43, EE44, IF23

**Prerequisites:** EEB362, MAB493

**Co-requisite:** EEB581

**Credit Points:** 6

**Contact Hours:** 3 per week

### ■ EEB662 MICROWAVE & ANTENNA TECHNOLOGY

Propagation in rectangular and circular guides, guide components, microwave active devices, high frequency techniques, antennas, antenna arrays, computer-aided antenna design, antenna measurements.

**Courses:** EE43, EE44

**Prerequisite:** EEB562

**Credit Points:** 7

**Contact Hours:** 3 per week

### ■ EEB680 AEROSPACE DESIGN 2

Designing for reliability as required by the aviation and aerospace industry will augment practical design assignments; assignments require that design problems be solved analytically and the results confirmed by equipment construction and practical measurement; computer-aided design, computer simulation and programming may be required.

**Course:** EE43

**Prerequisites:** EEB362, EEB400, EEB580, EEB620

**Credit Points:** 6

**Contact Hours:** 3 per week

### ■ EEB691 AERONAUTICAL COMPUTING

Suitable languages such as ADA will be used to implement embedded avionics computer systems and practical experience will be gained in the application of object-oriented software design, concurrency and distributed systems used in the aerospace industry.

**Course:** EE43

**Prerequisite:** CSB490

**Credit Points:** 6

**Contact Hours:** 3 per week

### ■ EEB692 SPACE TECHNOLOGY

Review of world launch capability; spherical trigonometry; orbits and trajectories, eg. launch orbits, geostationary orbits; GPS satellite orbit requirements; gravitational fields; Lagrange points; orbital dynamics and parameters; special purpose orbits; tracking data; payload techniques; upper atmospheric meteorology and astronomy.

**Course:** EE43

**Credit Points:** 6

**Contact Hours:** 3 per week

### ■ EEB722 FLIGHT CONTROL SYSTEMS

Principles and description of flight control systems; performance of aircraft in flight; analysis and simulation of flight control systems; cross-coupling parameters; methods of coupling terrain following radar and other navigational aids; mechanical systems; analogue augmented systems; digital augmented systems; digital computer control relating to multiplex buses (Mil spec); artificial stability; automatic pilots during flight and landing; fibre optic control; fly-by-wire systems; use of redundancy.

**Course:** EE43

**Co-requisite:** EEB947

**Prerequisites:** MEB551, MEB553, MEB611

**Credit Points:** 6

**Contact Hours:** 3 per week

### ■ EEB741 POWER SYSTEMS ANALYSIS

Economic operation of power systems, system stability, power system control; HVDC power trans-



mission; advanced harmonic analysis; surge phenomena in machine and transmission lines.

Course: EE44

Prerequisite: EEB531

Credit Points: 8

Contact Hours: 3 per week

### ■ EEB742 POWER SYSTEMS ENGINEERING

Substation engineering, protection of plant, substation earthing, system overvoltages, insulation coordination, HV switchgear.

Course: EE44

Prerequisite: EEB531

Credit Points: 6

Contact Hours: 3 per week

### ■ EEB761 STATISTICAL COMMUNICATION

PCM quantisation noise in uniform and non-uniform quantisation; effects of channel noise on S/N; delta and delta-sigma modulations; threshold extensions, spread spectrum, matched filtering and correlation.

Courses: EE44, IF23

Prerequisite: EEB661

Credit Points: 7

Contact Hours: 3 per week

### ■ EEB780 AEROSPACE DESIGN 3

Practical design assignments consisting of detailed design and realisation of typical sub-systems used in all areas of the avionics industry; assignments require that design problems be solved analytically and the results confirmed by equipment construction and practical measurement; computer-aided design, computer simulation and programming may be required.

Course: EE43

Prerequisites: EEB474, EEB602, EEB680

Co-requisites: EEB947, MEB790

Credit Points: 6

Contact Hours: 3 per week

### ■ EEB784 AEROSPACE PROJECT

An individual engineering project on a special subject. The work requires design, computing, construction and experimental work and practical testing with the submission of appropriate reports; the topic is selected from aerospace engineering and involves electronics, computing, control, communication and electrical power; it may include programming, circuit and system design.

Course: EE43

Credit Points: 27

Contact Hours: 6 per week

### ■ EEB788 DESIGN 2

Design principles and practice of more complex electronic circuits; electrical equipment and systems.

Courses: EE44, IF23

Prerequisites: EEB302, EEB587

Credit Points: 8

Contact Hours: 3 per week

### ■ EEB789 PROJECT

An individual engineering project on a specified topic will be completed; the work will require, design, computing, construction, experimental work and practical testing with the submission of appropriate reports; the topic will be selected from any area which involves electronics, computing, control, communication and educational power and may include programming, circuit and system design.

Courses: EE44, IF23

Co-requisites: This unit must be done in the final year of the course.

Credit Points: 30

Contact Hours: 6 per week

### ■ EEB820 ENGINEERING MANAGEMENT

Economic analysis of electrical engineering projects; present worth and annual cost calculations. Assessment of tenders; project management, critical paths and linear programming methods; contract administration. Engineering case studies.

Courses: EE44, IF23

Credit Points: 8

Contact Hours: 3 per week

### ■ EEB821 PRODUCTION TECHNOLOGY & QUALITY

The methodology of electronic system design, the range of production processes in electronic manufacture, and the quality control procedures at both prototype and full production stages.

Courses: EE44, IF23

Credit Points: 6

Contact Hours: 3 per week

### ■ EEB841 MINING ELECTROTECHNOLOGY

Definition of hazardous locations; methods of protection of electrical equipment; intrinsically safe circuits, flameproof equipment; power supply systems in mines; planning, voltage regulation, fault levels, dynamic operation; earthing in mines; monitoring and control equipment; communications systems in mines; testing and certification of mining equipment; gas explosion testing, assessment of intrinsically safe equipment, CTI testing, temperature rise and high current testing.

Course: EE44

Prerequisite: EEB531

Credit Points: 7

Contact Hours: 3 per week

### ■ EEB880 AEROSPACE DESIGN 4

Practical design assignments consisting of the realisation of complete system designs for a specific aspect of the avionics industry; assignments require that design problems be solved analytically and the results confirmed by equipment construction and practical measurement; factors such as reliability, complexity, economic considerations and system (and sub-system) optimisation; computer-aided design; computer simulation and programming may be required.

Course: EE43

Prerequisite: EEB780

Credit Points: 7

Contact Hours: 3 per week

### ■ EEB887 DESIGN 3

Detailed design and realisation of typical electronic and power based sub-systems used in all areas of electronic systems and power systems engineering.

Course: EE44, IF23

Prerequisite: EEB788

Credit Points: 6

Contact Hours: 3 per week

### ■ EEB888 DESIGN 4

System design techniques and practice on typical electronic systems and power systems, taking into account such factors as realisability, reliability, complexity, economic considerations and optimisation.

Course: EE44, IF23

Prerequisite: EEB887

Credit Points: 10

Contact Hours: 3 per week

### ■ EEB890 ADVANCED INFORMATION TECHNOLOGY TOPICS

The latest techniques in information engineering systems: image enhancement, image restoration, computer vision; practical aspects of digital spectral estimation and linear system identification.

Course: EE44

Prerequisites: EEB591, EEB602, MAB894

Credit Points: 7

Contact Hours: 3 per week

### ■ EEB891 SIGNAL COMPUTING & REAL-TIME DSP

Signal theory; speech processing; image processing and real time DSP; the fundamentals of signal processing concepts; applications of signal processing techniques.

Courses: EE44, IF23

Prerequisites: EEB602, EEB968, EEB967

Credit Points: 8

Contact Hours: 3 per week

### ■ EEB901 INDUSTRIAL EXPERIENCE 1

Students should engage in at least five weeks employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.

Course: IF23 Contact Hours: 5 weeks

### ■ EEB902 INDUSTRIAL EXPERIENCE 2

See EEB901.

Course: IF23 Contact Hours: 5 weeks

### ■ EEB903 INDUSTRIAL EXPERIENCE 3

See EEB902.

Course: IF23 Contact Hours: 5 weeks

### ■ EEB922 COMPUTER CONTROLLED SYSTEMS

Computer control of typical process control systems; numerical control of machine tools and an introduction to robotics; optimal control and self-adaptive control systems; sequential control systems.

Courses: EE44, IF23 Prerequisite: EEB621  
Credit Points: 7 Contact Hours: 3 per week

### ■ EEB932 AUTOMATIC FLIGHT CONTROL

Derivation of transfer functions for aircraft and missiles including effects of vibration on servo systems along with servo actuators and sensors; use of conventional and modern control theory to analyse and design lateral-directional stability augmentation systems and control augmentation systems; study of autopilot design for various tasks including turn coordination and automatic landing, stabilisation of aircraft and adaptive control systems.

Course: EE43 Co-requisite: EEB947  
Prerequisites: MEB551, MEB553, MEB611  
Credit Points: 7 Contact Hours: 3 per week

### ■ EEB933 COMBAT SYSTEMS

Sound generation propagation and analysis in the maritime environment; principles and application of lasers to sighting and guidance systems; principles of detection of submarines using magnetometers; infrared propagation and its use in detection and weapons guidance; including ECM/ECCM; sonar processing; laser processing and guidance; radar guidance/sighting; gun sights; weapons control systems; IFF/ transponders; command and control; magnetic anomaly detection; tactical nav systems; infra-red.

Course: EE43 Prerequisite: EEB947  
Credit Points: 7 Contact Hours: 3 per week

### ■ EEB934 ADVANCED COMMUNICATIONS & NAVIGATION SYSTEMS

Expansion of previous theory; develop an increased understanding of systems previously described; complex algebra required for error-correcting codes and auto-correlation and cross-correlation of pseudo-noise sequences; investigation and simulation of error-correcting communication systems; detailed investigation into modern communication systems; theory of acquisition and tracking using delay-lock and similar techniques; use of fast-fourier and parallel processing the Global Positioning System (GPS); position fixing using GPS.

Course: EE43 Co-requisite: EEB947  
Prerequisites: EEB362, EEB562, EEB662, EEB968  
Credit Points: 7 Contact Hours: 3 per week

### ■ EEB935 ADVANCED SATELLITE SYSTEMS

Design of communication systems for spacecraft; spacecraft and ground stations performance; special

modulation methods; coherent frequency translation modes of operation; analysis of intermodulation distortion; carrier regeneration or synchronisation and acquisition and tracking requirements; analogue and digital processing of signals in the presence of noise; factors affecting accuracy of ranging; characterisation of spacecraft components and a critical evaluation of alternative design methods; design parameters of various aerial systems; design of low-noise amplifiers; description of B-MAC television system.

Course: EE43 Prerequisites: MEB692, MEB790  
Credit Points: 7 Contact Hours: 3 per week

### ■ EEB947 RADAR & RADIO NAVIGATIONAL AIDS

Radar equation; theory of reception; matched filtering; principles of detection; types of radars; primary and secondary radar; surveillance; tracking; navigation; terrain-following radar; radar techniques including doppler extraction, moving target indicator, pulse compression, ranging parameter optimisation, application of matched filtering and Wiener and Kalman filtering; detailed and systematic study of navigational systems; microwave landing systems.

Course: EE43  
Prerequisites: EEB561, EEB562, EEB662, EEB968  
Credit Points: 6 Contact Hours: 3 per week

### ■ EEB951 HIGH VOLTAGE EQUIPMENT

Review of modern insulating materials; high voltage test methods and apparatus; characteristics of electrical insulation theories of breakdown in dielectrics; non-destructive testing methods, dielectric loss angle, partial discharge; voltage surge distribution in power equipment; overhead line insulation and lightning.

Course: EE44 Co-requisite: EEB742  
Credit Points: 7 Contact Hours: 3 per week

### ■ EEB954 ELECTRICAL ENERGY UTILISATION

Power reticulation in building, energy management, fire protection systems, illumination technology, air conditioning plant, building supervising and control systems, lifts.

Course: EE44 Prerequisite: EEB553  
Credit Points: 7 Contact Hours: 3 per week

### ■ EEB955 POWER ELECTRONICS APPLICATIONS

Review of power electronic switching devices; variable speed AC and DC drives; high voltage DC transmission (HVDC); standard static VAR compensators and new developments. Uninterruptible power supplies (UPS); induction heating; high frequency switching technology in variable speed AC drives; power electronic physical layout considerations.

Courses: EE44, IF23 Prerequisite: EEB652  
Credit Points: 7 Contact Hours: 3 per week

### ■ EEB956 PHOTOVOLTAIC ENGINEERING

This unit deals with the various aspects of photovoltaic systems including flat panel and concentrating solar cell arrays, series-parallel connection for optimal array design, array measurements, power conditioning, load management, energy storage, system costs, and balance, of sub-systems.

Course: EE44 Prerequisite: EEB587  
Credit Points: 7 Contact Hours: 3 per week

### ■ EEB961 COMMUNICATIONS TECHNIQUES

Modern communication techniques including switched networks, broadcast, point-to-point sys-

tems; microwave and optical links; radio navigation and radar; associated electronic devices.

**Courses:** EE44, IF23 **Prerequisite:** EEB967  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ EEB962 MICROWAVE SYSTEMS ENGINEERING

Microwave thermionic and semiconductor devices, amplifier design using scattering parameters; passive microwave devices: non-linear networks and ferrites; array theory and design, microwave antennae.

**Courses:** EE44, IF23 **Prerequisite:** EEB662  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ EEB967 DIGITAL COMMUNICATIONS

The theory and applications of digital communications technology; baseband digital signals are introduced; pulse shaping, signal regeneration, measurement techniques and the digital coding of analogue signals are treated; such applications as digital radio systems, digital telephone and computer networks, error control in digital networks and ISDN.

**Courses:** EE43, EE44, IF23 **Prerequisite:** EEB967  
**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ EEB968 DIGITAL SIGNAL PROCESSING

Introduction to digital signal processing; discrete Fourier transform; discrete convolution; digital filtration and spectral estimation.

**Courses:** EE43, EE44, IF23 **Prerequisite:** EEB602  
**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ EEB969 DIGITAL SPECTRAL ANALYSIS

Modern spectral estimation, parametric and non-parametric; time frequency analysis and instantaneous frequency estimation; definition and implementation of higher order spectra; application to signal detection and classification.

**Courses:** EE44, IF23 **Prerequisite:** EEB968  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ EEB971 APPLIED ELECTRONICS

Analysis of the characteristics and applications of a variety of integrated devices; particular attention is given to new products; errors and quality of design.

**Courses:** EE44, IF23 **Prerequisite:** EEB573  
**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ EEB972 INTEGRATED ELECTRONIC TECHNIQUES

Commercially available integrated circuits and their typical applications in industry; design rules, limitations and methods of VLSI fabrication.

**Courses:** EE44, IF23 **Prerequisite:** EEB573  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ EEB980 AEROSPACE LAW

Aviation law, national and international; cargo constraints, restricted airspace, transport of people and animals, dangerous cargoes and firearms; the division of the upper atmosphere and space; insurance.

**Course:** EE43  
**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ EEP101 ALGORITHMS FOR CONTROL & SIGNAL PROCESSING

Solution of equations using numerical analysis methods and computer algorithms; differential and difference equations, numerical approximations and computational flow diagrams. Computer control of closed-loop systems, continuous and discrete systems, system hardware, sampled-data systems design techniques, system simulation. State-space theory, and system performance optimisation; state equation, transformations, state equation solution, closed-loop

system pole-placement design, performance criteria, dynamic optimisation methods. Spectral analysis and digital filtering. Discrete time adaptive filters. An introduction to neural networks and to fuzzy logic.

**Courses:** EE65, EE75  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EEP102 UNIX & C FOR ENGINEERS

Introduction to Operating Systems; commonly used commands; the file structure; the Shell; the vi Editor, Shell script. Types, operators and expressions, control flow, functions, pointers and arrays, structures, input and output. Applications of C and Unix in real time signal processing and control.

**Courses:** EE65, EE75  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EEP103 COMPUTER HARDWARE & INTERFACING

State-of-the-art digital devices; design and implementation of digital systems; microprocessors and microcontroller systems and interfacing; computer architectures, subsystems and peripherals.

**Courses:** EE65, EE75  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EEP104 REAL-TIME OPERATING SYSTEMS

Definition and introduction: review of current commercial real time operating systems, including RT-11 and UNIX-like operating systems. Structure: management; input/output management; file management; resource allocation and scheduling; protection; job control and multi-tasking. Development of programming skills: structured programming techniques, modular programming techniques; documentation of programs; interrupt handling techniques. Using assembler and high-level languages (C, Fortran, Ada, Pascal, Modula-2 etc).

**Courses:** EE65, EE75  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EEP120 NETWORKS & DISTRIBUTED COMPUTING

The Open System Interconnection model and the more common standards (such as CCITT, IEEE and MAP) which support the model; layers 3-7 (covered in depth), layers 1 and 2 (covered by reference); the computers, software packages, and protocols; networks structures (tree structures, multi-drop, star structures), software techniques (such as collision detection, tokens), data transfer protocols; examples of local area networks and wide area networks; hardware implementation of OSI layers and protocols.

**Courses:** EE65, EE75  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EEP121 PARALLEL & SUPER COMPUTING

The latest in vector processing and parallel computing technology; students will have access to parallel computer development systems and may be required to undertake a small research project.

**Course:** EE65  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EEP122 GRAPHICS & COMPUTER VISION

An introduction to the human visual system and the modelling of digital images; it also provides an introduction to a range of digital image process systems, transforms, image enhancement, image structural operations and pattern recognition.

**Course:** EE65  
**Credit Points:** 12 **Contact Hours:** 3 per week

## ■ EEP123 PROCESS CONTROL & ROBOTICS

Introduction to robotics; introduction to CNC machine tools; process control; controller tuning; plant characterisation and process optimisation; computer simulation and algorithms.

Courses: EE65, EE75

Credit Points: 12      Contact Hours: 3 per week

## ■ EEP124 DATA COMMUNICATIONS

The OSI Model - overview; examples of channels; physical layer interface standards; multiple access methods; modems; data coding error detection and correction; data compression encryption; public networks.

Courses: EE65, EE75

Credit Points: 12      Contact Hours: 3 per week

## ■ EEP125 ADVANCED ENGINEERING SOFTWARE TOOLS

Numerical techniques and computer software tools in procedural and non-procedural languages as well as specialised commercial applications packages for the analysis and design of data transmission systems.

Course: EE65

Credit Points: 12      Contact Hours: 3 per week

## ■ EEP126 COMMUNICATIONS DIGITAL SIGNAL PROCESSING

Source and channel coding; waveform coding; adaptive filtering in communication; applications of speech technology in communication; applications of DSP technology; real time DSP devices and their applications in communications.

Course: EE75

Credit Points: 12      Contact Hours: 3 per week

## ■ EEP127 ADVANCED TOPIC B

An advanced topic in the field of computers and communication engineering. This topic will change from year to year and will be announced at the beginning of the year.

Course: EE75

Credit Points: 12      Contact Hours: 3 per week

## ■ EEP128 DETECTION & ESTIMATION

Introduction to the theory of random variables and probability; signal detection; hypothesis tests, Neyman-Pearson detectors; uniformly most powerful tests for Gaussian case. Examples of detection of: an unknown deterministic signal in Gaussian noise of known probability distribution; Matched-Filter interpretation; a Gaussian signal of known distribution in Gaussian noise of known distribution. Detection in the non-Gaussian case. Parameter estimation: the Maximum Likelihood Estimator.

Course: EE75

Credit Points: 12      Contact Hours: 3 per week

## ■ EEP129 IMAGE PROCESSING & COMPUTER VISION

Image representation and modelling; image enhancement; image restoration; boundary detection techniques and algorithms; image segmentation; shape description techniques; neighbourhood operators; mathematical morphology.

Courses: EE65, EE75

Credit Points: 12      Contact Hours: 3 per week

## ■ EEP135 ADVANCED DIGITAL SIGNAL PROCESSING

General properties of stationary processes; basic spectral properties of the processes; practical aspects of digital spectral estimation; identification of linear systems; digital higher-order spectral estimation;

identification of non-linear systems; an update in the advances in digital signal processing.

Course: EE75

Credit Points: 12      Contact Hours: 3 per week

## ■ EEP137 ADVANCED TOPIC A

An advanced topic in the fields of computers and communication engineering. This topic will change from year to year and will be announced at the beginning of the year.

Course: EE75

Credit Points: 12      Contact Hours: 3 per week

## ■ EEP201 FUNDAMENTALS OF POWER SYSTEM EARTHING

Electrode resistance, potential gradient areas of common types of electrodes; multiple electrodes; electric shock, calculation of step and touch potentials; introduction to substation earthing; measurement of soil resistivity and electrode resistance; earthing of transmission lines; earth current distribution on faulted lines; distribution systems: MEN, SWER, safety during faults; flow of lightning currents to ground.

Courses: EE60, EE78, EE82

Credit Points: 4      Contact Hours: 3 per week

## ■ EEP202 THERMAL RATINGS & HEAT TRANSFER

Thermal conduction in simple geometries; forced and natural convection from plates and cylinders; radiation from hot surfaces; calculation of steady-state and time-varying temperatures in conductors; temperature measurement methods for high voltage equipment; thermal ratings of overhead lines; cable rating; temperature rise of power transformers.

Courses: EE60, EE78, EE82

Credit Points: 4      Contact Hours: 3 per week

## ■ EEP203 TESTING & CONDITION MONITORING

HV testing; temperature rise testing of electrical equipment; insulation testing; oil testing; condition monitoring systems.

Courses: EE60, EE78, EE82

Credit Points: 4      Contact Hours: 3 per week

## ■ EEP204 POWER SYSTEM LOAD FLOW ANALYSIS

p.u. revision; data collection methods; load flow algorithms; single and three-phase models; load flow applications; base case and contingency analysis in planning augmentation options, system operations contingency analysis; load flow analysis methodology; practice in analysis of transmission and distribution systems using an interactive package.

Courses: EE60, EE78, EE82

Credit Points: 4      Contact Hours: 3 per week

## ■ EEP205 POWER SYSTEM FAULT CALCULATIONS

Representation of generators, lines, transformers in positive sequence equivalent circuits; unbalanced fault conditions; complete sequence representation of power system equipment; per unit positive, negative and zero sequence network diagrams; calculation of generator and transformer sequence equivalent circuits from manufacturer's test data; calculation of line sequence impedances from line layout and soil resistivity; interference with telecommunications circuits; short circuit calculations to AS3581 using an interactive computer package.

Courses: EE60, EE78, EE82 Prerequisite: EEP204

Credit Points: 4      Contact Hours: 3 per week

**■ EEP206 PROJECT MANAGEMENT**

Activity networks; Basic Time Schedules and Gantt charts; project management packages - output reports, exercises related to electricity supply; analysis of critical path; types of resources; resource profiles and resource scheduling; methods of project administration and reporting; multi-project scheduling.

**Courses:** EE60, EE78, EE82

**Credit Points:** 4 **Contact Hours:** 3 per week

**■ EEP207 OVERHEAD TRANSMISSION LINE ROUTE SELECTION**

Legislation, standards and guides: radio interference, electromagnetic fields, low frequency induction, touch potentials, structure earthing, electrolytic corrosion, clearances, land legislation, environmental impact statements; current safety and environmental issues; requirements of other public utilities - Telecom, Railways, roadworks, marine, water, gas, oil; cost of environmental enhancements and alternative technologies; right of way; route selection principles: structure types, terrain shielding, identification of material and man-made features.

**Courses:** EE60, EE78, EE82

**Credit Points:** 4 **Contact Hours:** 3 per week

**■ EEP208 ECONOMIC ANALYSIS FOR POWER SYSTEMS ENGINEERS**

Cost of supply and tariff analysis; principles of economic analysis; methods of economic analysis; total/life cycle costs of plant; cost benefit analysis for engineering decision making; budgeting and cost control.

**Courses:** EE60, EE78, EE82

**Credit Points:** 4 **Contact Hours:** 3 per week

**■ EEP209 POWER SYSTEM HARMONICS**

Generation of harmonics; system response characteristics; effects of harmonics; reactive power compensation and harmonic control; measurement of harmonics; recommended practices including AS2279.

**Courses:** EE60, EE78, EE82 **Prerequisite:** EEP205

**Credit Points:** 4 **Contact Hours:** 3 per week

**■ EEP210 ABNORMAL SYSTEM VOLTAGES**

Supply quality standards; 50 Hz voltage; negative phase sequence voltages: AS1359 requirements, voltage unbalance studies, modelling, measurement; voltage transients and flicker: AS2279 requirements, disturbing loads, remedial measures, transient disturbances and power system plant; power system transient analysis: EMTP studies; measurement of voltage disturbances: instrumentation, transducers, accuracy.

**Courses:** EE60, EE78, EE82 **Prerequisite:** EEP205

**Credit Points:** 4 **Contact Hours:** 3 per week

**■ EEP211 BASIC POWER SYSTEM PROTECTION**

Protection principles and philosophy; power system components; unit and non-unit protection; relay equipment technology; relay application; equipment acquisition; basic relay setting methods; testing of relays and protection systems; protection operations.

**Courses:** EE60, EE78, EE82 **Prerequisite:** EEP205

**Credit Points:** 4 **Contact Hours:** 3 per week

**■ EEP212 ADVANCED POWER SYSTEM PROTECTION**

Revision of fault level calculations; protection schemes; current and voltage transformer transient characteristics; relay setting calculations; design and specification of protection schemes; modern develop-

ments and trends in protection; quality control and performance assessment.

**Courses:** EE60, EE78, EE82 **Prerequisite:** EEP211

**Credit Points:** 4 **Contact Hours:** 3 per week

**■ EEP213 STATISTICS**

Review of probability concepts, random variables, probability distributions and stochastic independence, definition of random variables for relevant applications; specific probability distributions; data collection and storage strategies to produce data from which valid inferences can be drawn; data description; parameter estimation; assessment of probable reliability of estimates.

**Courses:** EE60, EE82, EE78

**Credit Points:** 4 **Contact Hours:** 3 per week

**■ EEP214 RISK ASSESSMENT IN THE ELECTRICITY SUPPLY INDUSTRY**

Identification of hazards; hazard and operability studies; assessment of frequency; assessment of consequences; legal and economic consequences; case studies including identification of hazards, assessment of risks, and consequences in ESI.

**Courses:** EE60, EE78, EE82 **Prerequisite:** EEP214

**Credit Points:** 4 **Contact Hours:** 3 per week

**■ EEP215 RELIABILITY**

Reliability models; reliability analysis methods; corporate reliability standards; fundamentals of reliability assessment; reliability theory; determination of equipment failure rates and repair times; interval between failures, time to repair, failure modes and effects.

**Courses:** EE60, EE78, EE82 **Prerequisite:** EEP213

**Credit Points:** 4 **Contact Hours:** 3 per week

**■ EEP216 TRANSMISSION LINE DESIGN - ELECTRICAL**

Electrical design of transmission lines with ratings of 33kV to 500kV; standard and new technology insulators: power frequency, impulse and switching flashover voltage, pollution and creepage, wet and dry flashover, mechanical characteristics; feasible structure types; tower footing resistance and counterpoise; insulation co-ordination methodology; determination of RI using state of the art methods; design to ensure that electrostatic and electromagnetic fields do not exceed NH & MRC guidelines.

**Courses:** EE60, EE78, EE82

**Prerequisites:** EEP201, EEP202, EEP203, EEP205, EEP207, EEP210

**Credit Points:** 4 **Contact Hours:** 3 per week

**■ EEP217 TRANSMISSION LINE DESIGN - MECHANICAL**

Route survey and profile plotting; sag-tension-temperature calculations; requirements for survey data; statutory and enterprise requirements for line layout: clearances, mechanical loading, safety criteria; definition of loading conditions, structure capacities, layout clearances; applied mechanics of strung conductors; strength and rating of overhead line hardware; selection of standard design temperature that provides for emergency loading; load/weather probability considerations; determination of everyday tensions from allowable stress or tension/mass ratio; determination of vibration protection; assessment of conductor galloping for power and communications cables; transmission line estimating techniques; selection of structure type based on optimum capitalised costs.

**Courses:** EE60, EE78, EE82

**Prerequisites:** EEP208, EEP216

**Credit Points:** 4 **Contact Hours:** 3 per week

### ■ EEP218 INTRODUCTION TO AUTOMATED SYSTEM CONTROL & SUPERVISORY SYSTEMS

SCADA fundamentals and protocols; SCADA equipment; transmission SCADA systems, distribution automation systems, distribution control systems, PC software applications; alarm philosophy and control principles; specification of MMI; computer system platforms; communication system principles; data communications and I/O capacities and types, I/O processing; application of SCADA systems to transmission and distribution systems; cost/benefits of alternative schemes.

**Courses:** EE60, EE78, EE82

**Credit Points:** 4      **Contact Hours:** 3 per week

### ■ EEP219 HIGH VOLTAGE SUBSTATION EQUIPMENT, POWER TRANSFORMERS & REACTIVE POWER PLANT

Principles of power transformer design from distribution transformers to EHV transformers; leakage and magnetising reactance; losses, harmonics and inrush currents; short circuit forces; tests to measure ratio, losses, impedance, phasing, temperature rise; accuracy and traceability of tests; interpretation of test reports; surge phenomena in windings, RSG and impulse testing of power transformers, interpretation of test results; oil cooling systems; fire protection; tap changers and associated controls; analysis of transformer failure modes; in-phase and quad-boost regulators; series and shunt reactors; reactors for harmonic filters; SVCs: design considerations, equipment characteristics and equipment characteristics.

**Courses:** EE60, EE78, EE82

**Prerequisites:** EEP202, EEP203

**Credit Points:** 4      **Contact Hours:** 3 per week

### ■ EEP220 DISTRIBUTION PLANNING

Essential data requirements; sources of information; identification and quantification of current and future limitations; alternative solutions to problems; application of solutions to actual problems; comparison of alternatives including economic, technical and environmental comparisons; presentation of planning study information in an accurate and succinct format.

**Courses:** EE60, EE78, EE82

**Prerequisites:** EEP205, EEP208

**Credit Points:** 4      **Contact Hours:** 3 per week

### ■ EEP221 LIMITS TO POWER SYSTEM STABILITY

Time domain models and characteristics of synchronous machines; induction generator models; assessment of model bandwidth for use in dynamic studies; characteristics of load plant; evaluation of small signal adequacy by eigenvalue analysis; determination of modes of electromechanical and control systems; identification of modes with insufficient damping, eigenvalue participating states and eigenvectors; establishment of transfer evaluation of gains/phases at identified model frequencies; time domain dynamic simulations of power system operation; numerical models for prediction of large disturbance behaviour of interconnected power systems; stability of system under contingency and emergency conditions; stability improvement using: controlled reactive devices, special control systems, braking resistors, U/F load shedding, FACTS.

**Courses:** EE60, EE78, EE82

**Prerequisite:** EEP205

**Credit Points:** 4      **Contact Hours:** 3 per week

### ■ EEP222 MAINTENANCE OF ELECTRICITY SUPPLY SYSTEMS

Establishment of maintenance policies; maintenance planning; data recording and analysis; maintenance operations; maintenance program evaluation; assessment against KPI, modification of programs to account for continuing defects and failures or to reflect changing technologies.

**Courses:** EE60, EE78, EE82

**Prerequisites:** EEP208, EEP215

**Credit Points:** 4      **Contact Hours:** 3 per week

### ■ EEP223 LOAD FORECASTING

Nature of load patterns; categories of DSM, costs of DSM, options, benefits and limitations to DSM; tariffs and their impact; impact of economic trends on demand growth; load manipulation; load forecast methods; establishment of base loads from: historical load data, customer load predictions, and other contributing factors; prediction of growth rates; generation of load forecasts.

**Courses:** EE60, EE78, EE82

**Prerequisites:** EEP208, EEP213

**Credit Points:** 4      **Contact Hours:** 3 per week

### ■ EEP224 POWER SYSTEM OPERATION

Frequency control and AGC under normal load conditions, operation under emergency and contingency conditions, black starting, load shedding philosophy; generation operation; contract fuel prices, variations, automatic generation control systems; analysis of power station operating costs; establishment of optimum operating costs; management of forced outages; coordination of planned outages including assessment of risks and contingency planning; control of reactive power and voltage levels under normal and abnormal conditions; load reduction – instantaneous, delayed and planned; maintenance of consumer services and records.

**Courses:** EE60, EE78, EE82

**Prerequisites:** EEP202, EEP212, EEP215, EEP218, EEP221, EEP223

**Credit Points:** 4      **Contact Hours:** 3 per week

### ■ EEP230 THESIS A

Students work in industry for 100 days of supervised practice in industry. As part of this practical training, one or more linked topics are identified that are related to the work of the section in which the training is carried out. A masters thesis is prepared describing results of studies done by the student during the practical training.

**Course:** EE78

### ■ EEP231 THESIS B

Work done in this unit and the related unit EEP230 are examined by submission of a single masters thesis.

**Course:** EE78

### ■ EEP300 RESEARCH PROJECT

A computer engineering research project in the student's chosen field encompassing a literature search, design, hardware construction or writing of software, testing and publication of a thesis.

**Course:** EE75

**Credit Points:** 48      **Contact Hours:** 168 hours total

### ■ EEP301 PROJECT

Students carry out research or development work on a mini project in specified areas.

**Course:** EE75

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ EEP302 RESEARCH COMPONENT 1**

Research component of EEP101, EEP102, EEP123 and EEP124.

Course: EE75

Credit Points: 12 Contact Hours: 3 per week

**■ EEP303 RESEARCH COMPONENT 2**

Research component of EEP102, EEP104, EEP120 and EEP129.

Course: EE75

Credit Points: 12 Contact Hours: 3 per week

**■ EET500 ELECTRICAL TECHNOLOGY**

Introduction to electric motors, generators, transformers and three phase systems.

Course: ME23

Credit Points: 6 Contact Hours: 3 per week

**■ EET522 CONTROL SYSTEMS 2**

Process control system terminology and symbols; review of hardware; chart recorders; sizing of control valves; measurement of mass flowrate, humidity and chemical composition; analogue data transmission standards; three term controllers and other techniques; examples of process control configurations, such as cascade, ratio and feedforward control; controller tuning; system performance for reference, noise and load disturbances; accuracy, steady state errors, effect of type number on performance; stability and more advanced frequency domain analysis; machine control systems, such as DC motor speed controllers, variable frequency controllers, servosystems, machine control systems.

Course: EE22

Prerequisite: EET420  
Credit Points: 7 Contact Hours: 3 per week

**■ EET560 COMMUNICATIONS ENGINEERING 1**

Advanced signal analysis using Fourier methods; AM generation and detection, the effects of filtering and noise; FM and PM generation and demodulation, effects of noise, FM threshold, SSB methods; phase locked loop principles; radio receiver circuits, double conversion, spurious responses; pulse analogue modulation, PAM, PWM, PPM, circuits and spectra.

Course: EE22

Prerequisites: EET270, EET460  
Credit Points: 7 Contact Hours: 3 per week

**■ EET570 ELECTRONICS 2**

Integrated circuit amplifiers and their applications; other areas of study include: power amplifiers; optoelectronic devices; voltage regulators and a survey of semiconductor switching devices.

Course: EE22

Prerequisite: EET270  
Credit Points: 7 Contact Hours: 3 per week

**■ EET590 MICROPROCESSOR SYSTEMS**

Assembly language programming and use of microprocessors as electrical engineering hardware. Interfacing of microprocessors to instrumentation and external equipment.

Course: EE22

Prerequisites: CST390, EET676  
Credit Points: 7 Contact Hours: 3 per week

**■ EET642 ELECTRICAL POWER SYSTEMS**

Single line diagrams, pu systems, transmission line equivalent circuits, fault balanced calculations, power flow calculations, overhead line and underground cable characteristics, power system insulation.

Course: EE22

Prerequisite: EET350  
Credit Points: 7 Contact Hours: 3 per week

**■ EET650 ELECTRICAL EQUIPMENT**

Three phase transformers, multiwinding, auto; special types of AC machines including three phase and

single phase induction motors, synchronous machine construction and operation.

Course: EE22

Credit Points: 7 Contact Hours: 3 per week

**■ EET678 APPLIED ELECTRONICS**

The integrated circuit approach to electronic systems design; the unit is highly practical and utilises the basic fundamentals of ICs given in integrated circuits; further treatment of integrated circuits with practical applications: amplifiers (all the common configurations), oscillators, special purpose circuits such as peak detectors, sample and hold circuits, active filters.

Course: EE22

Prerequisite: EET570  
Credit Points: 7 Contact Hours: 3 per week

**■ EET690 COMPUTER ORGANISATION**

A comparative study of computer architectures and operating systems from microprocessors up to super computers; virtual machines, interpreters, compilers, linkers, loaders, disc operating systems and executive; instruction sets, addressing modes and instruction prefetch cycles; a survey of memory management techniques such as memory maps, virtual memory, cache memory, and interleaving; exception processing methods such as interrupts, autovectors, bus errors and supervisor states; multi processor systems and computer communications standards, networks and protocols. Parallel computing, pipelines, single instruction multiple data and multiple instruction multiple data machines.

Course: EE22

Prerequisite: CST390  
Credit Points: 7 Contact Hours: 3 per week

**■ EET720 MODERN CONTROL TECHNOLOGY**

Onstream analysers; intelligent analytical equipment; sequence control and programmable logic controllers; robot sensors and control systems; computer numerical controlled machines; distributed control systems; sampling theory and algorithm development; communication between intelligent control systems (such as MAP and TOP); adaptive and automatic tuning controllers; advanced testing instruments.

Course: EE22

Prerequisite: EET420 Co-requisite: EET522  
Credit Points: 7 Contact Hours: 3 per week

**■ EET737 TRANSMISSION & PROPAGATION**

Transmission lines study of waves; reflections; matching; using Smith circle and computer aided techniques; electromagnetic waves in free space and at the boundary between media; basic antenna parameters and properties, waveguide theory and microwave techniques; optical fibre technology.

Course: EE22

Credit Points: 7 Contact Hours: 3 per week

**■ EET753 TESTING & COMMISSIONING TECHNIQUES**

The philosophy of testing quality assurance and commissioning; test methods and techniques for various electrical tests; application of test methods and techniques to a range of electrical plant; principles of earthing in a power system; safety procedures.

Course: EE22

Credit Points: 7 Contact Hours: 3 per week

**■ EET760 COMMUNICATIONS ENGINEERING 2**

Sampling, reconstruction, spectra; quantisation, dynamic range and noise; PCM methods and circuitry, companding; delta modulation; digital trans-

mission, TDM, FDM, modulation methods; error correction and data communication protocols.

**Course:** EE22 **Prerequisite:** EET560  
**Credit Points:** 7 **Contact Hours:** 3 per week

#### ■ EET791 COMPUTER PROGRAMMING 2

Development of the concepts introduced in CST390 to include the full range of features in this language; an introduction to the features of FORTRAN.

**Course:** EE22 **Prerequisite:** CST390  
**Credit Points:** 7 **Contact Hours:** 3 per week

#### ■ EET840 SUBSTATIONS & PROTECTION SYSTEMS

Study insulation coordination principles, substation layout and equipment including circuit breakers, current and voltage transformers and their characteristics; an introduction to sequence components and fault calculations; a description of different types of protection systems and their integration with the power system, especially substations.

**Course:** EE22 **Prerequisite:** EET642  
**Credit Points:** 7 **Contact Hours:** 3 per week

#### ■ EET860 COMMUNICATIONS TECHNOLOGY

Broadcast radio and TV, terrestrial and satellite; specialised broadcast systems, eg. police, taxi; point-to-point radio communications; telemetry; switched systems, circuit and packet switching, exchangers, traffic; use of different frequency ranges, VLF, MF, HF, VHF, UHF and SHF for radio communications; a number of compulsory industrial visits are arranged.

**Course:** EE22 **Prerequisite:** EET570  
**Credit Points:** 7 **Contact Hours:** 3 per week

#### ■ EET870 INDUSTRIAL ELECTRONICS

Study of a wide range of electronic devices and circuits associated with industrial control systems; a wide range of power switching devices and their applications are studied together with electronic measurement systems and their transducers.

**Course:** EE22 **Prerequisite:** EET570  
**Credit Points:** 7 **Contact Hours:** 3 per week

#### ■ EET880 DESIGN

The main concepts of electrical design and introduction to relevant specifications and standards; further work is in the form of design projects in which a written report must be submitted.

**Course:** EE22  
**Prerequisites:** Major units in selected modules  
**Co-requisites:** Major modules 1(d) and 2(d)  
**Credit Points:** 7 **Contact Hours:** 3 per week

#### ■ EET891 ADVANCED COMPUTING TECHNIQUES

Applications of computers and microprocessor systems to data collections supervisory and active control functions; real-time operating systems and software development in both low-level languages and high-level languages such as C or MODULA 2.

**Course:** EE22 **Prerequisite:** CST390  
**Credit Points:** 7 **Contact Hours:** 3 per week

#### ■ EPB100 ADMINISTRATIVE THEORY

Use of political theories and models in the study of public administration; theories of democracy: individualism, pluralism, elitism, corporatism, Marxism; theories of power: McClelland, Lasswell; theories of bureaucracy: Weber, Mosca, Michels, Marx; use of management theories and models in the study of public administration: classical/traditional theory;

human relations theory; systems theory and structural functionalism; action theory (Harmon).

**Course:** BS50 **Prerequisites:** BSB102, EPB112  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ EPB101 ADVANCED ECONOMIC THEORY & POLICY

The foundations of economic thought and recent contributions to the literature of micro and macro theory and policy; their relevance for public and private decision making in the Australian context.

**Course:** BS50  
**Prerequisites:** EPB142 and EPB152 or one of these plus the other as a co-requisite.  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ EPB102 APPLIED ECONOMETRICS A

Econometric models widely used by business to improve forecasting and decision making as well as by government to assist in the policy formulation process; the practical problems encountered in using the single equation econometric model; model assumptions; specification error and testing; alternative functional forms; multicollinearity; serial correlation; heteroscedasticity; the use of dummy variables; introduction to the statistical package SAS.

**Course:** BS50 **Prerequisite:** EPB110  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ EPB103 APPLIED ECONOMETRICS B

Single equation methods such as lagged dependent variables and principle components with applications in economics; simultaneous equation methods, identification problems; estimation methods such as indirect least square, two stage least squares and three stage least squares; important practical issues relating to the non-stationarity of most economic data.

**Course:** BS50 **Prerequisite:** EPB102  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ EPB104 APPLIED ECONOMIC TECHNIQUES 1

Aspects of regression analysis with particular application to the estimation of demand, production and cost functions and the interpretation of results; approaches to forecasting including time series smoothing methods, the classical decomposition model and extensions of regression; optimal resource allocation using linear programming, project management and inventory control modes.

**Course:** BS50  
**Prerequisites:** MAB173 and EPB110 (or equivalent)  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ EPB105 ASIAN ECONOMIC DEVELOPMENT

An analysis of economic change in Asia since 1820; the response of Japan, China and Southeast Asia to European intrusion and the growth of the international economy; the economic consequences of colonisation; the impact of war; development policies; ASEAN; the rise of the NICs.

**Course:** BS50  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ EPB106 AUSTRALIAN ECONOMIC HISTORY

The Australian economy and its economic institutions from the 1890's to World War II; analysis of post-war economic growth and fluctuations; arbitration, conciliation and wage fixation, immigration policy, capital inflow, institutional arrangements; Australia's links with the international economy; trading agreements; the contribution of manufacturing, agriculture,



minerals and energy, labor, investment and technology in historical context; Australia's deteriorating economic performance since the 1970's and the opportunities presented by the development of the Pacific Basin; the future for Australia.

Courses: BS50, ED50, NS48

Credit Points: 12 Contact Hours: 3 per week

### ■ EPB107 BUSINESS ECONOMIC FORECASTING

Review of deterministic forecasting models; properties of stochastic time series; concepts of stationarity and the autocorrelation function; identification of autoregressive, moving average and ARIMA models; introduction to non-linear least squares estimation; diagnostic checking to determine model adequacy; forecasting and adaptive forecasting; seasonal forecasting models and their application.

Course: BS50

Prerequisite: EPB110

Credit Points: 12 Contact Hours: 3 per week

### ■ EPB108 BUSINESS IN ASIA

The business and cultural environments of Japan, China, the NICs and ASEAN; the operation and management of the major Asian economies; social and institutional foundations of the economies concerned; interaction between Asia and Australia.

Course: BS50

Credit Points: 12 Contact Hours: 3 per week

### ■ EPB109 BUSINESS METHODOLOGY

The concepts of basic statistical methods and their applications in business; descriptive statistics, probability concepts and probability distributions; inferential statistics; correlation and regression.

Courses: BS50, IF53

Prerequisite: EPB110

Credit Points: 12 Contact Hours: 3 per week

### ■ EPB110 BUSINESS STATISTICS

Sources of data; descriptive statistics; probability concepts; discrete and continuous distributions; statistical inference for 1, 2 and 3 or more population comparisons of parameters; simple regression and correlation; use of the statgraphics package.

Course: BS50

Prerequisite: EPB109

Credit Points: 12 Contact Hours: 3 per week

### ■ EPB111 COMPARATIVE ECONOMIC SYSTEMS

The study of comparative economic systems; methods of comparison; structural dimensions as systemic factors; socio-political settings and economic systems; capitalism and its critics; socialist planning and administrative decentralisation; socialist planning and manipulative decentralisation; the role of the state in the market economy; socialist economic reforms; transition to a market economy; structural change and economic development; convergence.

Courses: BS50, ED50

Prerequisites: EPB140 and EPB150

Credit Points: 12 Contact Hours: 3 per week

### ■ EPB112 CRITICAL ANALYSIS

The anatomy of valid argument in the social sciences, argument analysis from premise to conclusion; examination of causes, fallacies in argument to foster a critical stance; application of the fundamentals of reasoning to organisation principles; rule making issues and the enforcement problem; strategies for change; dealing with clients; responding to rhetoric.

Courses: BS50, NS48

Credit Points: 12 Contact Hours: 3 per week

### ■ EPB114 ECONOMIC DEVELOPMENT

The economics of development of the Third World; examination and application of economic principles, alternative theories and policies to the understanding of significant development problems such as poverty, inequality, unemployment, debt, rural stagnation, economic stabilisation, resource depletion and sustainability. As these problems of development or underdevelopment are rooted in social and institutional causes as well as economic causes, the economic principles are combined with institutional and structural analyses to provide a better understanding of the problems.

Courses: BS50, ED50

Prerequisites: EPB140 and EPB150

Credit Points: 12 Contact Hours: 3 per week

### ■ EPB115 ECONOMIC MODEL BUILDING

Model specification and theory formulation; investigating the model characteristics and the underlying assumptions of convexity, concavity and regularity; theoretical appraisal of single and simultaneous equation model building and audit usefulness in pacifying and solving economic issues and problems.

Course: BS50

Prerequisites: EPB104, EPB142, EPB152

Credit Points: 12 Contact Hours: 3 per week

### ■ EPB116 ECONOMIC PRINCIPLES 1

The economic problem and its basis in scarcity; contemporary Australian microeconomics institutions; aspects of market demand, supply and elasticity; costing principles; profit maximisation; Australian market structure; price and output decisions in different market types; relevance of microeconomics for the macro economy; economic institutions in the macro economy; measurement of GDP, recession and prosperity; income determination and distribution; role of the Reserve Bank; managing the external economy; integrated monetary and fiscal policies and aspects of the current economic debate.

Courses: BS50, IF53, NS48

Incompatible with: EPB140 and EPB150

Credit Points: 12 Contact Hours: 3 per week

### ■ EPB117 ECONOMICS OF INDUSTRY

An analysis of: a selection of industrial structures; measures and determinants of industry concentration; market concentration and consumer surplus; partial equilibrium market power and concentration; pricing policies for oligopolists and monopolistically competitive firms; entry-deterrence pricing; issues in Australian industry policy - the Trade Practices Act and Price Surveillance Authority effectiveness.

Courses: BS50, BS53

Prerequisites: EPB140 and EPB150 (EPN102) or EPB172

Credit Points: 12 Contact Hours: 3 per week

### ■ EPB120 EUROPEAN ECONOMIC HISTORY

The emergence and spread of industry; Europe's involvement with the world economy; international movements of capital and technology; developments in manufacturing; agriculture; minerals and energy.

Course: BS50

Credit Points: 12 Contact Hours: 3 per week

### ■ EPB121 EUROPEAN INTEGRATION

The political economy of European integration in the post-war era; the influence of major European economies on the integration process; the institutional framework; emphasis on current issues, Eastern

Europe post-1992, the global economy and implications for Australia.

Course: BS50

Credit Points: 12 Contact Hours: 3 per week

#### ■ EPB124 GOVERNMENT

Government in the national and international context; political concepts and principles, models of government, Westminster and presidential systems; federalism and constitutionalism; judicial review and the High Court; political parties and elections; public service and public enterprise; intergovernmental relations; pressure groups and the trend to corporatism; international influences on government policy.

Courses: BS50, IF52, IS43, LW31, NS48

Credit Points: 12 Contact Hours: 3 per week

#### ■ EPB125 GOVERNMENT & BUSINESS

The political context of development: a review of major trends in Australian government policies towards business; ideology and government-business relationships: liberalism, socialism and their contemporary derivatives; intergovernment relations and business policy; the regulatory framework; the big government debate; interest representation: interest groups, political parties and processes; the trend to corporatism; taxation and welfare policies and business; government, business and the primary sector, manufacturing, the transport sector, resource development, and finance; science and technology.

Course: BS50

Prerequisites: EPB124 or HUB686 or EPN102

(MBA students)

Credit Points: 12 Contact Hours: 3 per week

#### ■ EPB127 HISTORY OF ECONOMIC THOUGHT

Adam Smith and economic development; Malthus and the population problem; the magnificent dynamics of David Ricardo; the problem of value; Smith, Ricardo, Marx and the marginal revolution; utopian socialists and the problem of alternative organisation and industry; Marx and the critique of capitalism; planning versus the market; Lange versus Mises; Schumpeter on economic development; Rae, Veblen and Gailbraith and consumerism.

Course: BS50

Prerequisites: EPB140 and EPB150 (EPN102) or EPB172

Credit Points: 12 Contact Hours: 3 per week

#### ■ EPB130 INTERNATIONAL ECONOMICS

Theories of trade; balance of payments; Australia's export dilemma; foreign investment in Australia; GATT; OECD; commodity agreements; tariff and other barriers to trade; the spot and forward FX markets; the national debt; Keynesian, monetary and portfolio balance models of the open economy; the EC; ASEAN; international monetary arrangements; work capital markets.

Course: BS50 Prerequisites: EPB142, EPB152

Credit Points: 12 Contact Hours: 3 per week

#### ■ EPB131 INTERNATIONAL POLITICS & BUSINESS

Australian business exists within a vitally important international environment whose structure, especially as regards access to various national markets, is particularly determined by national governments and a range of international agreements entered into by those governments. This unit examines the international political system and its impact upon business; the major actors in the system, with an emphasis upon the bilateral and multilateral agreements of major

impact for Australian business; security, production, finance, transport, trade, energy, and transnational organisations; the place of Australia in the system; regions of central interest to Australian business.

Courses: BS50, NS48

Credit Points: 12 Contact Hours: 3 per week

#### ■ EPB132 INTERNATIONAL TRADE & FINANCE

Surveys international trade and finance with an emphasis on current economic policy issues; the theories of trade and the bases, direction, volume and terms of trade; trade policy and economic welfare; tariffs and trade; GATT; industry policies; economic integration: EC, NAFTA, APEC, ASEAN; balance of payments; alternative exchange rate regimes; foreign exchange markets and risk management using futures and options; Eurocurrency markets; international money reform. This unit is not available to students undertaking the Economics primary major.

Courses: BS50, ED50

Prerequisites: EPB140, EPB150

Credit Points: 12 Contact Hours: 3 per week

#### ■ EPB133 GLOBALISATION & WORLD BUSINESS

The international, economic, financial and business environment and analyses the impact of globalisation on Australia's economy and its business firms; measures to improve competitiveness, trade blocs, global business strategies, technological change, conflict in product and export markets; Europe/North American/Asian economic relations.

Course: BS50

Credit Points: 12 Contact Hours: 3 per week

#### ■ EPB134 LABOUR ECONOMICS

This unit applies analytical tools acquired from the preceding units investigating specific market applications both at the micro and macro levels. Topics include: the demand and supply of labour, investment in human capital, market structures and their effect on equilibrium wage levels; job search; discrimination; collective bargaining; minimum wages; enterprise bargaining; unemployment; inflation; the Phillips Curve in Australia.

Course: BS50 Prerequisites: EPB154, EPB142

Credit Points: 12 Contact Hours: 3 per week

#### ■ EPB135 LOCAL GOVERNMENT

The nature and constitutional status of local government in Queensland; the evolution of local government legislation; community of interest concepts; determination of external boundaries; local government electoral systems in Queensland; public participation and policy formulation; professionals in local government; administrative issues; functions, the general charter, personnel resources; budgeting and finance; local government and federalism; greater local government; City of Brisbane; regional administration; local government in the UK; corporatism in local government; EARC; EARC process and new local government legislation.

Course: BS50 Prerequisite: EPB124 or EPN101

Credit Points: 12 Contact Hours: 3 per week

#### ■ EPB136 LOCAL GOVERNMENT ADMINISTRATIVE PRACTICE 1

The local authority, its constitution, committees; the Department of Housing and local government, and powers of central government; by-laws: procedure, content, and enforcement; elections and electoral procedures; the finances of the local authority; planning schemes, land use controls, procedures; planning and

the Environment Court; subdivision of land, building units title and group title, artificial lakes, canals; environmental controls, types and powers, Environmental Impact Statement (EIS); the role of the local authority; Health, the Health Act and regulations; the standard bylaws (buildings, water supply and sewerage) and flammable liquids regulations; local authority meeting agenda and minutes; the Local Government Association of Queensland; recent legislative action and possible future legislation. (Note: Offered in Semester 1 in odd-numbered years only.)

Course: BS50

Prerequisite: EPB135

Credit Points: 12

Contact Hours: 3 per week

### ■ EPB137 LOCAL GOVERNMENT ADMINISTRATIVE PRACTICE 2

A review of the Local Government Act; miscellaneous powers and duties of local authorities; Brisbane City Council: constitutions, acts, ordinances, City of Brisbane Town Planning Act; land acquisition, and compensation; flood mitigation and land use controls in flood prone areas; town planning, dam catchment areas, the North Pine Dam study; town planning and land subdivision research project; planning and Environment Court decisions; sources of funds and financial administration; grants; commissions and the concept of fiscal equalisation; relationships between local authorities: Brisbane and area Water Board; relationships with State and Federal governments; consideration of selected issues based on Local Government Conference motions. (Note: Offered in Semester 2 in odd-numbered years only.)

Courses: BS50, ED50

Prerequisite: EPB136

Credit Points: 12

Contact Hours: 3 per week

### ■ EPB140 MACROECONOMICS

Examination of the problems associated with inflation, unemployment and the balance of payments in the context of the Australian economy; the role of the government and the central bank discussed within the framework of an income-expenditure model; international trade and capital flows.

Courses: BS50, IF31, IF52, IS43, IT20, NS48, PU48

Incompatible with: EPB116 and EPB173

Credit Points: 12

Contact Hours: 3 per week

### ■ EPB141 MACROECONOMIC POLICY

Recent experience with monetary and fiscal policy and the regulation of the labour market, analysing their effect on unemployment, inflation, balance of payments, foreign exchanges and international trade, consumption, savings and investment.

Course: BS50

Prerequisite: EPB142

Credit Points: 12

Contact Hours: 3 per week

### ■ EPB142 MACROECONOMIC THEORY

The IS-LM model in a closed and open economy; theories of consumption, investment and money; issues relating to aggregate supply; problems of unemployment, inflation, the balance of payments and economic growth; the effects of monetary and fiscal policies and supply-side economics.

Course: BS50

Prerequisite: EPB140 or EPN102 or EPB172

Credit Points: 12

Contact Hours: 3 per week

### ■ EPB143 MANAGEMENT SCIENCE A

The major behavioural objectives are to introduce students to important models of operations research; students are made aware of how these models are used in accounting and/or management decision-making situations; students become familiar with solving

problems through their own calculations and the use of a computer; students gain an appreciation of the strengths and weaknesses of the models.

Course: BS50

Credit Points: 12

Contact Hours: 3 per week

### ■ EPB144 MATHEMATICAL ECONOMIC APPLICATIONS

Differential calculus; rules of differentiation; comparative statistics; implicit function theorem with applications to market equilibrium models; classical optimisation; Lagrangian method with equality constraints; Kuhn Tucker's method with inequality constraints; second order conditions for optimisation with Hessian determinants; economic dynamics and integral calculus: differential equations and difference equations with applications to growth and trade cycles.

Course: BS50

Prerequisite: MAB173

Credit Points: 12

Contact Hours: 3 per week

### ■ EPB150 MICROECONOMICS

The nature of the economic problem and the economic way of thinking; the theory of consumer behaviour, the nature of demand, preference and indifference theory; the nature of supply, the price mechanism and the operation of the market; short and long run costs; profit maximisation, market structure, factor markets and market failure.

Courses: BS50, ED50, IF31, IS43, IT20

Incompatible with: EPB116 and EPB173

Credit Points: 12

Contact Hours: 3 per week

### ■ EPB151 MICROECONOMIC POLICY

A methodological framework based on the tenets of welfare economics allowing the student to assess microeconomic policy in action in both the public and private sectors. Topics include: efficient market outcomes, market failure, the role of the government, public goods, agriculture policy, manufacturing policy, externalities and the environment.

Course: BS50

Prerequisite: EPB152

Credit Points: 12

Contact Hours: 3 per week

### ■ EPB152 MICROECONOMIC THEORY

The theory of consumer demand showing the dual relationship between preference and demand theory; the concept of elasticity and demand analysis; the theory of the firm through extensions into production and cost theory. Monopoly and competitive pricing behaviour and welfare economics.

Course: BS50

Prerequisite: EPB150 or EPN102 or EPB172

Credit Points: 12

Contact Hours: 3 per week

### ■ EPB153 MONETARY THEORY & POLICY

The historical evolution of contemporary monetary theories; the role of money in affecting output, inflation and the balance of payments; recent approaches to monetary policy in the Australian context; and the role of the Reserve Bank in interpreting theory and giving effect to policy.

Course: BS50

Prerequisites: EPB140 and EPB150, or EPN102, or EPB172

Credit Points: 12

Contact Hours: 3 per week

### ■ EPB154 NATIONAL GOVERNMENT

The philosophical foundations, trends and reform processes across the whole spectrum of national government in Australia. Topics include: political theories and models: their relevance for Australian national government; theories of democracy: liberalism, pluralism, elitism, marxism, corporatism,

socialism; constitutional framework: judicial review and division of powers; legislative processes: the contemporary committee system, scrutiny mechanisms; electoral processes: voting behaviour; public policy-making: models of public policy formulation, the budget process; public sector reforms: devolution of responsibility, the goals of improved efficiency, accountability, equity; inter-governmental relations, fiscal federalism, cooperative federalism; politics of structural reform.

**Course:** BS50

**Prerequisite:** EPB124

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ EPB155 POLICY & PROGRAM EVALUATION

The process and practice of policy and program evaluation in the public sector; the nature of evaluation and techniques; evaluations of selected policies and programs. The aim is to develop a critical appreciation of the strengths and weaknesses of evaluation as an integral part of the policy process.

**Course:** BS50

**Prerequisite:** EPB159

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ EPB156 POLITICAL & ADMINISTRATIVE ANALYSIS

Political theory and practice: conceptualising the problems; the liberal tradition: neo-liberalism, conservatism, liberalism and their relevance for past and present political systems; reformist and radical traditions: totalitarianism, communism, socialism and social democracy; relevance for past and present political systems; theories of power and participation: Lukes, Lindblom, Pateman; case studies; theories of the liberal-democratic state: liberalism, freedom and equality, marxism and the capitalist state, theories of the liberal-democratic state: the public choice approach; corporatism and democracy: initiatives, possibilities and problems; state power and democracy; re-evaluation of basic concepts.

**Course:** BS50 **Prerequisite:** EPB100 or HUB686

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ EPB157 PUBLIC ENTERPRISE

Public and private enterprise; a descriptive and comparative perspective; the extent and socio-economic significance of public enterprises; the development of public enterprise to World War I; the development of public enterprise from World War I to date; policy and planning in public enterprise; control systems and problems; personnel policies and problems; financial policies and practices; assessing the performance of public enterprise: models and criteria; privatisation and the Commonwealth; State Government and privatisation; the future of state intervention.

**Course:** BS50

**Prerequisites:** EPB124 and either EPB116/EPB140/EPB150 or EPN101 and EPN102

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ EPB158 PUBLIC FINANCE

The broad speciality of public sector economics; the microeconomic analysis of traditional public finance; the theory, incidence and impact of government taxation and expenditure measures; theoretical perspective and the impact of taxation and expenditure measures on personal and corporate behaviour; functions of government and growth of government activity in a mixed economy.

**Course:** BS50

**Prerequisites:** EPB140 and EPB150 (EPN102) or EPB172

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ EPB159 PUBLIC POLICY

Models of policy: types and uses of models, cyclic and sequential models; policy formulation: issue identification and agendas, adoption; legitimisation and succession; policy implementation: determinants of policy: economic and political; policy theory.

**Course:** BS50

**Prerequisite:** EPB100 or for non public administration students, the completion of 8 units in the relevant degree program, including an introductory government or politics unit. EPN101 for MBA students.

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ EPB160 PUBLIC SECTOR ECONOMICS

The reasons for government intervention in the economy; the ways in which the effectiveness of this intervention may be measured. Topics include: the competing goals of efficiency and equity; theories of first-best and second-best; the importance of externalities; the public goods controversy; privatisation, deregulation and reregulation.

**Course:** BS50

**Prerequisite:** EPB152

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ EPB162 REFORM & THE PUBLIC SECTOR

The development of the existing body of law, rules and regulations governing accountability; efficiency and effectiveness in the public sector through all administrative processes and levels of government, as well as the various mechanisms available for the purpose of review. The need for reform and review from early developments in administrative and political history through to contemporary developments.

**Course:** BS50

**Prerequisites:** BSB102 and EPB112 (or MNB184 pre-1992)

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ EPB163 RESEARCH & SURVEY METHODS

Australian statistical information; demographic processes; the presentation of quantitative as well as qualitative data; questionnaire construction; how to conduct surveys; sampling design; sample accuracy; sample size; confidence intervals; hypothesis testing plus an introduction to correlation, regression and time series analysis. Computer work involves SPSS.

**Courses:** BS50, ED50, PU48

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ EPB164 SPATIAL & REGIONAL ECONOMICS

Location theories; theories of growth and development over space; the role of cities; regional features, problems; strengths; spatial networks including city systems; regional stability and volatility.

**Course:** BS50

**Prerequisite:** EPB172 or EPN102 (MBA students)

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ EPB166 SPECIAL TOPIC – PUBLIC POLICY

This unit aims to help the student apply in detail the modes of analysis developed in the core units to specific policy areas; their immediate relevance can be demonstrated and a thorough understanding of a policy area gained.

**Course:** BS50

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ EPB167 STATE GOVERNMENT

State Government institutions, politics and public policy processes; comparison of State Governments

around Australia with respect to constitutions, parliaments, executive government, political parties, interest groups, policy processes, elections and electoral systems; Queensland political culture; the public service; commissions of accountability and various public policy issues.

**Course:** BS50

**Prerequisite:** EPB124

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ EPB168 TRANSPORT & COMMUNICATION ECONOMICS

The application of microeconomic principles to transport and communication; location decision, demand, costs, pricing, investment principles, regulation, issues and policy.

**Course:** BS50

**Prerequisites:** EPB140 and EPB150 (EPN102) or EPB172

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ EPB169 ECONOMICS OF INFORMATION

Information as a commodity; the demand for information; the economics of the production of information; the costs of information; the cost, pricing and charging out of information within organisations; the market supply of information; information technology and the supply curve; the structure of the information industry; information and industry concentration; public good characteristics of information; government intervention and economic impacts.

**Course:** BS50

**Credit Points:** 9

**Contact Hours:** 2 per week

### ■ EPB171 ECONOMIC ANALYSIS & POLICY

Theoretical constructs of welfare economics and cost-benefit analysis; economic rationales for government policy in major areas including: the environment; resource depletion; public investment; taxation; federal fiscal relations; education finance; income distribution; industry.

**Course:** ED50

**Prerequisites:** EPB140 and EPB150

**Incompatible with:** EPB151 and EPB152

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ EPB173 TECHNOLOGY DEVELOPMENT & INTERNATIONAL BUSINESS

The role of technological development as a central determinant of the economic performance of nations and regions, and the commercial performance of firms.

**Course:** BS50

**Prerequisite:** 96 credit points of undergraduate study

**Incompatible with:** EPB140 and EPB150

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ EPN101 GOVERNMENT BUSINESS RELATIONS

The relationship between government and business, especially in Australia; the historical development of the relationships that exist between the private and public sectors and of the impact that the policy decision of each has on the operations of the other.

**Courses:** BS81, BS70

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ EPN102 MANAGERIAL ECONOMICS

Managerial decision making in an economic environment; an introduction to economics, demand analysis, cost analysis, market strategy and the macroeconomic environment; problems of resource allocation at the firm, in industry and the economy; completion of an

industry study by each student, and an analysis of the Commonwealth Budget strategy.

**Courses:** BS78, BS81

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ EPN104 POLICY ANALYSIS

A central aim of the program is to develop skills in the analysis of policy content and policy process; it provides a basic methodological framework for the systematic development of those skills with two related objectives: (a) to examine a range of models of public policy processes with a view to determining their validity and utility, (b) to develop a capacity for policy analysis, utilising a variety of conceptual frameworks. Topics include: policy design, formation and implementation and theories of policy.

**Courses:** BS62, BS83

**Prerequisite:** An undergraduate degree

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ EPN106 PROGRAM MANAGEMENT

Understanding of program management and evaluation in the public sector, with an emphasis on skills development; theory and methodology of evaluation research; qualitative and quantitative tools and the application of these to a public sector program.

**Courses:** BS62, BS83

**Prerequisite:** An undergraduate degree

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ EPN108 DEVELOPMENTS IN MICROECONOMIC THEORIES

At a time when microeconomic theory is being applied to a host of contemporary economic developments including privatisation, deregulation, microeconomic reform and environmental management it is important for honours graduates to be familiar with these developments. Discussion of refinements in microeconomic theory such as hedonic pricing models, invalid preference theory, contestable market theory, theories of regulation, strategic entry deterrence, networks and vertical integration theories, underpays and public utility theories will take place in this unit; explores refinements in microeconomic theory which have contemporary use in the development of government policies in areas such as the environment, energy, public enterprises, industrial development, transport and telecommunications.

**Courses:** BS62, BS83

**Prerequisite:** An undergraduate degree or major in economics.

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ EPN109 INTERNATIONAL BUSINESS POLICY & COMPETITIVE STRATEGIES

This unit expands and builds upon the theoretical and conceptual basis of analytical decision making in international Business Policy. Emphasises recent developments in competitive and anti-competitive trade practices at a business, cultural and negotiating level. Topics include: trade policies in relation to analysis of product cycles, technology based trade services, tourism and agribusiness; contemporary issues such as structural adjustment policies, innovation and entrepreneurship, global strategic objectives, business plans and market entry strategies.

**Courses:** BS62, BS83

**Prerequisite:** Undergraduate degree or major in international business

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ EPN110 REGIONAL STUDY

Regional understanding is crucial to international success. This unit aims to analyse a regions' economic,

business and government environment, its key institutions and trade and investment relation with other countries, particularly Australia. The unit will endeavour to extend and advance the analytical, evaluative and expressive skills of students to consolidate their understanding of policy issues in a regional dimension. These studies will be chosen from the Asia-Pacific and/or the European global arena. The topics covered include: international economic relations within the region, between the region and Australia, industry and technology policies. Other topics include: commercial policy and institution building, business policy culture and communication and corporate-government relations.

**Courses:** BS62, BS83

**Prerequisite:** Undergraduate degree or major in international business

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EPN111 CONTEMPORARY MACROECONOMIC THEORIES

Macroeconomic theories form the foundation for national and international policy prescriptions. It is essential for honours graduates to be familiar with the latest theories impinging on policy making in both English speaking and non-English speaking countries. This unit introduces students to the latest theoretical developments in the field of macroeconomics using both qualitative and quantitative approaches. It places these theories in their historical, philosophical and societal contexts. This unit will look at New-classical and New-Keynesian theoretical approaches to a range of issues. These include: expectation theories, supply-side economics, theories of labour markets, monetary theories and growth theories (including the role of international trade). Also differences in the theoretical foundations of macroeconomic policies employed in different countries will be highlighted.

**Courses:** BS62, BS83

**Prerequisite:** Students must have an undergraduate economics degree or economics major.

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EPP101 ECONOMIC ANALYSIS

Australia's international trading performance relative to other industrialised nations; the potential economic impact on quality control systems on primary, secondary and tertiary sections of Australian industry; economics of the firm and the quality factor, quality as a determinant of demand, demand elasticity, goods attribute theory; tools for incorporating quality into investment decisions; opportunity and marginal costs; x-inefficiency; increased profitability resulting from quality initiatives.

**Courses:** BS77, BS83, IF69

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ EPX100 ELEMENTS OF LABOUR ECONOMICS

Price theory and its application to the Australian labour market: demand and supply of labour; determination of wages and employment; factors influencing the relative wage structure.

**Course:** BS10

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ EPX102 MACROECONOMIC ANALYSIS

The structure of the Australian economy; determination of income, employment and the price level; government policy in relation to aggregate labour market variables.

**Course:** BS10

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ ESA310 GEOLOGY

An introduction to geological materials, emphasising chemical concepts and processes. Aspects studied include the origin and constitution of the earth, introductory mineralogy, igneous, sedimentary and metamorphic petrology, study of physical and structural geology, geomorphology, stratigraphy and economic geology. Field excursions as required.

**Course:** SC10

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ ESB122 EARTH SCIENCE 1

Basic geologic principles, physical geology, geomorphology, weathering, erosion, river and coastal environments, groundwater, deserts and aeolian processes. The earth and the solar system, mineralogy, classification and origin of igneous, metamorphic and sedimentary rocks, structural geology, plate tectonics, economic geology. Practical work includes examination and identification of major rock-forming minerals, economic minerals and rock specimens, structural exercises, and interpretation of topographic and geologic maps and aerial photographs. Field excursions to local areas of geological interest.

**Courses:** ED50, SC30

**Credit Points:** 12 **Contact Hours:** 5 per week

### ■ ESB222 EARTH SCIENCE 2

Geologic history of the Earth; interpretation of past geologic events emphasising the geologic development of Australia and the evolution of life; principles of stratigraphy; radiometric dating; palaeontology and biostratigraphy. Practical work: stratigraphic interpretations, study of fossils, map interpretation. Field excursions to local areas of interest.

**Courses:** ED50, SC30

**Credit Points:** 12 **Contact Hours:** 5 per week

### ■ ESB312 MINERALOGY & OPTICAL MINERALOGY

Introductory crystallography; fundamentals of crystal chemistry, mineral stability and reactions; crystallisation, growth and habit of the geologic framework of minerals; classification of minerals; systematic treatment of the physical, chemical and structural properties of minerals; techniques of mineral analysis; identification in thin section and grain mounts. Field excursions to mineralogic sites.

**Courses:** ED50, SC30

**Credit Points:** 12 **Contact Hours:** 5 per week

### ■ ESB342 STRUCTURAL GEOLOGY

The geometry of map-scale structures. Principles of deformation: strain and rigid motion, measurements of strain in deformed rocks, deformation paths, strain rate, homogeneous and non-homogeneous strain, normal and shear stress, Mohr diagram. Deformation mechanisms: elastic and thermal expansion, plastic deformation within crystals, flow by pressure solution, compaction, stress-strain relations. Fracture and brittle behaviour: the Mohr envelope, role of cracks and fluid in the fracture of rocks, fracture experiments, effects of pre-existing fractures, fracture of anisotropic rocks, brittle-plastic transition. Classes of structures; joints: origin, surface morphology and relation to other structures; faults: normal, strike-slip, thrust and detachment faults; folds: description and classification, kink bands, chevron folds, boudinage, mechanisms and mechanics. Practical work includes a series of assignments of increasing complexity; field work involves mapping deformed terrain.

**Courses:** ED50, SC30

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ ESB362 ECONOMIC MINERAL DEPOSITS**

Mineralogy, genesis, use and value, mining methods and beneficiation of the different groups of mineral resources; major overseas deposits and Australian deposits. Unit includes practical work and field and industrial visits.

**Courses:** ED50, SC30 **Co-requisite:** ESB312

**Prerequisites:** ESB122, ESB222

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ ESB392 FIELD TECHNIQUES & STUDIES**

Methods used in the accumulation, analysis and interpretation of geological field data. Geological mapping, sampling and presentation of reports. The unit includes an extended excursion (five days or more), during which students will be required (individually or in groups) to map the geology of an assigned area. Assessment will be based on the production of a geological map to the prescribed scale, together with supporting explanatory notes. Other weekend excursions to areas of geological interest may be included.

**Courses:** ED50, SC30

**Prerequisites:** ESB122, ESB222

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ ESB422 SEDIMENTOLOGY & STRATIGRAPHY**

Principles of sedimentation; the sedimentary cycle; weathering; fluid flow and sediment transport; sedimentary structures; textures; grain size analysis; classification of sedimentary rocks and economic deposits; sedimentary depositional environments and introduction to facies analysis; diagenesis; sedimentation and tectonics. Principles of stratigraphy and basin analysis including lithostratigraphy, biostratigraphy, chronostratigraphy, magnetostratigraphy, seismic stratigraphy and sequence stratigraphy. The unit includes project-based practical assignments, several short field excursions and one weekend excursion.

**Courses:** ED50, SC30

**Prerequisites:** ESB312, ESB392

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ ESB442 GEOMORPHOLOGY**

The nature and origin of landforms in different environments, processes of formation and their relationship to geological features and history. Applied aspects related to groundwater and surface water, soil formation, coastal erosion and deposition, river development and environmental aspects of geology. Practical work involves exercises on above topics, air photo and topographic map interpretation and satellite imagery, plus a short field exercise

**Courses:** ED50, SC30

**Prerequisite:** ESB392

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ ESB452 GEOCHEMISTRY**

Introduction to the chemistry of the earth as a whole and of its component parts. Origin and distribution of the elements within the universe, the solar system and the earth. Elemental associations, primary differentiation and geochemical classification. Thermodynamics, equilibrium and equilibrium constants, chemical potential, fugacity, activity, the phase rule and phase diagrams. Isotope geochemistry. Crystal chemistry, nature of solids, bonding forces, covalent and ionic radii, crystal structures, unit cell composition, solid solution, polymorphism, crystal field theory, trace elements in minerals. Organic geochemistry. The geochemistry of aqueous environments, water chemistry, properties of water, solutions and solubilities, pH, oxidation and reduction, water at high temperature and pressure, kinetics of water reac-

tions. The geochemistry of magmatic, sedimentary and metamorphic rocks. Practical aspects include collection of geochemical data, methods of analysis and interpretation and preparation of geochemical reports.

**Courses:** ED50, SC30

**Prerequisites:** CHB182, ESB312

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ ESB462 LITHOLOGY**

The description and classification of igneous, metamorphic and sedimentary rocks in thin section and hand specimen; optical mineralogy; textural identification and classification. Field excursions of short duration are normally required.

**Courses:** ED50, SC30

**Prerequisite:** ESB312

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ ESB502 PACIFIC MARINE GEOLOGY**

The regional geology of the Pacific Ocean and in particular the South West Pacific, including its tectonic framework, island arc magmatism and types of volcanism. Deep and shallow marine and on-shore examples are considered. Broad aspects of physical and chemical oceanography (eg. circulation and climate) including features such as the El Nino and Greenhouse effects. Resources of the region: ore deposits related to environment and formation with terrestrial examples; marine deposits; non-metaliferous and engineering materials; conventional and alternative energy sources. Types and chemistry of marine sediments (deep and shallow). Specific problems related to engineering geology, coastal zone protection and hydrogeology. Interaction of man with the Pacific environment.

**Courses:** ED50, SC30

**Prerequisites:** ESB392 and at least one of ESB342, ESB422, ESB442, ESB452, or ESB462

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ ESB512 IGNEOUS & METAMORPHIC PETROLOGY**

The origin, formation and geologic history of igneous and metamorphic rocks as determined from field and laboratory studies of occurrences; mineral assemblages; rock compositions and textures. Interpretation of rock and mineral compositional diagrams; application of experimental work and detailed computer modelling of petrochemical processes. Practical work and field excursions.

**Courses:** ED50, SC30

**Prerequisite:** ESB462

**Credit Points:** 12 **Contact Hours:** 5 per week

**■ ESB519 GEOLOGY FOR ENGINEERS**

The basic principles and theories of geology, emphasising the way in which mineralogy and petrology, geologic structures, geomorphology and groundwater interact with, and are related to, engineering design and construction, the engineering properties of rock and the effect of geologic hazards on engineering construction; case histories on the relevance of geology to the civil engineer's workplace.

**Courses:** CE42, PS47

**Credit Points:** 6 **Contact Hours:** 3 per week

**■ ESB522 HYDROGEOLOGY**

The hydrological cycle; the origin, occurrence and movement of groundwater; geology and character of aquifers; the chemistry and quality of groundwater and their monitoring; exploration methods; drilling and testing methods and equipment. Practical exercises with pump tests, groundwater flow, material

permeability, field testing, chemical analysis and computer modelling.

**Course:** SC30

**Prerequisite:** ESB442

**Credit Points:** 12

**Contact Hours:** 5 per week

### ■ ESB532 APPLIED GEOPHYSICS

The theory of exploration geophysics. Gravity, magnetic, radiometric, well logging, seismic refraction and reflection, electrical resistivity, induced polarisation and electromagnetic techniques. The reduction and manipulation of geophysical data and their interpretation, field data acquisition and computer modelling. Practical studies of the main techniques. Experience in a variety of geophysical methods is gained during a field excursion.

**Course:** SC30

**Prerequisites:** ESB392, MAB212, PHB122

**Credit Points:** 12

**Contact Hours:** 5 per week

### ■ ESB552 APPLIED GEOCHEMISTRY

Techniques for establishing regional geochemical patterns and their use in land use evaluation and environmental impact studies. Recognition of primary and secondary dispersion patterns and their use in the discovery of ore deposits. The geochemical impact of the Australian landscape; chemical analyses; rationalisation and interpretation of geochemical data; computing and statistical analysis. Geochemical surveys based upon bedrock, ironstone and gossan, soils, stream sediments, lake sediments, water, biogeochemical materials and gases. Off-shore geochemistry. Special problems of gold geochemistry. Practical work includes an industry or research field project requiring several days of field work and a selection of case history assignments based upon environmental and exploration problems.

**Course:** SC30 **Prerequisites:** ESB452, MAB237

**Credit Points:** 12

**Contact Hours:** 5 per week

### ■ ESB562 MINERAL EXPLORATION

Mineral exploration; crustal evolution and ore genesis; metallogenetic epochs and provinces; wall rock alteration; gossans; the mineral potential of the sea bed; isotope studies and ore genesis; geothermometry; fluid inclusions; sampling, drilling, core logging, mineragraphy. Field and industrial visits. Part of the assessment is based on student seminars.

**Courses:** ED50, SC30

**Prerequisite:** ESB362

**Credit Points:** 12

**Contact Hours:** 5 per week

### ■ ESB592 GEOLOGICAL FIELD EXCURSIONS

Field excursions in Queensland or northern New South Wales emphasising geologic mapping. Includes lectures and tutorials. Assessment is based entirely on the field reports and geologic maps. This is a year long unit. Field excursions will be conducted during the first semester and the mid-year breaks.

**Courses:** ED50, SC30

**Prerequisites:** ESB342, ESB462

**Credit Points:** 12

**Contact Hours:** 5 per week

### ■ ESB602 GEOLOGICAL INVESTIGATIONS

Students are required to formulate a research problem with specific aims and objectives, develop the methodology and collect, analyse and interpret data to produce a solution to the problem. Research problems may be field based, requiring the projection of a detailed map, collection of representative samples and observation and analysis of structures and mineralisation and/or include a substantial exploratory component to conduct detailed analyses of rock geochemistry or petrography. Assessment is based on the production of both a written and an oral report.

**Course:** SC30

**Prerequisite:** Approval from Head of School

**Credit Points:** 12

**Contact Hours:** 5 per week

### ■ ESB612 EARTH RESOURCES MANAGEMENT

Appreciation of earth resources; their distribution and uses; societal and environmental impacts and future alternatives; economic mineral resources; energy sources; water and soil resources; realities and limits of earth resources; resource management; conservation versus exploration; waste disposal; environmental pollution; future technological developments and their possible effects on earth resources. The unit also includes management in applied geology, professionalism and ethics together with an introduction to civil and mining law. This includes: mining acts and miner's rights; licensing procedures for prospecting search and exploration; mining leases on crown lands and mining on private land; the enforcement of mining interest; petroleum legislation in Australia; company structure; joint ventures; practical work involves applications for exploration licences, claim and leases. A field trip may be included.

**Courses:** ED50, SC30

**Prerequisite:** ESB362

**Credit Points:** 12

**Contact Hours:** 5 per week

### ■ ESB622 ENGINEERING GEOLOGY

The inter-related fields of engineering, environmental geology and soil and rock mechanics. The topics studied are those most likely to apply to the work of the engineering or environmental geologist in tropical urban and coastal areas. Topics include: investigation techniques and philosophies for the engineering of slopes, coastal structures, dams, buildings and subsurface openings; practical investigation methods; the input of geology into urban and coastal developments; the mechanical and chemical properties of soils and rocks; seepage; shear strength; bearing capacity; consolidation theory; stresses and displacements, in situ stresses; earthquakes and slope stability.

**Courses:** ED50, SC30

**Prerequisites:** ESB392 and one of ESB342, ESB422, ESB442 and ESB462

**Credit Points:** 12

**Contact Hours:** 5 per week

### ■ ESB632 ADVANCED GEOPHYSICS

The main geophysical disciplines are treated in detail in terms of data processing and interpretation. Emphasis on particular methods will vary depending on current market demands and innovative techniques. Case histories are used to illustrate successful program design and implementation. Cooperative sessions with exploration companies and appropriate field work will be included in the unit.

**Course:** SC30

**Prerequisites:** ESB532 and MAB222

**Credit Points:** 12

**Contact Hours:** 5 per week

### ■ ESB642 STRUCTURAL GEOLOGY & GEOTECTONICS

Petrofabrics: macroscopic classification, axial planar foliations, refraction of foliations, foliation in heterogeneous lumpy materials, cleavage: bedding relations in structural mapping, processes of fabric development, fabric in analysis of histories of poly-deformed terrains. Recent and contemporary crustal movements. Genesis and classification of fault rocks. States of stress in the earth's crust: loading history, crustal fluids and extensive tectonism. Stress systems in sedimentary basins during downwarp and uplift. Intrusive and extrusive structures: sheet intrusions, plutonic intrusions, magma pressure and the eruptive



mechanisms, breccia pipes, sedimentary intrusive and extrusive structures. Practical component is based on a series of assignments using data from mineral exploration, civil engineering projects, complex deformation terrain, and petroleum and coal applications.

**Course:** SC30

**Prerequisite:** ESB342

**Credit Points:** 12

**Contact Hours:** 5 per week

#### ■ ESB662 MINING GEOLOGY & FEASIBILITY

Topics include: mine mapping, mining methods, the geologist's role in the mine, mining hazards and safety requirements. Solutions to problems involving the concepts of present value of money, place value, unit value, recoverable value, cash flow, discounted cash flow, DCFROI, payback, discounted payback, net present value, depreciation, depletion, sinking fund, annuity, diminishing annuity, compound interest, taxation and its effect on ore reserves and mine profitability, price forecasting, mining costs, metal marketing, exchange rates, sampling, tonnage grade calculation, resources and reserves, sensitivity analyses, spreadsheets. Practical work in both laboratory and industrial settings and problem solving tutorials.

**Courses:** ED50, SC30

**Prerequisite:** ESB562

**Credit Points:** 12

**Contact Hours:** 5 per week

#### ■ ESB672 GEOLOGY OF FOSSIL FUELS

Coal properties, classification, genesis and analysis; hand specimen study and microscopy; hydrocarbon generation from coal and oil shale; coalfield geology and subsurface mapping techniques; basin analysis; coal production and economics. Origin and characteristics of petroleum fluids including generation, accumulation and migration through time and space; study of structural and stratigraphic traps and reservoir rock characteristics; application of drilling, logging and geophysical and correlation techniques to quantify these aspects; correlation techniques including seismic stratigraphy; economics of production. Field excursions of short duration as required, together with practical assignments.

**Courses:** ED50, SC30

**Prerequisites:** ESB422, ESB522

**Credit Points:** 12

**Contact Hours:** 5 per week

#### ■ ESB700 PROJECT

All students undertaking honours are required to select and undertake, in consultation with a supervisor, a substantial project in an appropriate area. Each project will be assessed on the basis of an extensive written report and an oral presentation.

**Course:** SC60

**Credit Points:** 48

#### ■ ESB701 GEOLOGICAL CASE STUDIES

Preparation of case history assignments of one or several projects from inception to completion. This includes the philosophy of the project, project development, project results. The case history should be selected to complement the student's project thesis. The study includes literature research from published and unpublished sources and if possible, interviews with project personnel. Presentation of the case history may include some or all of the following: relevant maps, sections, geochemical synthesis, and appropriate specimen material.

**Course:** SC60

**Credit Points:** 10

**Contact Hours:** 3 per week

#### ■ ESB702 COMPLEMENTARY STUDIES

Studies include a selection from: participation in research seminars; oral communication skills; written

communication skills; formal coursework in occupational health and safety, scientific and industrial ethics, philosophy and methodology of science, and science policy and research funding options; development of research management strategies; preparation and presentation of proposals for research projects; coursework material from other accredited courses as directed by the project supervisor and Head of School.

**Course:** SC60

**Credit Points:** 16

**Contact Hours:** 6 per week

#### ■ ESB711 ADVANCED RESOURCE GEOLOGY

Metallogenic epochs and provinces; ore genesis models; advanced basin analysis; isotope geology; fluid inclusions and geothermometry; advanced mineralogy; resource geochemistry; resource petrology: new materials, aspects of special rocks, alteration zones, paragenesis; resource trends, exploration philosophy; resource assessment: geostatistics, pattern drilling methodology.

**Course:** SC60

**Prerequisite:** As approved by Honours (Geology) coordinator

**Credit Points:** 6

**Contact Hours:** 2 per week

#### ■ ESB712 ADVANCED ENGINEERING GEOLOGY

Principles and scientific basis underlying the theory of engineering geological investigations and the application of modern techniques in analysis and investigation. Coursework is structured around engineering geology thesis topics being pursued in the current year, but include: application of continuous seismic profiling, engineering behaviour on normally consolidated Holocene sediments, engineering geology of open pit mines, slope and underground opening stability, slope stability in tropical residual soils, geotechnical problems in damsite foundations.

**Course:** SC60

**Prerequisite:** As approved by Honours (Geology) coordinator

**Credit Points:** 6

**Contact Hours:** 2 per week

#### ■ ESB713 PETROCHEMISTRY

The petrology, geochemistry, and petrogenesis of igneous and metamorphic rocks. Topics vary according to student interest but include: field, petrologic, geochemical, isotopic and experimental aspects of magma generation and/or metamorphism. Quantitative modelling of magmatic processes using phase chemistry, major and trace element geochemistry, stable and radiogenic isotopes. Petrographic analysis of igneous and metamorphic textures.

**Course:** SC60

**Prerequisite:** As approved by Honours (Geology) coordinator

**Credit Points:** 6

**Contact Hours:** 2 per week

#### ■ ESB714 GLOBAL PLATE TECTONICS

Investigation of recent advances in global plate tectonics; the petrology, sedimentology, structural, geophysical and resource geology of divergent and convergent plate margins; application of plate tectonic concepts to the Australian continent. A field excursion is compulsory.

**Course:** SC60

**Prerequisite:** As approved by Honours (Geology) coordinator

**Credit Points:** 6

**Contact Hours:** 2 per week

#### ■ ESB716 ADVANCED TOPICS IN GEOPHYSICS

Advanced geophysical theory and interpretation; applications of palaeomagnetic studies to geological

situations; the analysis of data and design of suitable filters using different mathematical transforms; computerised interpretation of large data sets; introduction to tomography and three-dimensional seismic interpretation.

**Course:** SC60

**Prerequisite:** As approved by Honours (Geology) coordinator

**Credit Points:** 6      **Contact Hours:** 2 per week

#### ■ **ESB717 COASTAL ZONE ENVIRONMENT STUDIES**

The natural and human-impacted coastal zone considered from the aspects of general geology and morphology specific factors such as sedimentology, and surface and groundwater occurrence and gravity. The unit included a field trip over an extended weekend.

**Course:** SC60

**Prerequisite:** As approved by Honours (Geology) coordinator.

**Credit Points:** 6      **Contact Hours:** 2 per week

#### ■ **ESN110 ADVANCED TOPICS IN EARTH SCIENCE 1**

This unit facilitates students in developing an advanced understanding of a topic in earth science that is highly relevant to their proposed research. The content is therefore variable and depends on the earth science topic chosen.

**Course:** SC80

**Credit Points:** 12

#### ■ **ESN120 ADVANCED TOPICS IN EARTH SCIENCE 2**

See ESN110.

**Course:** SC80

**Credit Points:** 12

#### ■ **ESN130 COMPUTER APPLICATIONS IN EARTH SCIENCE**

Examination of up to five computer programs relevant to a particular aspect of earth science operating on a range of systems; readings on the theoretical base for each program; case studies for each application and an assessment of the results of the applications.

**Course:** SC80

**Credit Points:** 12

#### ■ **ESN140 RESEARCH METHODOLOGY 1**

A variety of field and laboratory techniques for the collection of data in a particular earth science discipline; the practical application of these techniques, strategies for assessing their appropriateness for particular problems; the theoretical basis of the research.

**Course:** SC80

**Credit Points:** 12

#### ■ **ESN150 RESEARCH METHODOLOGY 2**

See ESN140.

**Course:** SC80

**Credit Points:** 12

#### ■ **ESN160 SEMINARS**

Students may present several seminars ranging from a summary of background to a particular topic, to a preliminary thesis presentation.

**Course:** SC80

**Credit Points:** 12

#### ■ **ESN170 LITERATURE SURVEY**

Develops the detailed background of a student's research topic; extends the student's knowledge into current and relevant literature.

**Course:** SC80

**Credit Points:** 12

#### ■ **EST219 ENGINEERING GEOLOGY**

The definitions and principles of geology; rock types and the effects of weathering leading to soil formation. Identification of common mineral and rock types, the occurrence and nature of rock defects or discontinuities; the flow and control of groundwater by stratigraphy; rock structure and surface profile; the effects of rivers and coastal wave action in erosional/sedimentary cycles.

**Course:** CE21

**Credit Points:** 7      **Contact Hours:** 3 per week

#### ■ **FNB100 AUSTRALIAN FINANCIAL MARKETS**

System efficiency and the intermediation process; term structure of interest rates; the Australian banking and payments system; merchant bank and finance company operations; the operations of the Australian Stock Exchange; financial systems regulation; trading and pricing of money market/capital market securities; the options and futures market.

**Course:** BS50

**Prerequisites:** FNB107 or FNB111 or FNN102, EPB140

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ **FNB103 COMPARATIVE FINANCIAL SYSTEMS**

Introduction to the operations of important overseas capital markets, regulation and structure.

**Course:** BS50

**Prerequisite:** FNB100

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ **FNB104 COMPUTER APPLICATIONS IN FINANCE**

Students learn the necessary skills to undertake analysis and applied research in business finance. Topics include: programming and data file manipulation using dBase IV; ordinary least squares regression; SPSS-PC statistical computer software.

**Course:** BS50

**Prerequisites:** FNB112, ISB892

**Credit Points:** 12      **Contact Hours:** 4 per week

#### ■ **FNB105 COMPUTER APPLICATIONS IN MANAGERIAL ACCOUNTING**

Consideration of selected managerial accounting areas: master budgeting, cash budgeting, cost estimation, cost allocation, variance analysis, cost-volume-profit analysis; application of appropriate software tools: spreadsheet software, accounting package, graphics software, statistical analysis software.

**Course:** BS50

**Prerequisite:** ISB892

**Credit Points:** 12      **Co-requisite:** FNB123

**Contact Hours:** 4 per week

#### ■ **FNB106 COMPUTER APPLICATIONS IN PUBLIC PRACTICE**

Use of modern software tools and techniques as applied to finance and commerce; reinforcement of computerised share trading; hardware and software selection process; negotiating contracts involving hardware and software; using and searching on-line public access databases; the components and benefits of modern data communications business products technology in finance and commerce.

**Course:** BS50

**Prerequisite:** ISB892

**Credit Points:** 12      **Contact Hours:** 4 per week

#### ■ **FNB107 CORPORATE FINANCE**

An overview of the Australian Financial system; technical tools used in financial decision making; the capital market, short and long term finance; dividend policy; investment decision models.

**Courses:** BS50, ED50, IF53

**Prerequisite:** AYB100 or AYB110

**Incompatible with:** FNB111

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ FNB111 FINANCE 1

The institutional framework terminology, the basic instruments, their uses and pricing. Financial mathematics, NPV, risk and returns, certainty and uncertainty, the CAPM model. Practical asset management, firm valuations, investments and capital budgeting.

**Courses:** BS50, IF31

**Prerequisites:** AYB110 or AYB100, EPB150 or EPB116

**Incompatible with:** FNB107

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ FNB112 FINANCE 2

Theoretical development of the CAPM model, its practical application and its relationship to efficient market hypothesis. Capital structure, dividends, short term assets, leasing, takeovers, options and futures.

**Courses:** BS50, IF31

**Prerequisite:** FNB111

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ FNB113 FINANCE 3

A study of contemporary finance research; event research; beta estimation; valuation theory; use of finance research tools; anomalies and extension of finance theories; students are required to complete a research project combining theory and practice.

**Course:** BS50

**Prerequisite:** FNB112

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ FNB114 FINANCIAL INSTITUTIONS – LENDING

Finance theory and the lending function; cost of bank funds; the evaluation of retail loans, lending to small business; financial statement analysis; corporate lending and securities; financing international trade; problem loans and credit scoring.

**Course:** BS50

**Prerequisite:** FNB107 or FNB111 or FNB102

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ FNB115 FINANCIAL INSTITUTIONS MANAGEMENT

Strategic planning and budgeting in a financial institution, performance measurement, risk management in financial institutions, gap management liquidity and capital adequacy; lending policy and credit risk, service and customer profitability; international banking. The marketing of financial services.

**Course:** BS50      **Prerequisite:** FNB111 or FNB102

**Incompatible with:** FNB124

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ FNB116 FINANCIAL MANAGEMENT FOR ENGINEERS

Introduction to the theory and practice of financial management in Australia; the nature of business finance and firm objectives; business structures, debt and the organisation of the Australian capital markets; NPU calculations; project evaluation.

**Courses:** EE43, ME45, ME46

**Incompatible with:** FNB125

**Credit Points:** 8      **Contact Hours:** 2 per week

### ■ FNB117 FINANCIAL MODELLING

The development of a basic model within an organisational environment; operation of computer modelling languages; analysis and development of forecasting models; specialist financial models; model development as part of the decision support system.

**Course:** BS50

**Incompatible with:** AYB101

**Prerequisite:** FNB111/FNB106/ISB892

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ FNB120 INTERNATIONAL FINANCE

Foreign exchange; government assistance to exporters and importers; international money markets; risk measurement in foreign exchange; foreign exchange market efficiency; Eurobond and Euronote financing; international capital budgeting; cost of capital in international finance; foreign takeovers and other acquisitions; legislative aspects; accounting issues; taxation issues; international financial economics; transfer pricing.

**Courses:** BS50, IF53

**Prerequisites:** FNB111, FNB100 (recommended)

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ FNB121 ISSUES IN FINANCE

The finance framework; positive versus normative methods; Kuhn's model of progress; the resolution of traditional finance problems; regulation and finance, market failure: the finance solution.

**Course:** BS50

**Prerequisites:** FNB111, FNB123

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ FNB122 MANAGEMENT ACCOUNTING

The nature of management accounting; cost concepts; cost profit volume analysis; relevant costs and special decisions; flexible budgets; responsibility accounting; job and process costing; introduction to finance; financing decisions: equity v debt, leasing, investment dividends; introduction to financial maths; understanding the financial press.

**Course:** ED50

**Prerequisite:** AYB110

**Incompatible with:** FNB123

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ FNB123 MANAGERIAL ACCOUNTING 1

Introduction to managerial accounting, the role of the management accountant and cost concepts; costing systems including actual/normal/standard systems under job and process costing; introduction to budgeting; accounting for the factors of production: materials, labour and overheads; extension of basic costing systems for multiple products and spoilage; direct and absorption costing.

**Courses:** BS50, IF31

**Prerequisite:** AYB110

**Incompatible with:** FNB122

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ FNB124 MANAGERIAL ACCOUNTING 2

The application of the conceptual framework of the finance paradigm to provide a positive explanation of managerial accounting; interrelationships between managerial accounting, economics of firms, business finance, regulation, organisation behaviour and computer applications; agency theory responsibility accounting and cost allocation; decisionmaking and relevant costs; pricing techniques, advertising and transfer pricing; performance evaluation.

**Courses:** BS50, IF31      **Incompatible with:** FNB115

**Prerequisites:** FNB111, FNB123

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ FNB125 PERSONAL & CORPORATE FINANCE

The Australian financial environment from both a personal and corporate point of view; goals and functions of finance; project evaluation; evaluation and selection of investment projects, management of working capital; leverage; cash forecasting and management; financial statement analysis. This unit is not available to BS50 BBus(Accy) or BBus(B&F) majors.

**Course:** EE44

**Incompatible with:** FNB116

**Credit Points:** 4      **Contact Hours:** 2 per week

### ■ FNB126 PORTFOLIO & SECURITY ANALYSIS

Management of investment portfolios; diversification; performance management; risk management; advanced theories on option pricing, efficient markets, futures trading (hedging) and asset pricing; Course: BS50 Prerequisite: FNB112 or FNN102 Credit Points: 12 Contact Hours: 3 per week

### ■ FNN100 ADVANCED CAPITAL BUDGETING

Application of the theoretical constructs developed in undergraduate finance units to complex problems in investment appraisal.

Courses: BS70, BS87 Prerequisite: FNB112 Credit Points: 12 Contact Hours: 3 per week

### ■ FNN101 FINANCE HONOURS

An advanced coverage of the theory of financial management, building on work done in the undergraduate course with reference to empirical evidence where available; topics include: capital markets, investment decisions, market equilibrium, the capital asset pricing model, arbitrage pricing theory, capital structure, dividend policy, efficient capital markets; provides a theoretical basis allowing for evaluating policy problems in the area of financial management, a prerequisite for further specialisation in this area.

Courses: BS60, BS70, BS81, BS87 Credit Points: 12 Contact Hours: 3 per week

### ■ FNN102 MANAGERIAL FINANCE

Introduction to the world of finance and financial management. Topics include: the finance function, the role of the financial manager; the Australian financial environment; sources of funds; present and future value; time value of money; financial mathematics; cost of funds, the firm investment decision; investment evaluation techniques; cash budgeting; working capital management; capital budgeting; dividend policy and financial structure policy.

Course: BS81 Prerequisites: AYN101/AYN112 Credit Points: 12 Contact Hours: 3 per week

### ■ FNN103 FINANCIAL MODELLING

Modelling as an organisational planning tool; the development and manipulation of databases in order to provide information sources for model building; the use of the modelling concept for solving investment and forecasting problems and analysing performance.

Courses: BS70, BS87 Prerequisites: FNB111, FNB123 Incompatible with: FNB117 Credit Points: 12 Contact Hours: 3 per week

### ■ FNN104 FINANCIAL RISK MANAGEMENT

An advanced postgraduate finance unit which covers four areas of risk management: portfolio, investment, exchange and insurance. Topics include: portfolio theory, performance evaluation, benchmark problems, hedging, portfolio insurance in the crash of 1987, managing exchange risk, risk reduction, self insurance, new tax rules and superannuation fund performance, interest rate risk, rating agencies, duration, immunisation. Emphasis on empirical research.

Courses: BS70, BS87 Prerequisite: FNB112 Credit Points: 12 Contact Hours: 3 per week

### ■ FNN105 INTERNATIONAL FINANCE

The theory and practice of international finance; the relationship between domestic and international capital markets, interest rate and exchange rate determination, risk management of foreign exchange, interna-

tional trade finance, offshore investment, legislation, transfer pricing, accounting and taxation aspects.

Courses: BS70, BS87 Prerequisite: FNB120 Credit Points: 12 Contact Hours: 3 per week

### ■ FNN106 MANAGERIAL ACCOUNTING HONOURS

Theoretical issues that constitute the foundations of managerial accounting theory and research; an investigation of the rationale and usefulness of managerial accounting; review the research and literature in the areas of strategic management; management control systems; decentralisation and organisational structures; managerial performance measurement; executive performance and compensation; cost estimation and allocation.

Courses: BS60, BS70, BS87 Prerequisite: FNB124 Credit Points: 12 Contact Hours: 3 per week

### ■ FNN110 MANAGERIAL ACCOUNTING ISSUES A

Issues associated with decentralisation and responsibility accounting, performance evaluation, cost allocation, budgeting, the new management accounting viewed from the framework of finance economics.

Courses: BS70, BS87 Prerequisite: FNB124 Credit Points: 12 Contact Hours: 3 per week

### ■ FNN111 MANAGERIAL ACCOUNTING ISSUES B

The practical managerial accounting issues currently facing contemporary management. Topics include: quality and strategic product development, productivity control, advanced budgeting techniques, program budgeting, and management control systems.

Courses: BS70, BS87 Prerequisite: FNB123 Credit Points: 12 Contact Hours: 3 per week

### ■ FNN112 SPECIAL TOPIC – MANAGERIAL ACCOUNTING & FINANCE

Issues of significance in managerial accounting and finance. This unit is offered when required.

Courses: BS70, BS87 Credit Points: 12 Contact Hours: 3 per week

### ■ FNN113 MANAGERIAL ACCOUNTING FOR ENGINEERS

An explanation of accounting concepts and terminology and a coverage of the accounting communication and reporting system of financial statements; using accounting information for special decision-making; financial modelling as a decision support system; how costs are accumulated for manufacturing control purposes; current issues in accounting for manufacturing including activity based costing, costing for quality, costing for productivity.

Course: ME76 Credit Points: 12 Contact Hours: 3 per week

### ■ FNN300 ACCOUNTING 2 (PY)

This unit aims to satisfy the professional year syllabus of the Institute of Chartered Accountants in Australia in applied areas of managerial accounting, finance and auditing. The unit builds upon the undergraduate framework in these areas. Topics are revised annually by the Institute with a focus on applied practice.

Courses: BS70, BS87 Prerequisite: AYN300 Credit Points: 12 Contact Hours: 3 per week

### ■ FNN301 MANAGEMENT ACCOUNTING (PY)

This unit is designed to satisfy an elective topic in the professional year program of the Institute of Chartered Accountants in Australia. The syllabus is revised annually and applied advanced managerial

topics are included as the profession determines necessary for senior managerial accountants.

**Courses:** BS70, BS87 **Prerequisite:** FNB124  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ FNN303 MANAGEMENT ACCOUNTING (MBA)

Management accounting and the issues confronting a management accountant. On completion of the unit, students should have an appreciation of various management accounting concepts, and be able to apply these concepts to business/accounting situations. Topics include: the nature of management accounting; cost concepts; cost profit-volume analysis; relevant costs and special decisions; flexible budgeting; responsibility accounting; costing.

**Course:** BS81 **Prerequisite:** AYN101 or AYN112  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ FNP101 QUALITY COST ANALYSIS

Accounting language in AS2561; classification of costs, nature of fixed and variable costs for cost analysis; development of cost groupings within an organisation, use of cost allocation and cost control methods; prevention and appraisal cost data sources. Master budget, flexible budgets, derivation of standards for cost control, isolating variances, reviewing sub-standard production; burden of overhead costs, hiding the cost of poor quality production - single run case; overheads in service and non-profit organisations; identifying the cost of production in a process-continuous run, pricing of partly finished goods and at production checkpoints; activity based costing as a means to optimise quality costs.

**Course:** BS77

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ HLN001 LITERATURE REVIEW

### ■ HLN002 RESEARCH PROJECT

### ■ HLN003 THESIS PRESENTATION

These three units combine to constitute the research/thesis component of the Master of Health Science. The thesis in total provides students with an opportunity to formally extend and synthesise knowledge gained in earlier semesters of the program. This study represents an independent and original piece of research completed with the guidance of a supervisor. The thesis provides an opportunity for coursework conducted in the area of specialisation to be applied in a practical manner reflecting the student's specific interest in health science. The thesis may be a report on research which makes a contribution to knowledge, or a study in which the student critically analyses and appraises existing knowledge and produces observations and conclusions of value to the field concerned. The thesis is divided into three distinct units: Literature Review 12cp, Research Project 12cp, Thesis Presentation 24cp. Units may be studied independently or concurrently.

**Course:** HL88

**Contact Hours:** HLN001 - 3 per week, HLN002 - 3 per week

**Credit Points:** 48 total

### ■ HLP101 ADVANCED DISCIPLINE READINGS

This unit provides the opportunity for students to identify and review the literature relevant to their selected research topic. A one day seminar in advanced information retrieval skills is included.

**Courses:** HL50, HL52, HL58

**Credit Points:** 12

### ■ HLP102 RESEARCH SEMINARS

Preparation and completion of a seminar presentation in a professional and scientific manner plus attendance at scheduled seminars.

**Courses:** HL50, HL52, HL58

**Prerequisite:** MAN009 or HSN405

**Credit Points:** 12

### ■ HLP103 DISSERTATION

This unit is broken into a number of components which are completed over successive semesters (as appropriate for full-time or part-time course structure). A written report in the form of a dissertation proposal must be submitted by the end of week 6 in the semester in which enrolment in the dissertation commences.

**Courses:** HL50, HL52, HL58

**Co-requisite:** All other units in Honours program

**Credit Points:** 48

### ■ HMB171 FITNESS, HEALTH & WELLNESS

This unit involves students in the study of systems of the human being basic to physical activity. The inter-relationships of health, physical activity and wellness, historically and dimensionally, is investigated. Basic principles of conditioning and exercise prescription to demonstrate the impact of physical activity on life-style diseases, health behaviours and wellness.

**Courses:** ED51, HM42

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HMB172 LIFESPAN GROWTH & MOTOR DEVELOPMENT

This unit provides students with knowledge and understanding of essential physical growth concepts and the theoretical perspective of major development; maturational/descriptive and Neuro-behavioral, special reference to the physical activity setting.

**Course:** HM42

**Credit points:** 12 **Contact Hours:** 4 per week

### ■ HMB173 SOCIAL & PSYCHOLOGICAL DIMENSIONS OF PHYSICAL ACTIVITY

An introduction to social and psychological considerations of physical activity; why study sport?; the sociological dimensions; historical determinants; sport and socialisation, business, education and the future. The psychological dimensions; coaching; motivation; aggression and violence; parents in children's sport. The socio-psychological issues of exercise; healthism; dieting; sport and the aged.

**Course:** HM42

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HMB202 PHYSICAL EDUCATION 2

This unit is practically based. Students work through a systematic approach to the teaching of physical education. The micro-teaching involves four state primary schools. The preparation and planning of physical education activities is highlighted. There is a strong emphasis throughout on action learning and action research skills. Outcomes includes the development of reflective teachers of physical education.

**Course:** ED41

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ HMB204 PHYSICAL ACTIVITY STUDIES 1

Students pursue one of three strands: the science of physical activity incorporating physiology, anatomy and biomechanical principles which govern the body's movements in a variety of movement situations; a socio-cultural studies strand in which the

historical, political and socio-cultural factors that have influenced the development of Australian sport are considered; a motor development and skill acquisition strand which will incorporate theoretical and applied aspects of motor learning in such a way that appropriate methods for meeting the particular needs of each learning situation are developed.

**Courses:** ED41, ED51

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HMB205 PHYSICAL ACTIVITY STUDIES 2

The content is offered in three strands to enable students to gain an indepth knowledge in the one of their choice: Science of Physical Activity enables students to gain experience assessing the components of physical fitness in the laboratory and then implement these skills in the community; Adapted Physical Activity incorporates designing community programs for handicapped and disabled people; socio-cultural studies provide an initial view of the relationship between physical activity and the social world.

**Courses:** ED41, ED51

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HMB242 HEALTH STUDIES 2

This level two unit is offered in parallel strands and expands some of the issues raised in the level one unit. Students follow a strand focussing on individual health, or a strand focussing on health as a community issue. Students choosing to follow the individual strand focus on their development of a personal action control as a procedure for maintaining their health. Students choosing to follow the community health strand focus on occupational and environmental health issues in the community.

**Courses:** ED41, ED51

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HMB243 HEALTH STUDIES 3

This level three unit extends in depth some of the issues addressed in the level one and two units. The dual strand developed in the level two unit continues, following an individual or a community focus. In the individual strand the focus narrows to look at the former status of children. In the latter strand the focus is on drug issues and their use in Australia.

**Courses:** ED41, ED51

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HMB271 MOTOR CONTROL & LEARNING

Overview of relevant theories and research in motor control and learning for acquisition of skilled motor behaviour; a knowledge of information processing and sensory systems; memory processes; factors contributing to motor learning; laws of simple movements; motor programs and motor control processes.

**Course:** HM42

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ HMB272 BIOMECHANICS

The application of mechanics as they apply to human movement and sports performances including: kinematics and dynamics of human body models; quantitative analysis; impact; work and power.

**Courses:** HM42, ME46

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ HMB273 EXERCISE PHYSIOLOGY

Energy systems; aerobic and anaerobic systems; bioenergetics; fuels for energy. Fitness components: aerobic capacity, strength, power, muscular endurance, flexibility. Training and conditioning: effect on the system of the body; methods and techniques;

training for different populations (children, females, aged); training for specific sports and activities. Evaluation of fitness: tests for all fitness parameters; essential practical and laboratory procedures.

**Course:** HM42

**Prerequisite:** LSB231 or equivalent

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ HMB274 FUNCTIONAL ANATOMY

Surface anatomy of the trunk and upper and lower limb; morphological and mechanical properties of bone, muscle-tendon units with implications for physical activity; joint structure and function; analyses of movement tasks including walking and running; cinematography and electromyography in functional anatomy of movement tasks.

**Courses:** HM42, ME46

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ HMB275 EXERCISE & SPORT PSYCHOLOGY

Introduction to the psychological factors which influence performance, participation and adherence to both sport and exercise programs; personality and the athlete; attention and arousal; relaxation theory and practice; aggression and psycho-social development, leadership and team cohesion.

**Course:** HM42

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HMB276 RESEARCH IN HUMAN MOVEMENT

Principles of research: purposes, philosophy, applications. Quantitative research: principles of test construction and administration; basic statistics; basic research design hypothesis testing. Qualitative research: methodology; data collection; theory building. Research presentation: writing a research report; developing conclusions. Application of research; examples in human movement; related literature.

**Course:** HM42

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ HMB301 HEALTH & PHYSICAL EDUCATION 1

The nature, scope and importance of health and physical education as part of the primary school curriculum. Content includes: concepts and content incorporated in the philosophy of health education and the importance of lifelong healthy living; the structure, management and evaluation of physical education lessons in the school environment; planning learning experiences and developing health and physical education program modules.

**Course:** ED51

**Credit Points:** 12 **Contact Hours:** 5 per week

### ■ HMB302 HEALTH & PHYSICAL EDUCATION 2

This unit builds on HMB301 to give a greater understanding of the nature of health education and physical education as applied curriculum areas. Further insight into relevant syllabus and curriculum documents is provided; competencies in planning and teaching developed; close links with teaching practice.

**Course:** ED51

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HMB304 PHYSICAL ACTIVITY & MODERN SOCIETY

In this unit students analyse the nature of the symbiotic relationship between social patterns and the nature and role of physical activity and its influence upon physical education, sporting and fitness

programs in primary schools. The importance of both social and cultural change and of the role of teachers in the design and implementation of such programs.

Course: ED51

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB305 PERSONAL HEALTH

An examination of the range of factors influencing personal health including lifestyle and a range of social, economic and environmental factors. A holistic perspective on personal health.

Courses: ED50, ED51

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB306 DEVELOPMENTAL & INTEGRATED PHYSICAL ACTIVITY

This unit provides the theoretical basis to enable teachers of physical education to program for and implement physical activity for all children. Topics include: normal motor development and variations in these patterns in children with an intellectual, sensory, neurological, physiological or orthopaedic disability. Students taking this unit participate in the community based physical activity programs for such children.

Course: ED51

Prerequisite: HMB306

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB308 PHYSICAL ACTIVITY STUDIES

An overview of the breadth of the exercise science field with reference to the structure and function of the human body and key issues associated with the development of health related and motor fitness.

Course: ED51

Prerequisite: HMB304

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB309 MOTOR DEVELOPMENT, LEARNING & PERFORMANCE

An introduction to the cognitive and motor processes involved in the learning and performance of motor skills. Areas studied include: key terms related to motor development, learning and control; classification systems used in the motor domain; general and individual patterns of physical growth and motor development; information processing and memory systems in the context of motor behaviour.

Course: ED50

Credit Points: 12 Contact Hours: 5 per week

### ■ HMB310 PHYSICAL EDUCATION CURRICULUM STUDIES 1

The nature of physical education as an applied curriculum area. Insights into relevant Queensland syllabus and curriculum documents are provided; competencies in planning and teaching are developed and close links are made with teaching practice.

Course: ED50

Prerequisites: EDB323 and at least 48 credit points in the relevant discipline area

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB311 MOVEMENT ANALYSIS

This unit is designed to introduce students to the anatomical and mechanical foundations of human movement, an appreciation of which is necessary to understand and interpret performance skills. Knowledge of the skeletal structure, joints and muscle actions, combined with an understanding of the mechanical principles which govern the body's movements are the essential components of this unit.

Course: ED50

Credit Points: 12 Contact Hours: 4 per week

### ■ HMB312 FITNESS PARAMETERS

To equip students to plan and monitor fitness programs; topics include: essential physiology; cir-

culatory, respiratory, muscular and energy systems; effects of nervous and endocrine functions on body systems; components of fitness-health related and sport performance related programs; principles and methods of training and conditioning; nutrition and weight control; thermoregulation and fluid balance.

Course: ED50

Credit Points: 12 Contact Hours: 5 per week

### ■ HMB313 SOCIO-CULTURAL FOUNDATIONS OF PHYSICAL ACTIVITY

This unit is designed to lay a foundation in the disciplines of the socio-cultural areas which underpin the study of human movement. It serves as an introduction to the historical, sociological, philosophical, anthropological and cultural foundations of sports, games and leisure activities.

Course: ED50

Credit Points: 12 Contact Hours: 4 per week

### ■ HMB314 PERFORMANCE SKILLS 1

This unit involves application of scientific principles to the analysis and development of techniques in all major swimming strokes, water rescue methods and track and field events. Students explore instructional strategies, motivational, conditioning and training activities, the development of activity programs for various ability levels, and event rules application.

Course: ED50

Credit Points: 12 Contact Hours: 6 per week

### ■ HMB315 PERFORMANCE SKILLS 2

In this unit various game forms are analysed in order to identify fundamental game skills and problem areas in skill development. Emphasis is placed on the application of relevant skills to suit game situations; of appropriate strategies for teaching and coaching selected sports to a variety of age groups and on the interpretation of rules in a competitive situation.

Course: ED50

Credit Points: 12 Contact Hours: 6 per week

### ■ HMB316 PERFORMANCE SKILLS 3

Basic theoretical principles fundamental to the performance and teaching of gymnastics and dance; physical fitness and basic biomechanical principles of excellence in gymnastics; routines incorporating a variety of gymnastic and dance skills on floor/aparatus; recognise/remedy of unsafe practices.

Course: ED50

Credit Points: 12 Contact Hours: 6 per week

### ■ HMB317 OUTDOOR EDUCATION

The value and place of outdoor education in schools and the community; development of proficiency in a number of outdoor pursuits; light-weight, minimum impact camping; leadership skills and safety techniques; the Australian natural environment; promotion of positive attitudes towards natural environments.

Course: ED50

Co-requisite: HMB314

Credit Points: 12 Contact Hours: 6 per week

### ■ HMB321 SPORT IN SOCIETY

The relationship between sport and the social world. The nature and importance of the role of sport in modern Australian society through an analysis of such contemporary issues and developments in sport as drugs in sport, sport and the law, violence in sport, equity and sport, and sport and socialisation.

Course: ED50

Prerequisite: HMB313 or consent of lecturer.

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB324 ADVANCED PERFORMANCE LABORATORIES

Investigation of selected advanced theoretical structures and application to a performance activity.

Course: ED50

Prerequisites: Compulsory Level 1 and Level 2 units  
Credit Points: 12 Contact Hours: 3 per week

### ■ HMB325 INDEPENDENT STUDY

Students are required, with guidance, to propose, carry out and report on some achievable enquiry which may take a variety of forms, from a development of previously undertaken units to a supplementary option chosen to expand the scope of their studies in human performance and physical education.

Course: ED50

Prerequisites: Compulsory Level 1 units  
Credit Points: 12 Contact Hours: 3 per week

### ■ HMB327 MICROCOMPUTERS IN PHYSICAL EDUCATION & SPORT

This unit is offered to familiarise students with the benefits of applying microcomputer technology to the fields of physical education and sport. Content includes demonstration and evaluation of relevant software, database management, grading and administration programs and the development of task specific programs for individual institutions.

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB328 INTERNATIONAL PHYSICAL EDUCATION & SPORT

This unit is designed to provide students with an international perspective on physical education and sport. Comparative studies in this field give insight into life in other countries act to enhance international understanding of the global village.

Course: ED50

Prerequisite: HMB394 or HMB321 or consent of lecturer

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB329 PLAY & CULTURE

A study of the play element in non-literate societies providing insight into play in contemporary societies. The anthropology of play provides a perspective not only for analysing play behaviour itself, but also for describing other cultural experience.

Course: ED50

Prerequisite: HMB313 or consent of lecturer.  
Credit Points: 12 Contact Hours: 3 per week

### ■ HMB332 HEALTH RELATED FITNESS

The role of health related fitness in the community and in the school for the attainment of optimal health.

Course: ED50

Prerequisite: PUB327  
Credit Points: 12 Contact Hours: 3 per week

### ■ HMB333 CHILD & ADOLESCENT HEALTH

Child and adolescent health and the wide range of factors that impact on the health of individuals in these two crucial stages of life. An analysis is made of skills required for health enhancing behaviours and experience provided in some of the skills needed to assess and maintain the health status of children.

Courses: ED50, ED51

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB335 INDIVIDUAL GAMES & SPORTS

These sports offer a different perspective from team games by demanding a higher level of self-directed involvement. Students specialise in three sports such

as archery, golf, orienteering, fencing, squash, table tennis.

Course: ED50

Credit Points: 12 Contact Hours: 4 per week

### ■ HMB337 ORGANISATION & MANAGEMENT IN PHYSICAL EDUCATION & SPORT

School physical education departments and sporting associations are middle-sized organisations requiring direction for servicing a large client base with a fluctuating budget. In this unit students examine the role of administrators, management and leadership styles, and the administration of monies, facilities and human resources in a sports setting.

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB340 PHYSICAL EDUCATION CURRICULUM STUDIES IB

This unit is designed only for those students who have chosen to do a double major in physical education. It extends the understanding developed in HMB310 and focuses particularly on teaching within the classroom setting. Students are introduced to strategies used to develop higher order thinking skills and are encouraged to experiment with their use.

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB341 SPORTING & CAMPING ADMINISTRATION

The primary school physical educator is responsible for the organisation of educational programs both at school and in other educational and sporting settings. This elective unit assists students in understanding and organising a variety of sporting tournaments, carnivals and camping programs as educationally sound, safe and enjoyable experiences for children.

Course: ED51

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB342 THE DEVELOPMENT OF TEACHING SKILLS IN PHYSICAL EDUCATION

This unit is designed around micro-teaching and involves student teachers, children and their working environment in schools. It promotes excellence in teaching, preparation and planning with an emphasis on active learning and research. Physical education teacher education students develop a greater understanding of their prospective working environment.

Course: ED51

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB343 ENVIRONMENTAL HEALTH

The focus of this curriculum elective unit is on educational responses to the growing concern about environmental hazards and their detrimental effects on human health. Emphasis on the curriculum implications of knowledge will assist children to make a positive contribution to health policy.

Course: ED51

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB344 HUMAN RELATIONSHIPS EDUCATION

This curriculum elective unit has a dual focus: effective interpersonal communication by teachers as members of the school community; and the curriculum and pedagogical process for teaching children. Care, personal development, work experience and community-based learning characterise these curriculum programs. Students are introduced



to these processes through lectures, seminars, workshops and appropriate field study experiences.

Course: ED51

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB345 MOTOR DEVELOPMENT & PERFORMANCE IN DISABLED CHILDREN

In this unit students examine the effects of a wide range of intellectual, sensory, neurological, orthopaedic and physiological disorders on the motor development and performance of children. Assessment techniques for evaluating motor development and performance are combined with program planning and implementation with specific cases.

Course: ED51

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB361 FUNCTIONAL ANATOMY 2

Anthropometric protocols for the measurement of the body; morphological considerations: changes in body size and composition including skeletal, muscle and fat mass; body composition assessment methods: direct and indirect methods suitable to laboratory and field settings: somatotyping, maturation and performance; postural implications; exercise.

Course: HM42

Credit Points: 12 Contact Hours: 4 per week

### ■ HMB362 BIOMECHANICS 2

Research techniques within biomechanics; analysis of force systems; photographic, cinematographic; goniometric and electrographic analysis of movement; mass of inertial characteristics of the human body and biomechanical models.

Course: HM42

Prerequisite: HMB272

Credit Points: 12 Contact Hours: 4 per week

### ■ HMB363 INDEPENDENT STUDY

To meet the specific interest of students beyond content offered within existing units; conceptualise, plan and execute a research study including survey of literature, development of an action plan, reflection on a practice or situation, and proposal for future action. The student works at an advanced level and autonomously under the supervision of a lecturer.

Course: HM42

Credit Points: 12 Contact Hours: 4 per week

### ■ HMB364 SEMINARS IN HUMAN MOVEMENT

Offered to capitalise on the expertise of resident or visiting staff, special needs and interests of students, and to create flexibility in unit offerings. These may include special expertise, high quality limited period research projects, seminars, conferences and new initiatives by staff and students. An interest group will study the area chosen cooperatively.

Course: HM42

Credit Points: 12 Contact Hours: 4 per week

### ■ HMB370 PHYSICAL EDUCATION CURRICULUM STUDIES 2

The focus of this unit is divided between issues and directions of current trends in curriculum development and advanced strategies used to achieve variety in the presentation of indoor and outdoor lessons.

Course: ED50

Prerequisite: HMB310

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB371 MOTOR CONTROL & LEARNING 2

Major recent theories in motor control and learning; centralist and peripheralist theories; concepts of coordination and skill; control and learning of complex

movements; interlimb coordination; interacting schemas; visual-spatial, force and temporal aspects and sequencing of complex movements. Research design in motor control and learning.

Course: HM42

Prerequisite: HMB271

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB372 BIOPHYSICAL BASES OF MOVEMENT REHABILITATION

Overview of rehabilitation including medico-legal aspects; health professionals in the rehabilitation process; exercise specialist, medical practitioner, physiotherapist, specialist physician; exercise prescription: overview of responses to injury implications for exercise programs; modalities of treatment: exercise and rest; immobilisation, cryotherapy and hydrotherapy; exercise prescription rehabilitation.

Course: HM42

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB374 PSYCHOLOGY OF REHABILITATION

Practical application of psychological skills beneficial to the physical and psychological rehabilitative process: topics include: specific rehabilitation strategies; vicarious ego support; trauma from athletics; psychological process; disabled athletes.

Course: HM42

Prerequisite: HMB275

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB375 ADAPTED PHYSICAL ACTIVITY

Similarities and differences in the motor development and performance with intellectual, sensory, neurological, physiological, orthopaedic, musculoskeletal and cardio-respiratory conditions; assessment and programming for individuals with impairments including program organisation and service delivery models; importance of fitness, sport and leisure for disabled individuals in mainstreamed and disorder specific groups; dance and aquatics.

Course: HM42

Prerequisite: HMB271

Credit Points: 12 Contact Hours: 4 per week

### ■ HMB376 MOTOR DEVELOPMENT IN CHILDREN

Theoretical perspective of normal and abnormal motor development, incorporating maturational, descriptive and behavioral aspects; underlying sensory, perceptual, neurological and cognitive changes which influence motor development in children. A theoretical understanding of gross and fine movement behaviour; and intellectually disabled, auditorily impaired and neurologically impaired children. Programs for motor impaired children.

Course: HM42

Prerequisite: HMB271 or at lecturer's discretion.

Credit Points: 12 Contact Hours: 4 per week

### ■ HMB377 CHILDREN IN SPORT

Physical development of the young athlete; physical maturation; benefits of participation in sport and physical activity; psycho-social issues: positive and negative effects of participation including competitive stress; injuries to the growing skeleton: overtraining, overuse injuries; strength training in childhood and adolescence; promotion of safety in sport: accreditation of teachers and coaches, policy guidelines for junior sport, Aussie sport program.

Course: HM42

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB380 PHYSICAL EDUCATION CURRICULUM STUDIES 2B

This unit is designed only for those students doing a double major in physical education and focuses par-

ticularly on the areas of assessment and the use of action research in curriculum innovation. Students are required to undertake individual projects which allow them to practise critical reflection and autonomous learning in their pursuit of knowledge.

**Course:** ED50 **Prerequisite:** HMB340  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB381 EXERCISE PHYSIOLOGY 2

Theoretical component: an extension of material covered in exercise physiology; respiratory, circulatory, and muscular systems; cardiac dynamics; hormonal and biochemical aspects of exercise. Laboratory component: familiarity with all equipment in the laboratory; testing procedures and methodology; interpretation and evaluation of results.

**Course:** HM42  
**Prerequisite:** HMB273 **Co-requisite:** HMB382  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB382 EXERCISE PRESCRIPTION

Students research and analyse the physiological methods and procedures used in training and conditioning programs of all forms and levels of physical activity. The conditioning needs of specific populations are studied. The application of fitness assessment and exercise prescription is an integral aspect.

**Course:** HM42  
**Prerequisite:** HMB273 or at lecturer's discretion.  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB383 WORKPLACE HEALTH

The historical and current position of workplace health as one emerging focus of occupational health and safety. Issues, laws, policies, programs and union, employer and employer perspective are analysed in conjunction with the role of workplace health professionals. The planning, development, promotion, implementation and administration of programs from a fitness counsellor's perspective.

**Course:** HM42  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB384 INJURY PREVENTION & REHABILITATION

Roles and responsibilities of health professionals: first aid, injury prevention, rehabilitation, health training and facility management; prevention of injury: conditioning and fitness components, methods of evaluation of performance, personal responsibilities, protective equipment; types of injury: primary (indirect, direct and overuse) and secondary; structural classification of injury; procedures for management and rehabilitation: specific injuries.

**Course:** HM42  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB390 HEALTH EDUCATION CURRICULUM STUDIES 1

The nature of health education as an applied curriculum area. Insights into relevant Queensland syllabus and curriculum documents are provided; competencies in planning and teaching are developed and close links are made with teaching practice.

**Course:** ED50  
**Prerequisites:** EDB323 and at least 48 credit points in the relevant discipline area  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB391 PROMOTION OF PHYSICAL ACTIVITY

Physical education departments, schools and sports organisations are constantly seeking funds, participants and spectators, and often the limiting factor

is the low profile of the groups concerned. In this unit students examine the role of marketing and promotion, identify client and market mix, and develop strategies for the promotion and funding of activities.

**Course:** ED50  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB392 ORGANISING TOURNAMENTS & EVENTS

Competition is fundamental to all sports whether it be against oneself or another party. In this unit the philosophies related to competition and award systems for a varying client mix are examined; the complexities of, and skills required for, organisation of major sporting events in schools and other settings are discussed; and utilisation of human and facility resources in these settings is considered.

**Course:** ED50  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB393 SPORT & EQUITY

The inequalities that exist in society's major institutions, with particular reference to sport and physical education. The aim is to develop knowledge of government policy and legislation regarding equity in public, private and corporate establishments, as well as within educational settings.

**Course:** ED50  
**Prerequisite:** HMB321 or HMB394 or consent of lecturer  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB394 HISTORY OF PHYSICAL EDUCATION & SPORT

The historical evolution of physical education, sports and games with their role and relevance in societies past and present. It extends the historical focus of HMB313 Socio-Cultural Foundations of Physical Activity and, itself provides the foundation for contemporary analyses of sport in society.

**Course:** ED50 **Prerequisite:** HMB313  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB395 HEALTH EDUCATION CURRICULUM STUDIES 2

The focus of this unit is divided between issues and directions associated with current trends in curriculum development and advanced strategies used to achieve variety in the presentation of health lessons.

**Course:** ED50 **Prerequisite:** HMB390  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB410 PHYSICAL EDUCATION CURRICULUM: SECONDARY

The factors responsible for current physical education curriculum development. Emerging trends are studied to highlight the implications for physical education programs; challenges the student to design a secondary curriculum that reflects current trends.

**Courses:** ED26, ED32  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB411 PHYSICAL EDUCATION CURRICULUM: PRIMARY

The notion of the teacher of physical education and the classroom teacher reflecting on their experiences is of prime import to the nature of this unit. An examination of the principles and procedures which are used within the physical education curriculum and the individual's classwork is central to the outcome. Action research methods are explained and linked to the sociological qualities of current curriculum prac-

tices. These issues relate to individual relationships within the physical education settings.

**Courses:** ED26, ED31

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB412 HEALTH EDUCATION CURRICULUM PLANNING

Analysis and application of curriculum design theory and curriculum research to health education in primary and secondary schools. A focus on a curriculum design project is supported with a situational analysis of the project setting and is evaluated in a report on the effectiveness of the process.

**Course:** ED26

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB440 MOTOR DEVELOPMENT & LEARNING IN CHILDREN

The role of reflexes and early voluntary movements in the development of the child; fundamental patterns of movement (walking, running, jumping, throwing, catching) and their sequential development; development of comprehension and manipulation; theories of motor learning; evaluation of perceptual-motor, sensory-motor and psycho-motor theories.

**Course:** ED26

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB441 SOCIOLOGY OF SPORT

A sociology of sport; historical and contemporary perspectives; sport in Australia; Australia's sporting heritage; corruption of sport; control of sport; media and sport; inequality in sport; social issues in sport.

**Course:** ED26

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB442 ADMINISTRATION IN PHYSICAL EDUCATION & SPORT

Identification of duties of the administrator; administration theory; leadership styles and conflict resolution; budgeting and money management including sponsorship and fundraising; planning for a range of events; processes and procedures of management against a school and club setting.

**Course:** ED26

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB471 PROJECT 1

Students in the Bachelor of Applied Science are required to undertake a project in Year 4. Students will work in small groups on original topics. Work will include: a literature review and the presentation of experimental hypotheses, research methodology and analysis procedures. Groups will present a formal colloquium at the end of Semester 1.

**Course:** HM42

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB472 PROJECT 2

The implementation of the plan, the analysis of results and publication of a report. Groups present a formal colloquium at the end of Semester 2.

**Course:** HM42

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB473 PRACTICUM 1

A structured and supervised initial vocational experience linked to the student's specialised strand of study: the reality of the workplace; professional expectations; work ethics; client contact; the range of environments in the sport industry; practical application of specialist knowledge and skills in clinic settings. Reflective analysis of the experience.

**Course:** HM42

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HMB474 PRACTICUM 2

As an extension of HMB473, an intense vocational experience undertaken as an internship over a minimum period of twenty days full-time employment: operational tasks to include management and administration; independent professional skills and knowledge; full client services illustrating effective communication skills and a comprehensive reflective analysis of the internship.

**Course:** HM42

**Credit Points:** 24

#### ■ HMB610 CLINICAL MEASUREMENT

Blood flow and volume, plethysmography; cardiorespiratory measurement; electrical impedance imaging; anthropometry and body composition; measurement of normal and pathological gait; kinematic and kinetic analyses of human movement and performance; functional evaluation of orthotics and prostheses; electromyography; ergonomic and environmental issues; measurement of special populations.

**Course:** ME46 **Prerequisites:** HMB272, HMB274

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ HMB611 HUMAN PERFORMANCE

Human adaptation to physical activity; performance efficiency and enhancement in children and adolescents; performance characteristics of adults and the elderly; human performance and the environment; performance evaluation and restoration/enhancement in the injured or disabled population.

**Course:** ME46

**Prerequisites:** HMB272, HMB274, HMB615

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ HMB614 BIOPHYSICAL BASES OF MOVEMENT/REHABILITATION

The rehabilitation process; introduction to rehabilitation protocols; mechanisms of injury and repair and functional restoration; principles of exercise prescription and rehabilitation; modalities of treatment; modalities of exercise prescription in rehabilitation.

**Course:** ME46

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ HMB615 EXERCISE PHYSIOLOGY

Bioenergetics; exercise metabolism; hormonal response to exercise; muscle structure and function; circulatory adaptations, respiration and acid-base balance during exercise; temperature regulation, training and conditioning; body composition and nutrition; fitness testing and assessment procedures.

**Course:** ME46

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ HMB616 PSYCHOLOGY OF REHABILITATION

Factors that predispose to injury and behavioural change; the psychological process of rehabilitation; teaching specific psychological rehabilitation and coping strategies; the grief process; the rehabilitation psychologist's role in the rehabilitation team; disabled athletes.

**Course:** ME46

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ HMB617 WORKPLACE HEALTH

History of workplace health; legal aspects; role of associated professionals; trends in mortality and morbidity; workplace health promotion agencies and programs; economic considerations; program promotion.

**Course:** ME46

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ HMB801 SPORT & MASS MEDIA

The commercialisation and development of sport and the mass media are inextricably linked and the nature and implications of this relationship will be the foundation for the investigation of this unit. This unit will examine the past, present and future aspects of this relationship through examination of current issues.

Course: BS50

Credit Points: 12 Contact Hours: 3 per week

### ■ HMB802 STRUCTURE & POLICY IN AUSTRALIAN SPORT

An understanding of the structure and policies of Australian sport is fundamental for administrators who are required to operate through the levels of government for the conduct, promotion and funding of their chosen sport. The relevant documentation and strategies for operating within the system.

Course: BS50

Credit Points: 12 Contact Hours: 3 per week

### ■ HMN601 EXERCISE & HEALTH ACROSS THE LIFESPAN

Physical activity is almost universally accepted as being relevant to health, although the pattern of activity (nature, intensity, frequency and duration of individual exercise bouts, cumulative years of participation) required to induce maximum health benefits remains uncertain. Exercise throughout the lifespan and the implications for good health.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

### ■ HMN602 READINGS IN HUMAN MOVEMENT STUDIES

This unit enables students to explore the breadth of their chosen subdiscipline in contrast to the more specific focus of their thesis topic to follow. This unit provides the opportunity for students to develop a compendium of readings in an area(s) not catered for in other units comprising their specialisation. Students select advanced readings in their chosen field and submit a comprehensive annotated bibliography that critically reviews the available literature. This work is conducted under the supervision of a lecturer allied to the chosen area of study.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

### ■ HMN603 SCIENTIFIC BASES OF HUMAN PERFORMANCE

This unit provides the opportunity to develop theoretical and practical knowledge of selected topics representative of the scientific bases of human performance. Topics include: material from the recognised sub-disciplines of human movement science, functional anatomy, biomechanics, and exercise physiology. The unit investigates changes in the human energy systems, musculo-skeletal system and cardiovascular system that occur when the body is placed in a physically stressful situation (exercise being the predominant stressor considered). Specific applications to the physical activity setting.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

### ■ HMN604 SOCIAL ISSUES IN SPORT

An advanced in depth analysis of the diverse social issues which have permeated sport in Australia. The necessity for a critical cultural analysis has been necessitated by issues such as discrimination, violence, drugs, elitism, ethnocentrism, internationalism, politicisation, commercialisation and quantification. The focus will be on the analysis of the

nature, role and significance of sport in modern society. The unit is designed for professionals and practitioners in the field of sport and physical activity who are in the corporate setting, educational domain and government and community departments.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

### ■ HMP015 SCHOOL HEALTH PROGRAM PLANNING

Planning, implementation and evaluation of school health programs. Analysis of a range of planning models in health education and health promotion.

Courses: ED31, PU69

Prerequisite: HMP014

Credit Points: 12 Contact Hours: 3 per week

### ■ HMP401 PHYSICAL EDUCATION CURRICULUM STUDIES 1

Nature of physical education as an applied curriculum area; interpreting and managing the physical education practical and theoretical learning environment with particular attention to learner safety, maximum participation and teaching for cognition in practical activities; Mosston's spectrum of teaching styles.

Course: ED32

Prerequisite: HMP420

Credit Points: 12 Contact Hours: 3 per week

### ■ HMP402 PHYSICAL EDUCATION CURRICULUM STUDIES 2

Clarification of the motives and roles of physical education as a medium for education; exploration of the current physical education documents and the value orientations implicit within; language in physical education; the affective domain in physical education; teaching in unusual environments; evaluation and selection of learning experiences.

Course: ED32

Prerequisite: HMP421

Credit Points: 12 Contact Hours: 3 per week

### ■ HMP403 HEALTH EDUCATION CURRICULUM STUDIES 1

Nature of health education as an applied curriculum area; relevant Queensland syllabus and curriculum documents; competencies in planning and teaching are developed and close links made with teaching practice.

Course: ED32

Credit Points: 12 Contact Hours: 3 per week

### ■ HMP404 HEALTH EDUCATION CURRICULUM STUDIES 2

Issues and directions associated with current trends in curriculum development; advanced strategies used to achieve variety in the presentation of health lessons.

Course: ED32

Credit Points: 12 Contact Hours: 3 per week

### ■ HRB100 ADVANCED ORGANISATIONAL BEHAVIOUR

Investigation and analyses of major organisational behaviour issues undertaken within a context of organisational effectiveness and the quality of work life; analysis of relevant literature; application of concepts via case studies, surveys and/or projects.

Course: BS50

Prerequisite: HRB130

Credit Points: 12 Contact Hours: 3 per week

### ■ HRB101 ADVANCED TRAINING & DEVELOPMENT

Planning and programming management and supervisory development; career planning, developing a complete training program; advanced training techniques: case study, role play, laboratory training, simulations, games, programmed instruction, computer assisted instruction, individualised learning

video and learning; managing the training and development function; planning, organising staffing, direct controlling; the competencies of a trainer. Experiential and project activities.

Course: BS50

Prerequisite: HRB120

Credit Points: 12

Contact Hours: 3 per week

#### ■ HRB102 ADVOCACY & NEGOTIATION

Preparation and conduct of various types of negotiated industrial cases; preparation of tribunal documentation; preparation and presentation of cases before industrial tribunals; direct bargaining and enterprise-based bargaining.

Course: BS50

Prerequisite: HRB131 or HRN105

Credit Points: 12

Contact Hours: 3 per week

#### ■ HRB103 EMPLOYMENT REGULATION & ADMINISTRATION

The formal regulatory requirements that establish the structure and foundation of the employment relationship as well as the informal administrative rules and systems that apply examined in a broad industrial, social and political framework; practical and operational implications and the impact of managing these issues examined from an industrial relations context.

Course: BS50

Prerequisite: HRB131 or HRN104

Credit Points: 12

Contact Hours: 3 per week

#### ■ HRB104 FOUNDATION HR COMPETENCIES

The personal and interpersonal competencies (in both cognitive and affective domains) which form the foundations from which a HRM practitioner must operate. It aims to develop knowledge of, and skills in, self-awareness, personal and interpersonal development and interpersonal processes. It emphasises the design of process to achieve outcomes.

Course: BS50

Co-requisite: COB129

Prerequisite: COB129 or HRB130 or HRN108

Credit Points: 12

Contact Hours: 3 per week

#### ■ HRB105 HUMAN RESOURCES & THE ORGANISATION

The interface of human resources with the organisation and its requirements; concepts and processes for analysing jobs; human resources planning, job evaluation, performance appraisal and remuneration processes; data. A substantial level of analytical and professional competence is expected in this unit.

Courses: BS50, BS74

Prerequisite: HRB131 or HRN104

Credit Points: 12

Contact Hours: 3 per week

#### ■ HRB106 INDEPENDENT STUDY IN MANAGEMENT

A review of an organisation by examining some aspects of its management processes and practices; preparation of a report for the organisation.

Course: BS50 Prerequisite: BSB102 or HRN104

Credit Points: 12

Contact Hours: 3 per week

#### ■ HRB107 INDEPENDENT STUDY HRD

Enables students to demonstrate a competence in directing their own learning; essential for professionals who must subsequently keep themselves up-to-date in their area of expertise; students either individually or in small groups, within an approved content area, undertake one or several learning activities with the approval of a supervisor; appropriate activities could include literature review, research (mini-thesis), project, practicum (work placement) or anything else deemed acceptable by the supervisor.

Course: BS50

Prerequisites: HRB101 and HRB104

Credit Points: 12

Contact Hours: 3 per week

#### ■ HRB108 INDEPENDENT STUDY HRM

Enables students to demonstrate an ability to direct their own learning, a key competence for professionals who must keep themselves up-to-date in their area of expertise; students either individually or in small groups, undertake one or several learning activities with the approval of a supervisor; appropriate activities could include literature review, research (mini-thesis), project, practicum (work placement), or anything else deemed acceptable by the supervisor.

Course: BS50

Prerequisite: Completion of at least 48 credit points from the HRM major

Credit Points: 12

Contact Hours: 3 per week

#### ■ HRB109 INDUSTRIAL DEMOCRACY

The theoretical basis for the range of industrial democracy schemes which have been developed. It focuses on employment relationships, organisation of work and productivity. Comparative industrial democracy especially Britain, Spain, Sweden, Germany and Japan and their relevance to Australia.

Course: BS50

Prerequisite: HRB131 or HRN105

Credit Points: 12

Contact Hours: 3 per week

#### ■ HRB110 INDUSTRIAL LAW

The development and role of law in industrial relations in Australia; industrial relations legislation; common law contract of employment; industrial torts; other statute and case law related to the above.

Course: BS50

Prerequisite: HRB131 or HRN105

Credit Points: 12

Contact Hours: 3 per week

#### ■ HRB111 INDUSTRIAL MANAGEMENT

The management process, planning, leading, organising, controlling; human resources management aspects of communication, motivation, leadership and teamwork, with practical applications to planning and control, personnel relations, job design.

Courses: EE43, ME45, ME46

Credit Points: 6

Contact Hours: 3 per week

#### ■ HRB113 INDUSTRIAL RELATIONS HISTORY

The emergence and development of labour movements and employer groups; the ideas which gave rise to and changed these institutions. Although the focus is on Australia, relevant European and North American experience is included.

Course: BS50

Credit Points: 12

Contact Hours: 3 per week

#### ■ HRB114 INDUSTRIAL RELATIONS INSTITUTIONS

The history, structure, functions and role of the industrial relations system at both state and federal levels, including trade unions and employer associations; award restructuring and the movement to decentralised bargaining arrangements; inter-relationship of industrial relations with human resource management towards the development of employee relations.

Course: BS50

Prerequisite: HRB131

Credit Points: 12

Contact Hours: 3 per week

#### ■ HRB115 INDUSTRIAL RELATIONS POLICIES

Examination of the most significant policies of governments, employer bodies and unions; the development and influence of these policies.

Course: BS50

Prerequisite: HRB114 or HRN105

Credit Points: 12

Contact Hours: 3 per week

### ■ HRB116 INNOVATION & ENTREPRENEURSHIP

The nature and processes of innovation and new venture creation; assessment of the entrepreneur and new venture team, as well as the business opportunity and the resources required; methods of establishing ventures along with legal and financing issues; problems with, and effective management strategies for innovation; focuses on developing a comprehensive, professional standard business plan for a proposed new venture; the negotiation of new venture deals.

**Courses:** BS50, IF53

**Prerequisite:** BSB102 or HRN104

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HRB117 INTERNATIONAL HUMAN RESOURCE MANAGEMENT

Organisational structure and cultural differences; communicating across cultural boundaries; multicultural teams; crosscultural leadership, motivation and negotiation; comparative human resource management; comparative employee relations.

**Course:** BS50 **Prerequisite:** HRB131 or HRN104

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HRB118 INTERNATIONAL MANAGEMENT

Management in a global context; international regulation and co-operation; environmental risk analysis for multinational enterprises; management skills in different cultures; regional facit; ethics and international management.

**Course:** BS50 **Prerequisite:** BSB102 or HRN104

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HRB119 INTERVIEWING & COUNSELLING

Development of practical skills in aspects of employment interviewing through an introduction to the theory and principles of interviewing, and supervised experience. The characteristics of the interview situation; the interviewer, the interviewee and their interrelationships; interview areas include the personal interview; information seeking and the employee-personnel interview: recruitment, appraisal, disciplinary and exit; personality theory, guidance, counselling theory and techniques; an emphasis on the human skills required to facilitate the development of others, either in individual interaction or group interaction.

**Course:** BS50 **Prerequisite:** HRB131 or HRN104

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HRB120 INTRODUCTORY TRAINING & DEVELOPMENT

The knowledge and competencies required of a beginning or an occasional trainer; theories, research and skill development; topics include: training in Australia; instructional models and theories of learning; training needs analysis; task analysis process; basic training techniques: skill model, information giving model, discussion model; training aids/ audiovisuals; administering a training course; evaluating learning, writing and scoring test items; follow-up training.

**Course:** BS50

**Prerequisite:** Completion of at least 96 credit points or HRN104

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HRB121 MANAGEMENT

Career progression of the practising engineer from a technical to a managerial role; activities to be performed for effective management; development of theoretical and practical skills in planning, organis-

ing, controlling and leading; project teams; interpersonal interaction and teamwork; application of theoretical material to case study analysis.

**Course:** EE44

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ HRB125 MANAGEMENT STRATEGY & POLICY

The process of strategy applied to modern management; external environmental assessment and internal organisational context; analytical skills in the formulation, implementation and evaluation of organisational strategic capability.

**Course:** BS50

**Prerequisites:** BSB102 and HRB127 (recommended)

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HRB126 MANAGEMENT PROCESSES

Principles from management and organisation theories, from concepts to application; decision making, initiating and changing structure, planning and applying strategies; control systems; systems development; analytical and critical skills in the context of the activities and structures directed to achieving organisational objectives.

**Courses:** BS50, IF52, IS43 **Prerequisite:** BSB102

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HRB127 MANAGEMENT THEORY & ISSUES

A critical and historical view of theories which explain the tasks and roles of managers; recent developments in management and organisational methods and issues.

**Course:** BS50

**Credit Points:** 12 **Prerequisite:** BSB102 **Contact Hours:** 3 per week

### ■ HRB128 OCCUPATIONAL HEALTH & SAFETY MANAGEMENT

How health and safety can be managed at work; hazard identification, risk management and evaluation, control strategies and implementation programs; legal frameworks, government policy and current management strategies; safety audits and the management of health and safety functions.

**Course:** BS50 **Prerequisite:** HRB131 or HRN104

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HRB129 OPERATIONS & PRODUCTION MANAGEMENT

The application of qualitative management principles and quantitative management science principles to the organisational sub-system of the production/operations environment; organisation as a dynamic system, affected by internal and external forces; techniques for analysing and controlling operations; modelling and scheduling operations; inventory planning; on-site investigations.

**Course:** BS50 **Prerequisite:** BSB102 or HRN104

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HRB130 ORGANISATIONAL BEHAVIOUR

Impact that individuals, groups, and structure have on behaviour within organisations; theories, research and applications for understanding, predicting and developing people in organisations. Topics include: abilities, learning, work motivation and attitudes, leadership, group dynamics and decision making, conflict, organisational symbolism and culture.

**Courses:** BS50, NS48, PU48

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ HRB131 PERSONNEL MANAGEMENT & INDUSTRIAL RELATIONS

Influences impacting on personnel management and industrial relations; the theoretical foundations of personnel management and industrial relations.

**Courses:** BS50, IF52, IF53, IS43, IT20, NS48, PU44, PU48

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HRB133 EQUITY AT WORK

Historical, legal and social perspectives on current issues surrounding equal employment opportunity and anti-discrimination initiatives; workplace implications of current laws and in particular, likely and possible impacts in making personnel related decisions; concepts and applications of the principle of merit; day to day impacts of equity legislation; practical models for EEO management planning.

**Course:** BS50

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HRB134 RECRUITMENT & SELECTION

This unit has an applied focus but draws on conceptual and research foundations and job analysis competencies developed in HRB105. Contextual issues of the legal and social environment as well as labour markets are considered. Recruitment: from the perspective of both the organisation and the individual; recruitment strategies; selection techniques including aptitude and ability testing, work samples, assessment centres and interviews; technical issues including validity, reliability and utility analysis.

**Course:** BS50      **Prerequisite:** HRB105 or HRN104

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HRB135 SMALL BUSINESS MANAGEMENT

Australian small business and how to effectively manage a small business. Topics include: managing the functional areas of small businesses; meeting legal and governmental obligations; the management of risk (insurance), theft and fraud; managing growth; managing small businesses with problems; personal management for small business.

**Courses:** BS50, ED23, ED50, IF53

**Prerequisite:** BSB102 or HRN104

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HRB136 STRATEGIC HUMAN RESOURCE MANAGEMENT

The capstone of the HRM major; the primary objective is to integrate HR concepts and issues into the wider business and environmental context; a range of historical features, professional and ethical matters are considered; an experiential approach based in cases and/or simulations is adopted.

**Course:** BS50      **Prerequisite:** HRB105 or HRN104

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HRB137 WAGES & EMPLOYMENT

The forces which determine wage and employment levels; the various types of labour markets; collective bargaining and skill formation processes. The relationship between these aspects and industrial relations institutions are addressed.

**Course:** BS50      **Prerequisite:** HRB131 or HRN105

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HRB138 WORK & SOCIETY

Work and work organisations in industrialised society and their relationship with industrial relations processes and structures. Examination of work, work organisations and relations at work from a range of perspectives. The influence of control over work,

work practices and technological change in an industrial relations context.

**Course:** BS50      **Prerequisite:** HRB131 or HRN105

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HRB140 MANAGEMENT & TECHNOLOGY

Exploration of the links between technical process, product innovation and management structure, policy and practice; emphasises the consequences of changes to technologies for the organisation.

**Course:** BS50      **Prerequisite:** BSB102 or HRN104

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HRB144 PUBLIC SECTOR INDUSTRIAL RELATIONS

Examination of industrial relations within the public sector in both Federal and State arenas, in particular the relationship between the various agencies of the state and public sector units.

**Course:** BS50      **Prerequisite:** HRB131 or HRN105

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HRB146 SPECIAL TOPIC HRM

Offered as required; aims to permit an in-depth examination of an issue of importance to HRM; content varies depending on the issue examined.

**Course:** BS50      **Prerequisite:** HRB131 or HRN104

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HRB147 SPORTS ADMINISTRATION

The roles of elected officials; the roles of professional administrators; the relationships between the two groups; managing meetings and committees; liaison with government departments; managing sponsorship; intraorganisational conflicts and negotiation.

**Course:** BS50      **Prerequisite:** BSB102 or HRN105

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HRB148 MANAGING PEOPLE AT WORK

Introduction to the theory, process and practice of management and organisations with special reference to an engineering environment; importance of people in the achievement of organisational objectives.

**Course:** ME35

**Credit Points:** 8      **Contact Hours:** 2 per week

### ■ HRB149 HUMAN RESOURCES & INDUSTRIAL RELATIONS

Influences impacting on human resource management and industrial relations in an engineering environment; theoretical foundation of human resource management and industrial relations.

**Course:** ME35

**Credit Points:** 8      **Contact Hours:** 2 per week

### ■ HRB150 COMPARATIVE INDUSTRIAL RELATIONS

This unit examines industrial relations processes which operate under a range of social, economic, cultural and political arrangements. Emphasis is placed upon both European and Pacific-rim systems.

**Course:** BS50      **Prerequisite:** HRB131 or HRN 105

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HRB402 PUBLIC PERSONNEL MANAGEMENT

Principles of public sector management; public sector staffing structure; planning; organising/staffing; grievance resolution; reviews; development; personnel management issues; revision.

**Course:** BS50      **Prerequisite:** HRB131 or HRN104

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ HRB403 QUALITY MANAGEMENT

Introduction to the role of quality in the modern organisation; relation between quality management and strategic management as a total management philosophy; international quality programs and implications for Australia; organising for quality.

**Course:** BS50 **Prerequisite:** BSB102 or HRN104  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HRN101 ADVANCED THEORY & COMPARATIVISM

The historical and cultural factors of industrial relations; social theory and industrial relations, explanations of institutional development and the political economy of industrial relations; government intervention in industrial relations and current developments in Australia, the EEC and South East Asia.

**Courses:** BS62, BS83  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HRN104 INTRODUCTION TO MANAGEMENT

The functions and roles of managers; concepts and principles and their practical applications; the key management functions; areas of planning, organising, staffing, directing and controlling; production/operations management and the management of quality; entrepreneurship and business planning; important problems, opportunities and trends facing managers in Australia analysed from the viewpoint of relevant academic disciplines.

**Courses:** BS74, BS78, BS81, ED23  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HRN105 LABOUR-MANAGEMENT RELATIONS

Employee relations; employee and union action; the role of governments and industrial tribunals; alternative methods and pressures to change traditional Australian systems; the Australian system of labour/management relations; systems of regulation in the employment area; negotiating skills; the resources required for mobilising change in this area.

**Courses:** BS78, BS81, ED23  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HRN106 MANAGEMENT, TECHNOLOGY & SOCIAL CHANGE

The development of management theory and an analysis of management within complex organisations. The unit focuses on managers as participants in an organisational dynamic that is both influenced by and influences such factors as the current state of technology, government and community pressures.

**Course:** BS83  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HRN108 PEOPLE IN ORGANISATIONS

The internal operation of organisations and the behaviour of people in them; exploration of a range of theories and models of individual and organisational level influences on group behaviour. This exposure encourages students to critically evaluate such theories and models, and the implications for management behaviour.

**Courses:** BS70, BS74, BS78, BS81, ED23  
**Prerequisite:** HRN104  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HRN112 BUSINESS POLICY

Develops a manager's knowledge, analytical understanding and action-taking competencies. The paradigm adopted is that of strategic management: analyses of stakeholders, environments and

capabilities, strategy formulation, and strategy implementation. Teaching methodologies emphasise the process of management as well as analysis, content and concepts. At the conclusion of this unit, students should understand how and why strategic decisions are made, and be prepared to make them.

**Courses:** BS70, BS81, BS86  
**Prerequisite:** 72 credit points from MBA core or approval of course coordinator  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HRN113 MANAGEMENT FOR ENGINEERS

The staffing function; leadership and motivation principles and their application; time management; stress management; industrial relations systems and issues; personal and organisational communication; managing change; strategic management and the development of full, commercial business plans.

**Course:** ME76  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HRN114 LEGAL & INDUSTRIAL REQUIREMENTS

The industrial relations and legal issues addressed in implementing TQM. These include the Australian industrial system, the requirements for occupational health and safety and the role of trade unions.

**Course:** BS86  
**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ HRN115 CONTEMPORARY ISSUES IN HRM

Postgraduate students need to be familiar with the contemporary issues and the current theoretical and practical developments within their field of specialisation. These matters need to be pursued at a level of intellectual rigour beyond that required for an undergraduate degree. The main objective of this unit is to identify, analyse and report on contemporary issues in HRM. To research information relevant to identified topics. Content may vary according to which issues are current or predictably important in the future. Special expertise of staff, visiting scholars or distinguished HRM professionals may be utilised.

**Courses:** BS62, BS83  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HRN116 HRM CASES

This unit further develops students' capacity to analyse, evaluate and solve business problems and encourages them to develop the facility for independent thought and critical analysis. In this unit students will be required: (a) Examine a HR function in an organisation, and report observations. (b) Relate these observations to relevant theory and recent research. (c) Develop an integrated view of HR, including its functions, processes, stakeholders, and environment. Finally the unit will focus on any conceptual, theoretical, research, or practical material relevant to the cases.

**Courses:** BS62, BS83  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HRN117 INDUSTRIAL RELATIONS & WORK ORGANISATION

This unit will encourage students to develop critical awareness of current debates in the area. It will also develop the students' critical, analytical and intellectual powers at an advanced level. It will connect the social, organisational and legislative aspects of industrial design relation within an analytical framework, and will enhance knowledge of workplace studies. Through this unit students will be



introduced to the social aspects of industrial organisation and industrial relations. Workplace studies are included and associated legislative aspects. Concepts such as the new 'Managerialism'.

Courses: BS62, BS83

Credit Points: 12 Contact Hours: 3 per week

#### ■ HRN118 ADVANCED READINGS IN MANAGEMENT

Examination in detail of advanced theory and issues from chosen disciplinary area. The object is to have students explore the breadth of their discipline in contrast to the more narrow focus of their thesis work. Students select advanced readings in their field and submit a comprehensive criticism and review. This work is carried out in consultation with the supervisor.

Courses: BS62, BS83

Credit Points: 12 Contact Hours: 3 per week

#### ■ HRN119 CURRENT ISSUES IN MANAGEMENT

Students examine in detail advanced theory and issues from their chosen field of study. Such study may include an analysis of the historical developments in the field, interconnections with other fields, current significant issues and practices (including ethics), and advanced methodology and/or statistics relevant to the field. The content may vary according to which issues are significant at the time, according to the special expertise of the staff (including visiting scholars and distinguished business leaders) and according to specific needs from thesis proposals.

Courses: BS62, BS83

Credit Points: 12 Contact Hours: 3 per week

#### ■ HRP100 INTERNATIONAL INDUSTRIAL RELATIONS

The main structures, processes and contexts relevant to industrial relations; the different ways in which industrial relations has developed and operates. The comparative method, Japan, Sweden and Britain as industrial relations models.

Course: BS74

Credit Points: 12 Contact Hours: 3 per week

#### ■ HRP102 HUMAN FACTORS IN QUALITY

Quality: an issue about business and people; leadership for quality improvement; motivation for quality improvement; paradigm shift; business as teamwork; quality improvement and human resources; employee participation strategies; training and education; ergonomics, technology and a human environment; quality of products and services.

Course: BS77

Credit Points: 6 Contact Hours: 3 per week

#### ■ HRP103 INDUSTRIAL RELATIONS STRATEGIES & POLICIES

Examination of policy formation in industrial relations at national and local levels in areas including wage policies, job security, job design, bargaining structure and union matters.

Course: BS74

Credit Points: 12 Contact Hours: 3 per week

#### ■ HRP104 INDUSTRIAL RELATIONS PRACTICES

Industrial relations practices and policies; research techniques for industrial relations issues, case research, preparation and presentation; institutional framework of industrial relations practices in Australia.

Course: BS74

Credit Points: 12 Contact Hours: 3 per week

#### ■ HRP105 INDUSTRIAL RELATIONS PROCESSES

Negotiation practices in industrial law; detailed study of law relating to trade unions and employer organisations; current developments in industrial law.

Course: BS74

Prerequisite: HRP104  
Credit Points: 12 Contact Hours: 3 per week

#### ■ HRP106 INDUSTRIAL RELATIONS & SOCIETY

Economic and political context pertinent to industrial relations; aspects of theories of political economy related to labour and production; issues in political and economic strategies and policies relevant to industrial relations, for example, social welfare, income distribution and unemployment.

Course: BS74

Credit Points: 12 Contact Hours: 4 per week

#### ■ HRP107 INDUSTRIAL RELATIONS THEORY

The resolution and regulation of conflict in work and employment; theories of collective organisation; bipartite and tripartite schema of labour market regulation and workplace process.

Course: BS74

Credit Points: 12 Contact Hours: 3 per week

#### ■ HRP110 HUMAN RESOURCE MANAGEMENT

The importance of human resource management for organisational effectiveness and the quality of work life; human resource management from multiple constituency, functional and strategic perspectives; uses an open systems model to introduce some of the key processes of personnel management at a theoretical and skill level; fosters knowledge, analytical and operational competencies; topics include: human resource management models, HRM and organisational strategy, human resource planning/job analysis, recruitment and selection, training and development, equity and career management.

Course: BS73 Prerequisite: HRN104 or HRP107

Credit Points: 12 Contact Hours: 3 per week

#### ■ HRP111 QUALITY SYSTEMS MANAGEMENT

Quality management principles and systems put a new perspective on management theories and practices; introduction to management theories and concepts; relation to and impact on strategic management of the range of quality issues.

Course: BS77

Credit Points: 12 Contact Hours: 3 per week

#### ■ HRP112 MANAGEMENT OF SERVICE QUALITY

Application of quality management principles to services and processes in service operations and organisations; marketing; differentiation of services from products; implications for management.

Course: BS77

Credit Points: 12 Contact Hours: 3 per week

#### ■ HRX101 INDUSTRIAL RELATIONS & MANAGEMENT

Professionalism in industrial relations; pre-emptive bargaining; enterprise bargaining; alternative strategies; functional specialisations and the division of professional labour.

Course: BS10

Credit Points: 12 Contact Hours: 3 per week

### ■ HRX105 INDUSTRIAL RELATIONS SKILLS 3

Negotiation processes in industrial relations; duties, responsibilities and skills of negotiators; handling grievances at the workplace; award interpretation; local responsibilities.

Course: BS10

Prerequisite: HRX104

Credit Points: 12

Contact Hours: 3 per week

### ■ HRX106 INDUSTRIAL RELATIONS SKILLS 4

Formal advocacy and negotiation; operations within the conciliation and arbitration tribunals; collective bargaining in common law agreements; award creation and variation.

Course: BS10

Prerequisite: HRX105

Credit Points: 12

Contact Hours: 3 per week

### ■ HRX110 WORKPLACE ISSUES

Policies on current industrial relations issues in the workforce. Australian and overseas initiatives.

Course: BS10

Credit Points: 12

Contact Hours: 3 per week

### ■ HRX111 SAFETY & INDUSTRIAL RELATIONS

Current systems and practices in occupational safety and health programs. Industrial relations system in Australia and the management techniques which may be employed to create a good industrial relations climate on a site or in an industry.

Course: CE21

Credit Points: 7

Contact Hours: 2 per week

### ■ HUB002 CONTEMPORARY MORAL PROBLEMS

The central questions of applied ethics and moral philosophy through an analysis of contemporary issues: uses of technology, genetic engineering, nuclear energy, overpopulation, environmentalism, war, terrorism, civil disobedience, pacifism, racism, sexism, abortion, euthanasia, suicide and sexuality.

Course: ED26

Credit Points: 12

Contact Hours: 3 per week

### ■ HUB003 PHILOSOPHY & NURSING 1

A general introduction to philosophical questions and reasoning. Students have the opportunity to examine the ways in which personal beliefs and values impact on the nature of human beings and on nursing practice. Topics include: the nature of philosophy and political philosophy; the concept of personhood; spirituality and caring; critical thinking in nursing practice.

Course: NS48

Credit Points: 8

Contact Hours: 3 per week

### ■ HUB004 PHILOSOPHY & NURSING 2

Exploration of bioethics providing a foundation for the nursing professional in the handling of moral dilemmas intrinsic in the provision of health care. Topics include: introduction to ethics; bioethics in the social context; the process of moral decision making; ethics and professional nursing practice.

Course: NS48

Credit Points: 8

Contact Hours: 3 per week

### ■ HUB005 SOCIAL ETHICS & HUMAN RELATIONSHIPS

Philosophical and pedagogical issues underpinning the human relationships dimension of classroom practice and school cultures (eg. concept of personhood, the nature of love, power, desire, human rights); sociocultural factors and changes generating moral dilemmas in society; case studies of moral issues and moral decision-making; the ethics of teaching con-

troversial issues and matters such as indoctrination and censorship in the context of human relationships education in the Queensland education system.

Course: ED50

Credit Points: 12

Contact Hours: 3 per week

### ■ HUB007 HEALTH & ETHICS

An introduction to ethics within a health care context. It particularly focuses on the role of health care educators exploring the ethical challenges confronting them and the ways in which they may cultivate moral sensitivity as part of community 'well-being'.

Course: ED50

Credit Points: 12

Contact Hours: 3 per week

### ■ HUB111 APPROACHES TO LITERATURE

Introduction to theories and practice of literary criticism and cultural analysis. The unit applies theoretical approaches (including new criticism; structuralism and post-structuralism; Marxist, psychoanalytic and feminist perspectives) to the study of texts chosen from a variety of genres and media.

Course: ED26

Credit Points: 12

Contact Hours: 3 per week

### ■ HUB201 PEOPLE & THE NATURAL ENVIRONMENT 1

The geomorphological systems which are creating the surface of the earth and with which human systems interact; the probable effects of the interaction of human and physical systems.

Course: ED50

Credit Points: 12

Contact Hours: 3 per week

### ■ HUB202 INTRODUCTION TO GEOGRAPHY

The nature and purpose of geography in terms of its conceptual structure and enquiry approaches; technologies, methods, skills used by geographers.

Course: ED50

Credit Points: 12

Contact Hours: 3 per week

### ■ HUB207 ENVIRONMENTAL HAZARDS

The nature of hazard, risk and disaster; origins of hazards; nature of disaster; influences on the perception of risk; disaster prediction, preparation, response and recovery strategies.

Course: ED50

Credit Points: 12

Prerequisite: HUB201  
Contact Hours: 3 per week

### ■ HUB311 THE STUDY OF HISTORY

This unit provides an introduction of some of the key issues inherent in the study of history. It considers the role and importance of history for contemporary society and examines differing theories of history. It also considers the nature of the New History and evaluates the importance of historical studies in the socialisation process.

Course: ED26

Credit Points: 12

Contact Hours: 3 per week

### ■ HUB312 ASIAN STUDIES

The nature of traditional Asian societies, the interface between occidental and oriental cultures both historically and in a contemporary context, and the emergence of modern Asian societies. Specifically designed for secondary school teachers with limited knowledge of Asia and Asian issues.

Course: ED26

Credit Points: 12

Contact Hours: 3 per week

### ■ HUB313 AUSTRALIAN STUDIES

The background to settlement; attitudes and beliefs of early settlers and the extent to which these influenced the development of colonial society; European

civilisation and the Aborigine; the origins of an Australian stereotype and development of an ethos; nationalism and federation, Australia between the wars; Australia since World War II; urbanisation and the rights of the individual.

**Course:** ED26

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB314 INDONESIA: AUSTRALIA'S NEAR NEIGHBOUR

Influence of the physical environment on population densities and land use systems; ethnic groups, historical survey from pre-European times to independence; agricultural systems; religion; mining and manufacturing; politics since independence; problems for the future; the Indonesian language.

**Course:** ED26

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB419 LOTE 2

This unit focuses on furthering students' proficiency in a LOTE using communicative teaching techniques as outlined in the ALL guidelines. The major emphasis of the teaching program, expressed at an holistic level, relates to communication. Learners should be able to compose and comprehend a LOTE in both written and spoken modes in a range of genres and contexts and at a higher level of complexity than LOTE, Level 1. This is done through lectures, workshops, tutorials and language tapes.

**Course:** ED41

**Prerequisite:** HUB418

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB449 LOTE 3

At this level students are able to deal with more complex sociocultural information. In addition, they broaden their target language resource as well as develop an ability to use it; use more complex language structures and broader vocabulary; develop fluency; expand and fine-tune registers, genres, etc. and develop more theoretical/abstract discourse as the need arises in activities related to content.

**Course:** ED41

**Prerequisite:** HUB419

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB600 AUSTRALIAN SOCIETY & CULTURE

Historical, political, economic and cultural information about Australia and Australians; egalitarianism; religion, frontiers and rural Australia; the historical and future role of technology in Australia.

**Courses:** HU20, IF36

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB601 HUMAN IDENTITY & CHANGE

What it means to be human; ways human identities (eg. cultural, sexual, professional) are created and transformed; issues of identity, morality and change confronting human units in their encounters with the demands of contemporary life.

**Courses:** HU20, IF36

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB602 THE HUMANITIES TRADITIONS

Humanities traditions; current debates about the role of humanities in society; adopts a history of ideas approach in considering contributions of major writers from both western and eastern civilisations.

**Courses:** HU20, IF36

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB603 TEXTS & INTERPRETATION

Active analysis of various texts selected from a cross-section of contexts, genres and media; contemporary

methods of textual analysis and critical approaches to cultural studies; processes involved in the coding and decoding of signs; forms of narrative and the structuring of experience; the role of unconscious mental processes in the production and interpretation of texts; textual representations of gender.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB610 APPROACHES TO ASIA/PACIFIC BASIN STUDIES

A general introduction to the history and emerging political economy of the Asia/Pacific region; historical core/periphery structures; the ascent and decline of powerful imperial and new Asian cores such as Japan; systemic and anti-systemic movements and Australia's particular role in this region.

**Courses:** ED50, ED51, HU20, IF36

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB611 INDONESIAN SOCIAL GEOGRAPHY

Indonesia's physical environment, human settlement and land use patterns; an historical profile; ethnic diversity, religious beliefs and political perspectives.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB612 MODERN INDONESIAN STUDIES

An understanding of contemporary Indonesia; regional political and economic influences including ASEAN; domestic politics; demographic issues; Australia-Indonesian relationships.

**Courses:** ED50, ED51, HU20, IF36

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB613 SOCIAL GEOGRAPHY OF THAILAND

A critical understanding of the geography and history of Thailand; its cultural and social diversity; geographical influences; the situation of cultural minorities; traditional agricultural systems; ancient and modern history; religious beliefs and practices.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB614 CONTEMPORARY THAILAND

Geopolitical and economic influences in the Asian region influencing contemporary Thailand; urbanisation and industrialisation; poverty; health and welfare; tourism and international aid.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB615 MODERN CHINA & JAPAN

Historical developments in China and Japan during the nineteenth and twentieth centuries; the sophistication and complexity of Chinese and Japanese societies; historical evidence to examine commonly held stereotypes of China and Japan; evaluates the recent history of the area.

**Courses:** ED50, ED51, HU20, IF36

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB616 MODERN INDIA & SOUTH-EAST ASIA

A comparative study of the national independence struggles in India and Vietnam with some investigation of post-independence societies.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ HUB617 WOMEN, AID & DEVELOPMENT

Challenges existing notions of development; evaluates current models of development and aid in

terms of their implications for women; suggests that real development for women and their dependents requires a woman-centred approach.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB618 ASIAN WOMEN: TRADITION, COLONISATION & REVOLUTION**

Uses case studies to provide a broad analysis of Asian women's experiences of tradition, colonialism and revolution; highlights the linkages between traditional culture, colonialism and revolution; provides an appreciation of both the historical experiences and some of the contemporary concerns of Asian women.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB619 PACIFIC CULTURE CONTACT**

Key concepts including mobility, religion, morality, leadership, civilisation, society, change and continuity; develops an appreciation of culture and sensitivity towards those groups or individuals who do not share a particular cultural heritage; case studies and comparative analysis focus on the people of the Pacific at the time of initial European contact.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB620 THE PACIFIC SINCE 1945**

Analyses the link between culture and history in a post-contact context of change and continuity in the contemporary Pacific; overviews the events since 1945 that are important in the lives of Pacific Island people; presents key concepts including mobility, adaptation, change, tradition, continuity, modernisation, conflict and independence.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB621 NORTH AMERICAN STUDIES**

A comparative approach to the histories of Canada, the United States and Mexico; key themes including patterns of early settlement, the development of political institutions, the treatment of minorities, and the interaction of these three nations up to the present.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB622 LATIN AMERICAN STUDIES**

Uses case studies dealing with Latin American history and political economy from pre-conquest period to the present day; focuses on US/Latin American relations and contemporary systemic/anti-systemic cases such as the national security state doctrines of authoritarian Chile/Argentina and radical Cuba and Nicaragua.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB623 ASIA/PACIFIC POLITICAL STUDIES**

Studies the structural and ideological bases of Asia/Pacific leading countries within a broad world system overview; special emphasis on political models of development and cultural studies; case studies of systemic (eg. Taiwan) and non-systemic models (eg. NPA) are undertaken.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB625 AMERICAN LITERATURE**

This unit concentrates principally on twentieth century American literature in the years preceding World War II and in the post-war construction period to the present. Particular emphasis on major pre-occupations in literature and on the ways in which writers

have responded to, and interpreted, political and social currents in the pre and post World War II periods.

**Courses:** ED50, HU20

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB650 INTRODUCTORY INDONESIAN 1**

An introduction to the development of the macro skills of speaking, listening, reading and writing in the Indonesian language; examines customs and language etiquette and non-verbal communication.

**Courses:** BS50, ED50, ED51, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 4 per week

■ **HUB651 INTRODUCTORY INDONESIAN 2**

Develops macro skills in the Indonesian language; focuses on socio-cultural aspects of Indonesia; analytically studies the Indonesian language.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB641

**Credit Points:** 12      **Contact Hours:** 4 per week

■ **HUB652 INDONESIAN LANGUAGE & CULTURE 1**

Students are expected to: communicate at an elementary level in Indonesian; analytically study the language; study traditional Indonesian literature.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB642

**Credit Points:** 12      **Contact Hours:** 4 per week

■ **HUB653 INDONESIAN LANGUAGE & CULTURE 2**

Develops fluency in communicative activities; traditional and contemporary Indonesian literature.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB643

**Credit Points:** 12      **Contact Hours:** 4 per week

■ **HUB654 INDONESIAN LANGUAGE & CULTURE 3**

Develops a high degree of proficiency in Indonesian; students are expected to understand the complex language structure; Indonesian media sources.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB644

**Credit Points:** 12      **Contact Hours:** 4 per week

■ **HUB655 INDONESIAN LANGUAGE & CULTURE 4**

Develops maximum proficiency in Indonesian; emphasises fine tuning of speaking, listening, reading and writing; studies of Indonesian media sources.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB644

**Credit Points:** 12      **Contact Hours:** 4 per week

■ **HUB647 IN-COUNTRY SUMMER SCHOOL OR EQUIVALENT**

This unit is held in residence at a designated foreign university for four to six weeks of concentrated learning; aims to enhance student's proficiency in the four macro skills; increases students' understanding of the cultural context in which the target language is used.

**Courses:** BS50, ED50, HU20

**Credit Points:** 24

■ **HUB648 IN-COUNTRY SEMESTER OR EQUIVALENT**

Students follow an approved course of study at a designated foreign university for a semester. The unit aims to improve language skills in an immersion situation and at the same time provide the cultural experience of living in the country of the language being studied for an extended period of time.

**Course:** HU20

**Credit Points:** 48

**HUB660 INTRODUCTORY JAPANESE 1**

Students with little or no previous experience in the Japanese language are introduced to the four skills of listening, speaking, reading and writing; hiragana script is studied from the outset and some simple kanji are introduced; appreciation of cultural aspects.

**Courses:** BS50, ED50, ED51, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB661 INTRODUCTORY JAPANESE 2**

Develops the four skills of listening, speaking, reading and writing using a communicative approach; katakana is introduced; students read controlled material incorporating hiragana, katakana and an increasing number of kanji; cultural issues are integrated with relevant language situations.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB660

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB662 JAPANESE LANGUAGE & CULTURE 1**

This unit is for students who have studied Japanese for four to five years at secondary school; consolidates and further develops the four skills of listening, speaking, reading and writing through an integrated approach; cultural aspects in language situations.

**Courses:** BS50, ED50, ED51, HU20, IF36

**Prerequisite:** Year 12 Japanese or equivalent

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB663 JAPANESE LANGUAGE & CULTURE 2**

Consolidates and develops listening, speaking, reading and writing skills through an integrated approach; students read material written in hiragana, katakana and an increasing number of kanji; cultural aspects are incorporated within the relevant language situations.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB662

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB664 JAPANESE LANGUAGE & CULTURE 3**

An intermediate level unit aiming to impart an understanding of the values stipulated for Japanese culture and society; enhances students' language skills.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB663

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB665 JAPANESE LANGUAGE & CULTURE 4**

Continues the theme of understanding the values stipulated for Japanese culture and society; enhances students' language skills.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB664

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB666 JAPANESE LANGUAGE & CULTURE 5**

Focuses on the Japanese media; extends skills in listening, speaking, reading and writing to an advanced level by exposure to natural language.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB665

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB667 JAPANESE LANGUAGE & CULTURE 6**

Focuses on the media; extends students' linguistic skills to a level where they can access authentic media resources, express opinions and discuss issues.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB665

**Credit Points:** 12

**Contact Hours:** 4 per week

**HUB670 INTRODUCTORY FRENCH 1**

Designed for students who have had little or no previous experience of French; develops a basis for further language acquisition and stresses oral/aural skills with some introduction to reading comprehension and writing in French.

**Courses:** BS50, ED50, ED51, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB671 INTRODUCTORY FRENCH 2**

Develops a range of language skills; stresses oral/aural skills; extends reading comprehension and writing in French.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB670

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB672 FRENCH LANGUAGE & CULTURE 1**

Designed to meet the needs of students who have completed Year 12 French (or equivalent), focuses on speaking, listening and reading skills.

**Courses:** BS50, ED50, ED51, HU20, IF36

**Prerequisite:** Year 12 French or equivalent

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB673 FRENCH LANGUAGE & CULTURE 2**

Attention is paid to writing skills; emphasis on speaking, listening and to a lesser extent reading; aims to help students communicate orally with ease and confidence before embarking on a more sustained study of written French.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB672

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB674 FRENCH LANGUAGE & CULTURE 3**

Further develops the four macro skills. Study of short stories from France and other French speaking places (Quebec, Pacific Islands, West Indies).

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB673

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB675 FRENCH LANGUAGE & CULTURE 4**

Equips students to debate issues or discuss texts, visual and written using verbal and non-verbal means; attention is paid to the four macro skills; the French media and how news is constructed in France.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB674

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB676 FRENCH LANGUAGE & CULTURE 5**

Students are introduced to modern French theatre; continues the development of the four macro skills.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB675

**Credit Points:** 12      **Contact Hours:** 4 per week

**HUB677 FRENCH LANGUAGE & CULTURE 6**

Introduces the works of selected French writers; two hours a week are spent on a study of French for academic purposes.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB675

**Credit Points:** 12      **Contact Hours:** 4 per week

■ **HUB680 APPROACHES TO AUSTRALIAN STUDIES**

Introduces the Australian Studies major; focusses on cultural themes within Australian history; includes an examination of the shock felt by pre-1850s immigrants, racial conflict and naturalisation processes.

Courses: ED50, HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

■ **HUB682 SOCIAL MOVEMENTS IN AUSTRALIA**

New social movements in Australia since the 1960s; includes green, women's, peace, Aboriginal and Third World development movements; comparison with overseas and old social movements.

Courses: ED50, HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

■ **HUB683 AUSTRALIAN GEOGRAPHICAL STUDIES**

Expands the geographical understanding of students into the cultural area, enabling them to appreciate the significance and interrelationships of issues of people, land, resources, energy and technology.

Courses: ED50, HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

■ **HUB685 RESOURCES, PLANNING & DEVELOPMENT**

This unit considers the various development options open to Australia. Attention is paid to Australia's economic history and current economic structures.

Courses: HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

■ **HUB686 INTRODUCTION TO POLITICS: AN AUSTRALIAN PERSPECTIVE**

The institutional and ideological bases of political life in a democratic society such as Australia; examines ways in which political traditions, political parties, government and non-government organisations interact to make decisions.

Courses: ED50, HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

■ **HUB687 CONTEMPORARY MORAL PROBLEMS**

Introduction to applied ethics and moral philosophy through an analysis of a range of contemporary issues within an Australian context, eg. uses of technology, genetic engineering, nuclear energy, overpopulation, environmentalism, war, terrorism, civil disobedience, pacifism, racism, sexism, abortion, euthanasia, suicide and sexuality.

Courses: HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

■ **HUB690 THEMES IN AUSTRALIAN HISTORY**

Covers historical and cultural material on Australian mythologies and historiographies; European and Aboriginal understandings of the land; Aboriginal mapping and art; the construction and importance of cities; ways in which notions such as motherhood were enlisted in nationalism.

Courses: ED50, HU20, IF36

Credit points: 12 Contact Hours: 3 per week

■ **HUB691 WOMEN'S PAST - WOMEN'S HISTORY TO FEMINIST HISTORIOGRAPHY**

Challenges a masculine version of history; considers the historiographical debate on the development of women's history in the Australian context; explores a range of issues including case studies of women's

issues and experiences; encourages the process of documenting women's history via testimony.

Courses: ED50, HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

■ **HUB692 CONSPIRACY & DISSENT IN AUSTRALIAN HISTORY**

Uses case studies to reflect conspiracies as well as protest movements in nineteenth and twentieth century Australia; includes nineteenth century land grab conspiracies; Aboriginal resistance; anti-war movements; the Petrov affair; the 1975 dismissal.

Courses: ED50, HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

■ **HUB693 AUSTRALIAN RACE RELATIONS**

Race relations within Australia before and after British settlement and locates material within a comparative international framework. Theories of race, trade routes, racial violence and resistance.

Courses: ED50, HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

■ **HUB700 ABORIGINAL & TORRES STRAIT ISLANDER CULTURE STUDIES**

An appreciation of the two distinct indigenous cultures of Australia; how external forces to Aboriginal and Torres Strait Islander cultures caused social, economic and political changes; traditional family life and organisation.

Courses: ED50, HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

■ **HUB701 ABORIGINAL & TORRES STRAIT ISLANDER LITERATURE**

Despite the fact that it represents the indigenous culture of Australia, the oral tradition of Aborigines and Torres Strait Islanders has only recently begun to be appreciated. By examining this tradition, its continuation to the present day and its transformation into published texts, this unit seeks to open the eyes of students to a different world view.

Courses: ED50, HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

■ **HUB702 THE AUSTRALIAN DREAMING: THE INDIGENOUS CONSTRUCTION**

A philosophical overview of Aboriginal and Torres Strait Islander culture; draws upon a variety of conceptual approaches; examines theories which underpin indigenous constructions of reality.

Courses: HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

■ **HUB703 POLITICS & POLITICAL CULTURE IN INDIGENOUS AUSTRALIA**

Addresses the issues underlying the multifaceted world of indigenous politics; land rights; language rights; health; education; fishing rights and heritage.

Courses: HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

■ **HUB710 AUSTRALIAN LITERARY STUDIES**

A critical appreciation of various texts from Australia's literary tradition; considers the impact of social values, political and artistic movements upon literature production and genres; the dichotomy of mainstream and marginalised writing in various groups and periods of Australia's cultural traditions.

Courses: ED50, HU20, IF36

Credit Points: 12 Contact Hours: 3 per week

### ■ HUB711 AUSTRALIAN WOMEN'S WRITING

The literary contribution of Australian women writers from the nineteenth and twentieth centuries to Australian culture and society; focuses on a number of significant texts that raise crucial issues in their representation of women's lives and identities.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HUB712 AUSTRALIAN CHILDREN'S & ADOLESCENT FICTION

Children's and adolescent novels within the cultural context of nineteenth and twentieth century Australia; focuses on textual analysis of major generic types; considers issues such as race, gender, class and regionalism in fiction for young Australians.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HUB720 APPROACHES TO EUROPEAN STUDIES

A broad introduction to the major studies sequence in European studies; uses historical and literary perspectives to highlight major themes in the development of European society and culture.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HUB721 THE CLASSICAL WORLD

The emergence and development of European society from earliest times to 500 AD; in alternate semesters it examines the major political, social and economic trends in classical Greek or Roman society.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HUB722 FOUNDATIONS OF MODERN EUROPE

The formation of modern Europe from the late Middle Ages to the end of the nineteenth century; the emergence of secularism and the rise of nation states.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HUB723 EUROPE IN THE TWENTIETH CENTURY

Considers traumatic events of the twentieth century; emphasises significant trends in political, economic and social changes; examines the implications of the momentous changes which have taken place in Europe over the last few years.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HUB724 NINETEENTH CENTURY ENGLISH LITERATURE & CULTURE

Focuses on two major literary genres: the novel and poetry; their evolution and variety in a time of profound economic, political and social change in England between 1790 and 1880; examines the variety of response of a number of literary artists to these changes and the ways narrative and verse forms were adapted and evolved.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HUB725 TWENTIETH CENTURY ENGLISH LITERATURE & CULTURE

Critical analysis of key British literary texts of the twentieth century (prose, poetry, drama); the theoretical and cultural movements that underpin them.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HUB726 EUROPEAN LITERATURE & SOCIAL CHANGE

Uses a broadly defined European perspective to explore how literary texts respond to, influence and are in turn influenced by social and cultural forces; set texts are explored from a range of thematic perspectives: industrialisation and the impact of new technologies, war and civil unrest, political power and citizenship, colonialism and post-colonialism.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HUB727 EUROPEAN LITERATURE & IDENTITY

Explores selected European literary texts from different periods and regions with a focus on identity e.g. gender, individual development, sexual and social relations, normality and abnormality, crime and the problems of evil, imagination and fantasy.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HUB728 POPULAR LITERATURE

Explores the psychological, political and ideological functions of popular literature by studying texts from different popular genres (e.g. romance, crime fiction; spy thrillers; fantasy; science fiction; family sagas; horror; comics); methods of analysing the historical development of generic forms relating to the varying social contexts in which they are produced.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HUB729 SHAKESPEARE IN THE MODERN WORLD

Shakespeare is examined both in his own time and the present to analyse the dominance of this cultural icon; emphasises recent theoretical and performance strategies in Shakespearian genre studies.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HUB730 WOMEN'S WRITING & REPRESENTATION

Examines ways women have been represented in literary and non-literary texts; identifies cultural contexts in which women write and are represented; examines nineteenth and twentieth century texts by European writers by and about women.

**Courses:** ED50, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ HUB735 INTRODUCTORY GERMAN 1

An introductory unit in the German language for students with little or no previous knowledge of German; equips students with some of the basic communication skills for a variety of everyday situations.

**Courses:** BS50, ED50, ED51, HU20, IF36

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ HUB736 INTRODUCTORY GERMAN 2

An intensive introductory unit in the German language; develops basic communication skills.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB735

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ HUB737 GERMAN LANGUAGE & CULTURE 1

Designed for students who have completed Year 12 German or its equivalent; consolidates the four language skills of reading, writing, listening and speak-

ing; introduces students to a selection of post-war literature from German-speaking countries.

**Courses:** BS50, ED50, ED51, HU20, IF36

**Prerequisite:** Year 12 German or equivalent

**Credit points:** 12      **Contact Hours:** 4 per week

■ **HUB738 GERMAN LANGUAGE & CULTURE 2**

Continues the consolidation of the four macro skills; aims to further cultural awareness through a study of some examples of contemporary German literature from East and West Germany.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB737

**Credit Point:** 12      **Contact Hours:** 4 per week

■ **HUB739 GERMAN LANGUAGE & CULTURE 3**

Develops linguistic competence in the German language to a higher level; equips students with the language skills necessary for more demanding linguistic interactions and situations; an introduction to a major period in the development of German culture through a study of the German enlightenment and classical and romantic German texts.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB738

**Credit Points:** 12      **Contact Hours:** 4 per week

■ **HUB740 GERMAN LANGUAGE & CULTURE 4**

Develops linguistic competence in the German language to a higher level; equips students with the language skills necessary for more demanding linguistic interactions; introduction to the major cultural traditions of the nineteenth century through a study of a selection of nineteenth century texts.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB739

**Credit Points:** 12      **Contact Hours:** 4 per week

■ **HUB741 GERMAN LANGUAGE & CULTURE 5**

Develops linguistic competence in the German language to a more advanced level by extending students' vocabulary and range of registers and expressions; introduces the culture of modernity through the literary movements of modernism, expressionism and Viennese fin de siècle and the avant-garde.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB740

**Credit Points:** 12      **Contact Hours:** 4 per week

■ **HUB742 GERMAN LANGUAGE & CULTURE 6**

Develops linguistic competence in the German language to a more advanced level necessary for dealing with more complex linguistic interactions and texts; provides a survey of post-war East and West German literature and a discussion of the problems of writing after Auschwitz and under the censorship.

**Courses:** BS50, ED50, ED51, HU20

**Prerequisite:** HUB740

**Credit Points:** 12      **Contact Hours:** 4 per week

■ **HUB750 UNDERSTANDING ETHICS**

Introduces students to the theory and practice of moral decision making; covers questions such as 'Why be moral?' 'What is the good or the right?' and 'How do we make moral decisions?'; questions are related to current practical ethical dilemmas.

**Courses:** HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB751 PUBLIC & PROFESSIONAL ETHICS**

The ethical dimensions of public and professional life; the ethical rights and responsibilities of the individual citizen and the State within a liberal democracy; the ethical responsibilities of institutional and professional agencies and the roles and ethical responsibilities of individual citizens in such agencies.

**Courses:** HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB752 THE JUST SOCIETY**

Justice and concepts such as equity in various ethical and political traditions are applied to recent policy debates about affirmative action, the criminal justice system, political practice, health and the environment.

**Courses:** HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB753 ETHICAL DECISION-MAKING**

The ways in which various decision-making practices can be morally grounded; the practical value of such procedures for human transformation and emancipation; the ways in which decision-making practices either sustain or subvert moral communities.

**Courses:** HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB754 FEMINISM & ETHICS**

Ethics is one of the major areas of philosophy. It has been transformed recently by the feminist critique of traditional ethics in conventional notions of masculinity and analytical rationality, and by the development of applied ethics, notably bioethics.

**Courses:** HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB755 VULNERABLE IDENTITIES**

Vulnerability and the experiences of persons who are vulnerable due to exploitation, abandonment, confusion or suffering and other unethical practices; ways of relating with the vulnerable; students develop a richer appreciation of others as well as themselves.

**Courses:** HU20, IF36

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB760 APPROACHES TO FEMINIST STUDIES**

Introduces a broad spectrum of issues related to feminist studies and to the major theoretical debates about gender in fields including literature, history, psychology, philosophy, sociology and ethics.

**Course:** HU20

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB771 POLITICAL IDEOLOGIES**

A study of the political spectrum of ideologies and their intellectual foundations; the intellectual origins and nature of contemporary ideologies such as feminism, racism, and the green movement.

**Course:** HU20

**Credit Points:** 12      **Contact Hours:** 3 per week

■ **HUB800 POLITICS & MARKETS**

Introduces major debates in political economy about mixed economy and balance between collective and individual provision; theories of production and consumption, modes of production and regulation, studies of public intervention.

**Course:** HU20

**Credit Points:** 12      **Contact Hours:** 3 per week



**■ HUB801 POLITICS & CONSUMPTION**

Forms and patterns of consumption of market and social goods, income distribution and measures of quality and level of living; concepts of social wage, theories of public revenue and organisation of public services.

Course: HU20

Credit Points: 12 Contact Hours: 3 per week

**■ HUB802 POLITICS & PRODUCTION**

Political economy of production; form of economic calculation and theories of value, profit and interest; ownership and control of production in market and non-market situations.

Course: HU20

Credit Points: 12 Contact Hours: 3 per week

**■ HUB803 PATTERNS OF REGULATION**

Examination of regulatory strategies; political economy of economic and social compromises in advanced countries; strategies of regulation in domestic economies; case studies of media, public health, urban development and transport.

Course: HU20

Credit Points: 12 Contact Hours: 3 per week

**■ HUP001 ETHICS & HUMAN RELATIONSHIPS EDUCATION**

Philosophical approaches to human relationships; moral philosophy and education; development of an integrated and clearly articulated agreement for a philosophy of human relationship education.

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

**■ HUP002 PUBLIC SECTOR ETHICS**

Exploration of conceptual and theoretical issues; practical dilemmas and strategies for institutionalising ethics in the public sector.

Course: BS83

Credit Points: 12 Contact Hours: 3 per week

**■ HUP003 ETHICS: THEORY & PRACTICE**

The theory and practice of moral decision-making; current ethical issues.

Course: BS30

Credit Points: 12 Contact Hours: 3 per week

**■ HUP004 HEALTH CARE ETHICS & BIOETHICS**

Bioethics in the social context; the process of moral decision making; ethics and professional nursing practice.

Course: BS30

Credit Points: 12 Contact Hours: 3 per week

**■ IFB880 PROJECT**

Students undertake a project requiring research, investigation or design of some topic or problem of interest to the profession.

Courses: IF51, IF52

Prerequisite: Successful completion of units totalling not less than 120 hours of weekly contact time

Credit Points: 24 Contact Hours: 2 per week

**■ IFN001 ADVANCED INFORMATION RETRIEVAL SKILLS**

This unit provides postgraduate research students with the skills to implement a thorough literature search in their research area and to set up a personal system for managing the references collected. The seven modules which form this unit include: using the QUT libraries; indexing and abstracting services; electronic information retrieval; developing a current

awareness strategy; thesis writing; personal file management; evaluating information.

Courses: BN73, BN78, PS69, SC60, SC80

Credit Points: 4 Contact Hours: 1 per week

**■ IFP222 PROJECT**

This unit provides students with the opportunity to gain insight and improve their understanding of quality management practices through the study of workplace quality related problems. Students are given assistance to develop their capacity to apply ideas and knowledge gained during the course and to improve their communication and writing skills in furnishing a detailed project report.

Course: BS77

Credit Points: 12 Contact Hours: 3 per week

**■ ISB180 COMPUTER APPLICATIONS**

Application of technologies in a teaching context; the use of writing and publishing software; graphics design software; numerical software tools; personal and project management tools; communications technologies and computer peripherals used in the production of computer-generated materials.

Courses: CN31, CN32, CN33

Credit Points: 4 Contact Hours: 2 per week

**■ ISB183 INTRODUCTION TO COMPUTERS IN PLANNING**

The use of computers in planning. Overview of computers; problems and advantages of computer use; hands on experience in using QUT's computer facilities, particularly PCs; gaining access, file structures, information storage and retrieval, editing and related utility functions; flow-charting and programming logic. Simple programming exercises. Spreadsheets and databases. Geographical information systems. Word processing on microcomputers.

Course: PS67

Credit Points: 4 Contact Hours: 1 per week

**■ ISB382 MICROCOMPUTER APPLICATIONS**

Commercial microcomputer systems as they apply to science; includes an introduction to three major microcomputer applications; the design and implementation of spreadsheet models and creation of reusable templates; the use of a database management system (DBMS) including design of data files, creation of data views and reports; an introduction to problem definition, solution design and modular programming in connection with the DBMS; understanding the basic capabilities of word processing packages and their applications.

Courses: LS36, PU42, PU44, PU45

Credit Points: 8 Contact Hours: 3 per week

**■ ISB385 MICROCOMPUTER SOFTWARE APPLICATIONS**

Provides a basic understanding of commercial microcomputer systems as they relate to applied science. It includes an introduction to three major microcomputer applications; the design and implementation of spreadsheet models and creation of reusable templates; the use of a database management system (DBMS) including design of data files, creation of data views and reports; an introduction to problem definition, solution design and modular programming in conjunction with the DBMS; and an understanding of the basic capabilities of word processing packages and their applications.

Course: OP42

Credit Points: 4 Contact Hours: 2 per week

### ■ ISB393 COMPUTER BASED INFORMATION SYSTEMS

Introduces engineering students to commercial computer applications: systems concepts, file management and database systems. As practical work, the combination of database/spreadsheet package VP-Planner has been selected.

**Course:** EE44, ME45

**Pre/Co-requisites:** CSB191, CSB291

**Credit Points:** 4      **Contact Hours:** 2 per week

### ■ ISB863 DATABASE THEORY & TECHNIQUES

Logical and physical models of information systems; characteristics; use of a structured query language to query existing curriculum databases and construct new ones; the sociological implications of the utilisation of public and private databases.

**Course:** ED50

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ISB865 INFORMATION SYSTEM MODELLING

Modelling of information systems; relational systems; fact oriented approaches; conceptual schema design.

**Course:** ED50

**Pre/Co-requisite:** ISB863

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ISB892 BUSINESS COMPUTING

Provides business students with a practical understanding of computers as used in various business environments; the theory of hardware, software, types of processing and data storage methods. Students gain a thorough understanding of the role of computing in business, the efficient design and implementation of microcomputer software solutions (wordprocessing, spreadsheets and databases) to specific business problems, and an understanding of the implications of computers for business in terms of security, privacy, legal issues and current developments.

**Courses:** AA21, BS50, ED50, IF31, PU48

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ ISN100 INFORMATION SYSTEMS 1

Advances in information system development approaches and techniques. It examines the theoretical basis underlying current approaches to decision support. A special focus is on the impact on information systems development of increased user involvement.

**Courses:** CS36, CS55, IS50, IS61

**Prerequisite:** ITB222

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ISN110 FORMAL SYSTEMS SPECIFICATION

The description of information systems by means of formal languages; the concepts of formal specification, compared to informal specification languages such as structured English; how to formally specify a system; how to prove properties of that system, how to develop an executable implementation of the system and how to prove the equivalence of the two.

**Courses:** IS50, IS61

**Prerequisite:** ITB232

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ISN130 OBJECT-ORIENTED SYSTEMS

Object-oriented systems as an alternative to traditional procedurally based systems; looks at their benefits and weaknesses, including key concepts of data abstraction and encapsulation and the techniques of inheritance, polymorphism and genericity. Students learn to identify and design object classes. Builds competence in selection of strategies appropriate to

improved systems design leading to lower long-term maintenance costs.

**Courses:** IS50, IS61

**Credit Points:** 12

**Prerequisite:** ITB224

**Contact Hours:** 3 per week

### ■ ISN160 KNOWLEDGE-BASED SYSTEMS

This unit assumes a background in conventional systems concepts, programming and database, and an exposure to fundamental expert systems concepts. It explores four major themes in knowledge-based systems: (a) conceptual: problem selection and structure, inference and knowledge representation; (b) technical: declarative and functional programming; (c) pragmatic: improving the yield from existing information bases; and (d) methodological: questions associated with the definition, design and control of knowledge-based systems.

**Courses:** IS50, IS61

**Prerequisites:** ISN110, ITB243 (or equivalent)

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ISN170 SPECIAL STUDIES

Students are offered the opportunity to study specific topics which are not dealt with elsewhere in the course and which are seen at the time of offering to be significant to business information systems. It takes account of the very dynamic nature of the information systems field in allowing treatment of newly emerged topic areas. Use of specialist knowledge and skills among the information systems staff at the time.

**Courses:** IS50, IS61

**Prerequisite:** See School announcements.

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ISN180 HUMAN COMPUTER INTERFACE

The most significant issues and activities of the Human Computer Interface (HCI) and software design; includes the perceptual basis of the presentation of visual information, the basic aspects of visual information processing and facets of representation of knowledge; the development of expert systems and how they change the nature of interaction between person and machine and reviews features of interactions with systems, eg. keyboards through to advanced input modes. On completion, students should be able to apply principles from the current research in different aspects of HCI interactions and will be aware of future developments in this field.

**Course:** IS50

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ISN190 COMPARATIVE STUDY OF INFORMATION AGENCIES

Philosophies and modes of information provision which apply in different cultures and countries; comparative methods and studies and an investigation of sources relating to information agencies: including both libraries and computer-based information agencies worldwide. Students review and analyse examples of existing studies, services offered by different types of agencies and their community impact, national and international standards of services, the structure of the information professions, professional associations, literature, ethics and legal responsibilities in relation to national information policies and emerging trends in information provision.

**Course:** IS50

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ISN200 MAJOR ISSUES IN INFORMATION TECHNOLOGY

Explores aspects of Information Technology of great potential significance to Information Systems professionals, such as the status of information system

standards, the extent of integration of computer technology and data communications technology, as well as emerging social and ethical considerations with regard to information technology.

**Course:** IS50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ISN201 RESEARCH METHODOLOGY

Topics of research by agreement between the student and a faculty staff member acting as a project supervisor. Students must attend lectures/seminars of approximately one hour every two weeks (on average). They will also engage in literature search and generally other design aspects of their research project.

**Courses:** IS50, IS61

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ISN210 AUTOMATED SYSTEMS MANAGEMENT

Identification of management challenges entailed by automated systems; the development of system specifications and Request for Proposal; evaluation of proposals; contracts and legal responsibilities; staff training and development; the effect on management structure of centralised versus distributed systems and of upgrading automated systems.

**Course:** IS50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ISN211 HONOURS PROJECT

A continuation and completion of the research project initiated for ISN201.

**Course:** IS61

**Credit Points:** 12

#### ■ ISN220 BUSINESS COMPETITOR INTELLIGENCE

The use of competitor intelligence to enhance effectiveness of business strategies and the various methodologies and analytical techniques for obtaining and using competitor intelligence in support of strategic planning; competitor intelligence and strategic planning; the inter-relationship between intelligence and planning in corporate decision making; the organisation framework; establishing an intelligence collection network; analytical techniques; applications in different strategic environments; and sources and types of competitor intelligence.

**Course:** IS50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ISN240 CLASSIFICATION

The theory and practice of the classification of knowledge and its role in the advancement of knowledge; selected schemes and their applications, research into automated classification and creation of schemes for special situations will be considered.

**Course:** IS50

**Prerequisite:** ITP312

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ISN250 THE INFORMATION INDUSTRIES

Information industries and policies; the social and legal issues involved in the expansion of these industries; the information industries in the information economy, public policy, Queensland as an information economy; information industry development abroad, information law, intellectual property, privacy/freedom of information computer crime transborder data flow/sovereignty issues, social justice and equity issues; the information society.

**Course:** IS50

**Prerequisite:** ITB330

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ISN260 EVALUATION OF INFORMATION SERVICES & ORGANISATIONS

Techniques applicable to the evaluation of libraries and other information centres; including the statistics collected, their usefulness and the means used to collect them as well as non-statistical methods and their value. Previous research will be studied to determine applicable methods and isolate trends, especially those which may have implications for the future.

**Course:** IS50

**Prerequisite:** ISN201

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ISN270 SOCIAL IMPACTS OF INFORMATION TECHNOLOGY

The significant issues in the realm of speculative information systems and technologies; scenarios of information rich/poor interactions within and without organisational environments are examined. Emerging issues in information technology and the implications for information systems and organisational structures are defined and predicted. A compact synthesis for an organisational system, incorporating environmental and societal integration is considered.

**Course:** IS50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ISN280 ORGANISATIONS, SYSTEMS & INFORMATION

The structure of organisations, systems and information; theoretical aspects of environmental and managerial influences; socio-technical areas and system failures; strategies to deal with system failures; the role of information in organisations and its symbiotic relationship; constraints and alternatives.

**Course:** IS50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ISN290 CURRENT ADVANCES IN DATABASE TECHNOLOGY

Current research activities and development in the area of the next generation database systems; a mixture of research papers and lecture notes on existing systems; practical and theoretical methodologies.

**Course:** IS50

**Prerequisite:** knowledge of database systems.

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ISN300 INFORMATION SYSTEMS 2

An advanced treatment of contemporary issues of information system development, particularly the development of corporate information systems.

**Courses:** CS36, CS55

**Prerequisite:** ISN100

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ISN301 MINOR PROJECT

#### ■ ISN302 MINOR PROJECT

#### ■ ISN303 MINOR PROJECT

#### ■ ISN304 MINOR PROJECT

Students undertake a number of minor projects to pursue specialised areas of interest, or broaden their knowledge in areas of relevance to their employment. Topics are to be decided by agreement between the student and a Faculty staff supervisor.

**Course:** IS50

**Credit Points:** 12

#### ■ ISN320 DISTRIBUTED DATABASE SYSTEMS

Distributed DBMS architectures, data replication and fragmentation; query decomposition and optimisation; transaction management in distributed settings;

distributed concurrency control; recovery and multi-databases.

**Courses:** IS50, IS61      **Prerequisite:** ITB232  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ISN380 INFORMATION SYSTEMS & QUALITY

The application of information systems knowledge to enhance quality management; application of quality management principles in the development of computer-based information systems.

**Course:** BS86  
**Credit Points:** 6      **Contact Hours:** 3 per week

#### ■ ISN401 MAJOR PROJECT

Students may undertake a major project as an alternative to minor projects to pursue in depth a topic of interest in keeping with the course objectives. Project topics are to be determined after discussion between the student and a supervisor from the faculty staff.

**Course:** IS50  
**Prerequisite:** Completion of at least 50 per cent of the Master of Information Technology.  
**Credit Points:** 48

#### ■ ISN500 DISSERTATION

The undertaking and reporting of a significant piece of research work examining some aspect of concepts and principles dealt with in the coursework components of the program. The research topic will be agreed on following discussions between the student and a supervisor from the faculty staff. Each student will present a seminar on their dissertation topic.

**Course:** IS50  
**Prerequisite:** Completion of at least 50 per cent of the Master of Information Technology.  
**Credit Points:** 96

#### ■ ISP380 INFORMATION SYSTEMS & QUALITY

Methodologies and techniques for achieving a high level of quality in business information systems, relating these to broader principles of quality control and quality assurance. Areas include: types of information systems; information as a resource; past and current approaches; decision making based on information systems; analysis and design; prototype concepts; information system modelling.

**Course:** BS77  
**Credit Points:** 6      **Contact Hours:** 3 per week

#### ■ ISP811 BOOKS & PUBLISHING

Artistic and historical evolution of the book; judgment of book format through an understanding of production processes; techniques of printing; elements of the book; complexities of the publishing business.

**Course:** ED25  
**Credit Points:** 12

#### ■ ITB001 COMPUTING PRACTICE (NOTE) 1

Designed to coordinate the practical aspects of the lecture material presented so that students both develop essential practical skills and benefit from cross-fertilisation of the individual units.

**Course:** BN10  
**Credit Points:** 6      **Contact Hours:** 1 per week

#### ■ ITB002 COMPUTING PRACTICE (NOTE) 2

See ITB002.  
**Course:** BN10  
**Credit Points:** 6      **Contact Hours:** 1 per week

#### ■ ITB101 LABORATORY 1 (COMPUTING ENVIRONMENTS)

Professionals in Information Technology must have an ability to work in a variety of computing environ-

ments and to utilise general application packages. This unit provides students with a practical experience in a range of computing environments from personal computers to mainframes. Students are encouraged to learn to work independently, adhere to appropriate standards, make use of relevant documentation and document their work in the form of structured technical reports. Students learn to connect to services directly and via networks, to use the basic functions of typical operating systems including file and directory manipulation, customisation of environments and the principles of backing-up and recovery. Students will use the basic functions of existing databases, wordprocessors and spreadsheets.

**Courses:** IF23, IF33, IF52, IT20  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB102 LABORATORY 2 (COMPUTER APPLICATIONS)

Professionals in information technology must have an ability to design and implement computer solutions for various applications using a variety of computing languages, systems and environments. This unit will provide students with the experience of designing, implementing and testing of software systems. This unit provides students with a practical experience in the design, implementation and testing of software systems. Emphasis will be on design documentation, user documentation, programming style, test documentation, the use of diagnostic aids, software monitors, analysis of results and test coverage, and the oral and written presentation of results.

**Courses:** IF23, IF33, IF52, IT20  
**Prerequisite:** ITB101  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB210 FORMAL REPRESENTATION

This unit provides a foundation with regard to specification and implementation of information systems. As such, it gives an introduction to topics built on in subsequent units, notably those in database and systems analysis and design. Topics covered include models; facts; sets; relations; relational algebra; proof strategies and techniques; SQL; facts and relations; fact-based analysis; defining the database; referential integrity; knowledge; schemas; state transitions.

**Courses:** IF23, IF33, IF52, IT20  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB220 DATABASE DESIGN

Conceptual design of a database and its implementation in either relational, network or hierarchical logical file design; network and hierarchical database systems in detail; additional relational system techniques.

**Courses:** IF33, IF52, IT20  
**Prerequisite:** ITB210  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB221 LABORATORY 3 (COMMERCIAL PROGRAMMING)

This unit aims to extend student skills in program design and implementation by applying them to typical commercial problems through a widely used third generation language. The task-oriented approach supplies a vehicle for reinforcing students' knowledge of elementary design and planning theory.

**Courses:** BS50, IF33, IS28, IT20  
**Prerequisite:** ITB222  
**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB222 SYSTEMS ANALYSIS & DESIGN 1

Develops basic systems development skills by teaching a methodology and techniques of systems analysis

and design. This unit gives an introduction to all the phases of the classical systems development life cycle. The aim is to give students a balanced overview of the process of analysing and designing information systems, while ensuring that students develop the necessary skills to apply the major techniques to simple problems. Emphasis is placed on the practical application of techniques to real-world problems.

**Courses:** BS50, IT20

**Prerequisites:** BSB103, ITB210

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB223 LABORATORY 4 (4GL Programming)

Introduces the role of application generators and Fourth Generation Language technology in developing information systems. As well as using these tools to create programs from detailed specifications, students will develop standards for comparing the applicability of one environment with another.

**Courses:** IF33, IT20

**Prerequisite:** ITB220

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB224 SYSTEMS ANALYSIS & DESIGN 2

Expands upon the systems analysis and design techniques introduced in Systems Analysis and Design 1. Also, alternative approaches practiced in industry and other topics of importance are introduced. The aim is to provide students, who already have an overview of the unit, with an in-depth knowledge of key areas of systems analysis and design. Emphasis is placed on the practical application of techniques to problems.

**Courses:** IF33, IT20

**Prerequisite:** ITB222

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB230 PROJECT

The ability to apply knowledge and skills to real-life situations is essential for information systems professionals. A six-month project, under academic supervision, is considered useful in developing students' ability to apply their knowledge and skills.

**Courses:** IF33, IT20

**Prerequisites:** Successful completion of at least 72 credit points from the Information Systems major.

**Credit Points:** 12

#### ■ ITB231 APPLICATIONS DEVELOPMENT

This unit synthesises techniques and theory learned in earlier units by providing an opportunity for students to integrate these skills through team-based development of a major online system processing a database. The unit requires students to re-examine major design, programming and planning issues within the context of a 4GL software environment.

**Courses:** IT20

**Prerequisites:** ITB223, ITB224

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB232 DATABASE MANAGEMENT

The functions of database management systems; query optimisation; concurrency control; transaction processing; crash recovery; security and integrity; the fundamentals of physical file organisation.

**Courses:** IF33, IT20

**Prerequisites:** ITB220, ITB221

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB240 PROJECT

The ability to apply knowledge and skills to real-life situations is essential for information systems professionals. A six-month project, under academic supervision, is considered useful in developing students' ability to apply their knowledge and skills.

**Courses:** IT20

**Prerequisites:** Successful completion of at least 72 credit points from the Information Systems major.

**Credit Points:** 12

#### ■ ITB241 INFORMATION SYSTEMS MANAGEMENT

Information systems practitioners have responsibility for the acquisition of computer hardware and software and for its effective and efficient use. Many practitioners also have responsibility for managing other information systems personnel. This unit covers the knowledge and skills relevant to these planning, organising and staffing responsibilities.

**Courses:** IF33, IT20

**Prerequisite:** Completion of at least 60 credit points from units in the Information Systems major.

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ ITB242 DECISION SUPPORT SYSTEMS

There is increasing pressure for computer use to be closely aligned to organisational goals. Associated with this is an increasing emphasis for the computer to assist directly in the decision making process. This unit addresses issues relating to these factors.

**Courses:** BS50, IT20

**Prerequisite:** ITB222

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB243 KNOWLEDGE-BASED SYSTEMS

Examines the requirements for and development of knowledge-based systems in modern mainstream computing; provides an understanding of the techniques used in capturing and automating knowledge; and gives practical experience in designing, implementing and maintaining knowledge-based systems using a variety of software tools.

**Courses:** IT20

**Prerequisite:** ITB222

**Co-requisite:** ITB220

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB244 SPECIAL TOPIC 1

#### ■ ITB245 SPECIAL TOPIC 2

These units are designed to allow for the significant development of, or emphasis in, business computing not dealt with in other course units. Selected topics and study areas will be offered as required and when the necessary expertise is available. See School announcements for details of topics being offered.

**Courses:** IT20

**Prerequisite:** See School announcements.

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB246 UNIX & C

Introduces students to the Unix operating system environment and to the C programming language. It covers the basics of both, and advanced topics relevant to software development under Unix and C. Emphasis is placed on the production of high quality software and documentation.

**Courses:** IT20

**Prerequisites:** ITB410, ITB412

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB247 PROJECT

This provides for students to undertake a two-semester project. The work in one semester can be followed up in the second, or students can extend their practical skills through the second semester project.

**Course:** IT20

**Prerequisite:** Completion of at least 60 credit points from the Information Systems IT20 major.

**Credit Points:** 24

#### ■ ITB249 THEORETICAL FOUNDATIONS OF DATABASE SYSTEMS

Theoretical foundations for the design, analysis and the unprocedural languages used in modern database

systems; set theory; abstract algebra and theory of algorithms.

**Course:** IT20

**Credit Points:** 12

**Prerequisite:** ITB220

**Contact Hours:** 3 per week

#### ■ ITB310 INFORMATION MANAGEMENT 1

The concept of information management has emerged from a number of disciplines, which have become more associated as a result of the development of information technologies. This unit reviews this development, and introduces the principles of information management as they are presently defined. It therefore identifies the basic processes involved in handling information in the context of an information life cycle, and introduces the concept of managing information as an organisational resource.

**Courses:** IF33, IF52, IT20

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ ITB320 LABORATORY 3 (DATABASE APPLICATIONS)

Graduates from the course are expected to have skills in the creation, maintenance and utilisation of databases of various types. This unit gives them practical exposure to the tasks involved using higher level applications programming environments.

**Courses:** IF52, IT20

**Prerequisite:** ITB102

**Credit Points:** 12

**Co-requisite:** ITB220

**Contact Hours:** 3 per week

#### ■ ITB321 SYSTEMS ANALYSIS

In this unit information management draws on systems analysis as a central resource. Many of the techniques applied in systems analysis translate to information management. This unit gives an introduction to all phases of the classical systems development life cycle. The aim is to give students a balanced overview of the process of analysing information systems, while ensuring that students develop the necessary skills to apply the major techniques to information management problems.

**Courses:** IF52, IT20

**Credit Points:** 12

**Prerequisite:** ITB210

**Contact Hours:** 3 per week

#### ■ ITB322 INFORMATION RESOURCES

The ability to obtain accurate, up-to-date, business information on an ongoing basis is today accepted as an important component of competitive success.

**Course:** IT20

**Credit Points:** 12

**Prerequisite:** ITB310

**Contact Hours:** 3 per week

#### ■ ITB323 LABORATORY 4 (INFORMATION SUPPORT METHODS)

Provides students with practical exposure to a range of methods that are used to support information management implementations.

**Courses:** IF52, IT20

**Prerequisite:** ITB320

**Credit Points:** 12

**Co-requisite:** ITB520

**Contact Hours:** 3 per week

#### ■ ITB330 INFORMATION ISSUES & VALUES

Concepts of information and the associated technology create fundamental issues for society particularly in the legal, political and social arenas. This unit explores the development of such concepts in order to create an awareness of both the indirect and direct impacts of information and the associated technology. Such an awareness is crucial in the effective direction of management of information.

**Courses:** IF52, IT20

**Credit Points:** 12

**Prerequisite:** ITB322

**Contact Hours:** 3 per week

#### ■ ITB331 INFORMATION MANAGEMENT 2

Auditing information resources in an organisation; relating information provision to the information needs of end users, as well as to the strategic objectives of organisations.

**Courses:** IF52, IT20

**Credit Points:** 12

**Prerequisite:** ITB310

**Contact Hours:** 3 per week

#### ■ ITB340 PROJECT

The ability to apply knowledge and skills to real-life situations is essential information management professionals. A one semester project, under academic supervision, is considered useful in developing students' ability to apply their skills.

**Courses:** IT20

**Prerequisite:** Successful completion of at least 72 credit points from the Information Management major.

**Credit Points:** 12

#### ■ ITB341 INFORMATION MANAGEMENT 3

This unit pulls together many of the themes previously identified in the course of the information management major, with particular reference to information as a commodity and its use in strategic planning. It also deals with functions and practices of management that relate to provision of information services, and utilisation of technology to support them.

**Courses:** IF52, IT20

**Credit Points:** 12

**Prerequisite:** ITB331

**Contact Hours:** 3 per week

#### ■ ITB342 SPECIAL TOPIC (INFORMATION MANAGEMENT)

This unit covers aspects of information management of specific interest at that time. This unit makes allowances for significant developments or emphasis in information management not included in the remainder of the course program.

**Course:** IT20

**Credit Points:** 12

**Prerequisite:** Topic dependant

**Contact Hours:** 3 per week

#### ■ ITB350 PROJECT-H

The ability to apply knowledge and skills to real-life situations is essential for people planning to work as information management professionals. A one semester project, under academic supervision, is considered useful in developing students' ability to apply their knowledge and skills. As this unit is for students intending to proceed to the Honours course, this project must include an evaluative component.

**Course:** IT20

**Prerequisite:** Successful completion of at least 72 credit points from the Information Management major and 2 Pre-Honours units.

**Credit Points:** 12

#### ■ ITB351 INFORMATION MANAGEMENT 3H (STRATEGY & PLANNING)

This unit pulls together many of the themes previously identified in the course of the information management major, with particular reference to information as a commodity and its use in strategic planning. It also deals with functions and practices of management that relate to provision of information services, and utilisation of technology to support them. In order to prepare students who are intending to proceed to an Honours program, this unit addresses performance analysis and evaluation work in more depth than the standard version of the course.

**Course:** IT20

**Credit Points:** 12

**Prerequisite:** ITB331

**Contact Hours:** 3 per week

### ■ ITB352 LABORATORY 4H (INFORMATION SUPPORT METHODS & EVALUATION)

Practical exposure to a range of techniques that are used to support information management implementations. In order to prepare students who are intending to proceed to an Honours program, a greater amount of evaluative work is introduced in the exercises and assessment undertaken.

**Courses:** IF23, IF33, IF52, IT20

**Prerequisites:** ITB320 and ITB520

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB410 SOFTWARE DEVELOPMENT 1

This unit forms the basis of the major computing topics to be covered in later units. All students in the area of Information Technology need to be aware of a range of problem solving techniques and how these can be used to solve various problems using a procedural programming language. This unit introduces the student to the need for software quality management and control during software development.

**Courses:** IF23, IF33, IF52, IT20

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB411 SOFTWARE DEVELOPMENT 2

Quality software development increasingly requires design of algorithms using modules, and algorithms and data-structures for building modules. This unit provides the foundation knowledge for the external and internal perspective of software modules in a system context. This unit provides students with an understanding of modules in the context of program-mable systems. The external view and internal view of modules and their realisation in a modular programming language are covered. Abstract data-types, specification of interfaces and methods for achieving program correctness provide the theoretical basis. Standard data structure modules.

**Courses:** IF23, IF33, IF52, IT20

**Prerequisite:** ITB410

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB412 TECHNOLOGY OF INFORMATION SYSTEMS

Computer hardware and system software which together provide the context within which computer applications operate. Topics include: the von Neuman model; instruction execution; registers and addressing modes; program and data representation; assembly language programming; i/o, interrupts and DMA; introduction to boolean algebra and computer hardware; FSMs; hardwired vs. microprogrammed control; i/o and secondary storage devices; advanced computer architectures; networking.

**Courses:** IF23, IF33, IF52, IT20

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB420 COMPUTER ARCHITECTURE

This unit extends the introductory treatment of computer hardware and system software given in the prerequisite unit. In addition, it includes a study of the following concepts: virtual machine architecture, device handling and memory management.

**Courses:** IF23, IT20

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB421 DATA STRUCTURES & ALGORITHMS

Quality software development requires the design and implementation of efficient data structures with their associated algorithms. This unit builds upon the concepts of encapsulation and abstraction which were introduced in Software Development 2 by examining

a number of implementations of the Table abstraction and evaluates the efficiency of each implementation.

**Courses:** IF23, IT20

**Prerequisite:** ITB411

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB422 LABORATORY 3 (ADTS IN A UNIX ENVIRONMENT)

This unit extends students knowledge of the Unix environment and introduces the language C, with an emphasis on the implementation of ADTs in that language. Students will obtain extensive experience with this important practical language, including documentation and report writing. Topics covered include The Unix environment, the shell and shell programming. The language C. Implementation of a variety of data structures in C. Generic ADTs. Programming styles, documentation and standards.

**Courses:** IF23, IT20

**Prerequisites:** ITB411 and ITB102

**Co-requisite:** ITB421 (IT20 students only)

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB423 LABORATORY 4 (SOFTWARE DEVELOPMENT)

This unit consolidates the software engineering principles studied in earlier units as well as augmenting the material in Software Engineering. It provides students with an opportunity to work in small groups on a major project. This project shall require them to take a problem from statement to a well documented and researched solution.

**Course:** IT20

**Prerequisites:** ITB210, ITB424

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB424 SOFTWARE ENGINEERING PRINCIPLES

The problems of developing and maintaining reliable large scale software product and the techniques needed to overcome them. Students need to appreciate the seriousness of the problem, and the value of a disciplined approach to the solution; they should be aware of the variety of tools and methodologies to support software development.

**Courses:** IF23, IT20

**Prerequisite:** ITB421

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB430 CONCURRENT SYSTEMS

The process structure of concurrent systems and the symbiosis of hardware and system software required to support such systems. Topics include: concurrency, processes and process synchronisation; interrupt handling; resource management, deadlock. Realtime and concurrent programming in Modula-2 and process kernels. Specification of concurrent systems. Realisation of process and resource management principles in contemporary operating systems. Multiprocessor and distributed systems with special reference to multi-processor UNIX systems.

**Courses:** IF23, IT20

**Prerequisite:** ITB420

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB431 PROGRAMMING LANGUAGE PARADIGMS

This unit introduces students to non-procedural language paradigms; viz functional logical and object-oriented programming techniques. Each is studied in the context of a well-known computer language with its computational environment. A major component of this unit is laboratory based. For each paradigm substantial program development will be included.

**Courses:** IF23, IT20

**Prerequisite:** ITB411

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ ITB440 LANGUAGES & LANGUAGE PROCESSING

Syntax-directed programs permeate computing – examples are editors, formatters, command interpreters and compilers. In order to rapidly and reliably create such tools, it is necessary to understand the underlying theory of language definition, recognising automata and grammar classifications, as well as the practical realisation of recognisers in stylised, reusable code.

**Courses:** IF23, IT20 **Prerequisite:** ITB421  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB441 GRAPHICS

The nature of computer graphics hardware and software. The design and implementation of computer graphics software so as to enable students to implement graphics systems in their application areas. Topics include: graphics hardware; graphics Kernel System and Phigs; fundamental algorithms for 2-D graphics; 3-D transformations; curve and surface modelling; colour models; hidden surface removal.

**Courses:** IF23, IF52, IT20 **Prerequisite:** ITB422  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB442 ARTIFICIAL INTELLIGENCE

Artificial intelligence is coming out of the laboratory into the marketplace, it is important that students are exposed to the major ideas of artificial intelligence and in particular to the role of knowledge engineering in the design of practical knowledge-based systems. This unit provides a broad and comprehensive introduction to the field of artificial intelligence.

**Courses:** ED50, IF23, IT20 **Prerequisite:** ITB431  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB443 SYSTEMS PROGRAMMING

Concurrent programming is the basis for operation system implementations, much systems programming and parallel application programming. It is a central idea in advanced computer science and an important concept in multiprocessor computers and parallel computer hardware. This unit builds upon previous introduction to concurrent systems. It introduces systems programming in an operating system that supports processes and inter-process communications. Topics covered include a review of UNIX operating system commands; Process and file management; UNIX administration, security; shell programming; the C/UNIX interface; remote procedure calls.

**Courses:** IF23, IT20  
**Prerequisite:** ITB422 or ITP413  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB444 SPECIAL STUDIES 1

#### ■ ITB445 SPECIAL STUDIES 2

These units cover aspects of current scientific interest; it makes allowances for significant developments in computing science not provided for in the remainder of the course program. Details of topics will be published before the start of each semester.

**Courses:** IF23, IT20  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB446 PROJECT

#### ■ ITB447 PROJECT

Analysis, design and programming skills, and the underlying theory, are presented in various units; practice in those units naturally emphasises their particular specialisation. A project unit brings many of those skills together in a practical exercise of greater size and complexity, emphasising their complementary nature and the need for careful management. Students, either individually or in small groups, un-

dertake a significant project, relevant to the needs of industry, government or a research area, carried out under the supervision of a staff member whose interests lie in the field of the project. Before work commences on the project, student(s) and supervisor must agree on the topic of the project and the scope of the work to be attempted. The role of the supervisor is to provide broad guidance on the methods and techniques to be used but progress depends largely on student initiative and problem-solving ability.

**Course:** IT20  
**Prerequisite:** Completion of at least 72 credit points from the Computing Science major  
**Credit Points:** 12

#### ■ ITB448 OBJECT TECHNOLOGY

Methods and techniques of object-oriented design and implementation based on careful assessment of the underlying software engineering issues. The design of effective module interfaces is emphasised to achieve the full benefit of the object-oriented approach. Practical work focuses on building re-usable components and constructing object-oriented systems by combining existing and custom made components.

**Course:** IT20  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB449 EXPERT SYSTEMS

Expert systems in the AI context; knowledge representation techniques; inference methods; uncertainty; the expert system development process; case studies of existing expert systems; the human/expert system interface; limitations and social implications of expert systems; current international knowledge-based system programs and future perspectives.

**Courses:** IF23, IT20 **Pre/Co-requisite:** ITB431  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB450 ADVANCED COMPUTER ARCHITECTURE

This unit forms a continuation of the material introduced in the units ITB412 and ITB420. It is intended to provide students with an understanding of the organisation of contemporary computer systems and the variety of different structures which may be used for specific tasks. The style of presentation is based on a mixture of theory and case studies based on existing machines of practical or theoretical importance. Topics covered include the physical basis of the constraints of processor speed; High performance 'von Neumann' architectures; Pipelined processors, vector processors and supercomputers; Machines for protected multitasking; Conceptual models for parallel computation.

**Courses:** IF33, IT20 **Prerequisite:** ITB420  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB451 PROJECT

This provides for students to undertake a two-semester project. The work in one semester can be followed up in the second, or students can extend their practical skills through the second semester project.

**Course:** IT20  
**Prerequisite:** Completion of at least 60 credit points from the Computing Science major.  
**Credit Points:** 24

#### ■ ITB452 PROJECT WORK

This unit is for students intending to proceed to the Honours course following the Bachelor of Information Technology, the project will have a significant research component in addition to the practical



development of a system of greater size and complexity than previously undertaken by a student.

**Course:** IT20

**Prerequisite:** Completion of at least 72 credit points from the Computing Science major and ITB440 Languages and Language Processing.

**Credit Points:** 24

#### ■ ITB453 PROJECT

This unit allows students to undertake a large project in one semester.

**Course:** IT20

**Prerequisite:** Completion of at least 60 credit points from the Computing Science major

**Credit Points:** 24

#### ■ ITB454 SOFTWARE QUALITY ASSURANCE

Software quality assurance as an integral part of the life cycle of software products; techniques and tools for defining and achieving high quality products; optimising resources to increase overall productivity.

**Course:** IT20

**Prerequisite:** ITB424

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB455 SOFTWARE ENGINEERING APPLICATIONS

Rationale for the use of Computer Aided Software Engineering (CASE) tools; information stored in various software engineering constructs; requirements of an integrated CASE tool; existing CASE tools and methodologies.

**Course:** IT20

**Prerequisite:** ITB424

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB456 INTELLIGENT GRAPHIC USER INTERFACES

Design and construction of intelligent user interfaces using multiple media.

**Course:** IT20

**Prerequisite:** ITB424

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB520 DATA COMMUNICATIONS

This unit provides an introductory treatment of the major topics and issues in data communications. It is the foundation unit for the minor/major course programme in this area. Topics include: overview of data- and telecommunications networks and services; voice communication network design; digital/analog data representation; digital/analog signals; digital transmission; transmission media/impairments; link layer communications protocols; vendor implementations (HDLC, SDLC); data communications network design; communications architectures; reference model for open systems interconnection (OSI); network access protocols; public switched telephone network (PSTN); packet switched data networks (PSDN); ISDN and B-ISDN; local area networks; telecommunications products and services; network control, management, and security; future trends.

**Courses:** BS50, IF52, IF53, IS24, IT20

**Prerequisite:** ITB410

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB521 LABORATORY 3 (COMPUTER NETWORKS)

Students entering the field of data and telecommunications will be expected to have practical skills in various facets of the installation and management of communications systems. Topics include: physical level interfaces; communications hardware; communications network software; communications cabling; local area network configuration, installation,

and operation; unix networking; network troubleshooting and re-configuration.

**Course:** IT20

**Prerequisite:** ITB520

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB530 TRANSPORT PROTOCOLS

The principles, protocols, and architectures of inter-networking; routing strategies used by bridges and gateways; security and management of routing data over global networks; network interface design; medium access control; synchronous transmission; error and flow control; TCP/IP, SNA and OSI networks.

**Course:** IT20

**Prerequisite:** ITB521

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB531 APPLICATION SERVICES

The protocols provided by the process layers of the Open Systems Interconnection (OSI) Reference Model and the application services provided in the process layer, in particular message handling, directory services, file transfer access and management, network management, and distributed processing.

**Course:** IT20

**Prerequisite:** ITB521

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB532 LABORATORY 4 (NETWORK MANAGEMENT)

Principles of computer network management and control; practical experience in the configuration of network management software systems and in the interpretation of management information provided by these sub-systems; factors needed in assessment of the control, management, performance, availability and security of data networks and the association of these management parameters with overall systems security.

**Course:** IT20

**Prerequisite:** ITB531

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB541 TRANSMISSION TECHNIQUES

High speed networks, satellite communications, fibre optics and wireless LANs; performance and optimisation of network links and the interconnection of telecommunications equipment based on the international standards: ISDN, BSDN, ATM.

**Course:** IT20

**Prerequisites:** ITB520, MAB177

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB542 NETWORK PROGRAMMING

Interprocess communications on various network systems; concepts of network programming; setup network facilities and develop/modify network code; responsibilities and ethics of the network programmer.

**Course:** IT20

**Prerequisites:** ITB443, ITB531

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB543 DATA SECURITY

Data is an asset of high value to an organisation. Its security from accidental or malicious corruption or theft is essential. Computing practitioners should be aware of the security implications of their own designs and implementations, and of the strengths and limitations of the security in their computing environment covered include management of data security, cryptography, communication security, access control, viruses and legislation.

**Course:** IT20

**Prerequisite:** ITB520

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITB544 PROJECT

Students, either individually or in small groups, undertake a significant project, relevant to the needs of

industry, government or a research area, carried out under the supervision of a staff member whose interests lie in the field of the project. Before work commences on the project, student(s) and supervisor must agree on the topic of the project and the scope of the work to be attempted.

**Course:** IT20

**Prerequisite:** Completion of at least 72 credit points from the Data Communications major.

**Credit Points:** 12

### ■ ITB545 PROJECT

Students undertake a two-semester project. The work in one semester can be followed up in the second, or students can extend their practical skills through the second semester project.

**Course:** IT20

**Prerequisite:** Completion of at least 60 credit points from the Data Communications major.

**Credit Points:** 24

### ■ ITB546 SPECIAL STUDIES 1

This unit covers aspects of current scientific interest; it makes allowances for significant developments in data communications not provided for in the remainder of the course program. Details of topics will be published before the start of each semester.

**Course:** IT20

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB547 SPECIAL STUDIES 2

See ITB546.

**Course:** IT20

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB548 INTRODUCTION TO CRYPTOLOGY

Classical ciphers; modern symmetric ciphers; public key ciphers; practical cryptology.

**Courses:** IF23, IT20, MA34, SC30, SC60

**Prerequisite:** MAB177 or MAB493 or MAB620

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB549 ERROR CONTROL & DATA COMPRESSION

Data compression techniques; introduction to block codes; convolutional codes; cyclic codes and Reed-Solomon codes; coding techniques and applications.

**Courses:** IT20, MA43, SC30, SC60

**Prerequisite:** MAB177 or MAB493 or MAB620

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITB560 INTRODUCTION TO CRYPTOLOGY

Number theory; finite field theory; information theory; classical ciphers; key ciphers; cryptology.

**Courses:** EE44, IF23      **Prerequisite:** MAB493

**Credit Points:** 7      **Contact Hours:** 4 per week

### ■ ITB561 ERROR CONTROL & DATA COMPRESSION

Data compression techniques; introduction to block codes; convolutional codes; cyclic codes and Reed-Solomon codes; coding techniques and applications.

**Courses:** EE44, IF23      **Prerequisite:** MAB493

**Credit Points:** 7      **Contact Hours:** 4 per week

### ■ ITB904 INDUSTRIAL TRAINING EXPERIENCE

Consists of a one year work experience program. For more information about this program, see the IT20 Bachelor of Information Technology entry in this Handbook.

**Course:** IT20

**Credit Points:** 24

### ■ ITN240 COMPUTER SECURITY RISK MODELLING

Importance of identifying, valuing and securing data assets; current state of computer risk model research and implementation; traditional models compared to demonstrate sources of data for model development: asset identification and evaluation, threat, vulnerability and dependency analysis, and collection of supporting data.

**Courses:** IS50, IS61

**Credit Points:** 12

**Prerequisite:** ITN542

**Contact Hours:** 3 per week

### ■ ITN296 MAJOR PROJECT

Students may undertake a major project as an alternative to minor projects to pursue in-depth a topic of interest in keeping with the course objectives. Project topics are to be determined after discussion between the student and a Faculty staff member acting as supervisor.

**Course:** IS50

**Credit Points:** 48

### ■ ITN298 DISSERTATION

Comprises the undertaking and writing up of a significant piece of research work. The research will examine some aspect of concepts and principles dealt with in the course work components of the program. The research topic will be agreed on following discussions between the student and a Faculty staff member who will act as supervisor. Each student will present a seminar on his or her dissertation topic.

**Course:** IS50

**Prerequisite:** Completion of at least 50 per cent of the Master of Information Technology.

**Credit Points:** 96

### ■ ITN541 COMPUTER SECURITY

Ensures that students recognise the requirement to design, implement and manage facilities in a manner consistent with an overall organisational security policy. Development of security plan; risk analysis; access control; cryptography; network security and encryption; key management; database security; secure operating systems and access control. On completion, students should be able to incorporate security and management controls into information systems in accordance with a formal risk analysis and assessment for the system.

**Courses:** CS36, CS55, IS50, IS61

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITN542 ADVANCED DATA COMMUNICATIONS

Advanced material in data communications. Topics covered include data communications network design and management (techniques and case studies); performance modelling of communications networks; comparative evaluations of data communications products and services; data communications software design and implementation; provision of integrated communications services (voice, data, video, etc.); network security; communications industry policy (eg. deregulation vs regulation).

**Courses:** CS36, CS55, IS50

**Prerequisite:** ITB520 (or equivalent)

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ ITN546 ADVANCED TOPICS IN CRYPTOLOGY

Design and cryptanalysis of ciphers; indepth study of methods for forming secure ciphers and attacking various ciphers; secret sharing schemes; crypto-

protocols, including zero knowledge systems; current topics in cryptology.

**Courses:** IF23, IS50, IT20, SC60

**Prerequisite:** ITB548

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITP200 APPLICATIONS PROGRAMMING

Application programming is the process of developing a set of programs from a given specification. It involves the creation of an executable version of that specification and, as such, provides the crucial step into automation. The unit provides an introduction to the development of information systems using application generators and 4GL technology.

**Courses:** CS19, IS24

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITP201 FOUNDATIONS OF INFORMATION MODELLING

It is common to sharply distinguish between the specification and the implementation of organisational information systems. There are, however, many important ideas that are shared. This unit introduces notation from mathematics and logic that may be used to describe these ideas. An information system models some aspect of an organisation and contains both specific and general statements about it. The specific statements are stored in the database and the more general ones end up as programs. This unit describes how such statements may be specified in the Z notation and implemented in SQL.

**Courses:** IS24, IS25, CS19

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITP202 SYSTEMS ANALYSIS & DESIGN

For the creation of a useful and usable information system, it is essential that the feasibility of the system has been established, that the user's requirements are known, and that a suitable user interface is specified. This unit develops basic systems development skills by teaching the methodology and techniques.

**Course:** IS24

**Prerequisite:** ITP201

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITP203 APPLICATIONS DEVELOPMENT

This unit reexamines the major systems analysis, design and programming issues within the context of a particular 4GL environment. It integrates the skills acquired in other core units by involving students in the development of a non-trivial information system. Issues of teamwork, standards and project control.

**Course:** IS24

**Prerequisites:** ITP200, ITP201, ITP202

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITP311 COLLECTION BUILDING & ACQUISITIONS

The concept of information and its relationship to information resources and needs; the various formats by which information is communicated are compared and appropriate selection criteria discussed; the characteristics of the book and other media trades, and the means by which these media are acquired; collection building in light of the needs of the immediate clientele to be served and of the wider Australian community. Other topics include procedures for keeping collections current, evaluating their usefulness and the legal and ethical dimensions of collection building.

**Courses:** IS25, IT20

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITP312 ORGANISATION OF KNOWLEDGE

The organisation of knowledge in libraries and information agencies. Emphasis is placed on the descrip-

tion, classification and subject analysis of information in print media using AACR2 (1988 revision), DDC, and LCSH. Other related topics will be mentioned briefly, eg. LCC, MARC, ABN, and other efforts.

**Course:** IS25

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITP313 INFORMATION SOURCES & SERVICES

Interpersonal communication, the reference interview and search strategies, and general and Australian reference tools; national information policy, reference theory and service, communication and the reference interview, search strategies, lead-in tools, general reference tools, government documents, resources in the humanities, social sciences, science and technology, user pays, document delivery, microcomputers.

**Course:** IS25

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITP314 ONLINE INFORMATION SERVICES

Teaches students to act as the interface between users and information they may require, using a variety of available resources, systems, and technologies; development of on-line information services, database producers, search strategies, services offered by major vendors, in-house systems (including CD-ROM) and computer assisted retrieval of information.

**Course:** IS25

**Prerequisite:** ITP201

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITP315 LIBRARY PROGRAMS MANAGEMENT

Administrative organisation in libraries; authority relationships and the nature of the library as a bureaucracy; position classification and personnel administration; the management of library finances; applications of computer technology in library management; change in organisations; planning, organising, staffing, directing, and controlling; the concepts of leadership and professionalism.

**Courses:** IS25, IT20

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ ITP316 FIELD EXPERIENCE

Designed to give students an opportunity to participate in the day-to-day work of a library at a beginning professional level. Students are required to undertake work at a level appropriate to beginning professionals in two approved libraries for a total period of 30 working days gaining substantial experience in at least two different areas of library work under the supervision of qualified librarians.

**Courses:** IS25, IT20

**Prerequisite:** Completion of 50 per cent of other units.

**Credit Points:** 4

#### ■ ITP317 LIBRARY SERVICES TO YOUNG PEOPLE

The most important aspects of library services to children and young adults; the evolution of literature with emphasis on the effects of social, political and religious movements on its purposes, form and content; the development of library services in both schools and public libraries; the importance of literary awards; the criteria for selection of resources; the planning and carrying out of programs to promote reading, including effective storytelling.

**Course:** IS25

**Prerequisites:** ITP311, ITP313

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ ITP318 ADVANCED ORGANISATION OF KNOWLEDGE

The organisation of knowledge in libraries and information agencies. Topics include description of selected non-print media, enumerative and faceted classifications, special classifications, problems with alphabetical unit indexes and automated indexing.

Course: IS25

Prerequisite: ITP312

Credit Points: 12 Contact Hours: 3 per week

### ■ ITP319 GOVERNMENT DOCUMENTS

The production, acquisition and organisation of government documents and issues related to their use. Topics include why governments publish, the range of units, the value of government information, bibliographic control, freedom of information commercialisation/privatisation of government information, and organisation of government document collections. Australian, United States, United Kingdom and international government documents are studied.

Course: IS25

Prerequisite: ITP313

Credit Points: 12 Contact Hours: 3 per week

### ■ ITP320 SPECIAL TOPIC – LIBRARY SCIENCE

Designed to allow for significant development of, or emphasis in, library science not dealt with in other units. Topics and study areas will be offered as required and when the necessary expertise is available.

Course: IS25

Prerequisite: See School announcements.

Credit Points: 12 Contact Hours: 3 per week

### ■ ITP321 SPECIAL TOPIC – LIBRARY SCIENCE

Allows for the significant development of or emphasis in library science not already dealt with. Selected topics and study areas will be offered as required and when the necessary expertise is available.

Course: IS25

Prerequisite: See School announcements

Credit Points: 8 Contact Hours: 2 per week

### ■ ITP322 INDIVIDUAL STUDY

Students can pursue in depth a personal interest in library science not covered by the Graduate Diploma course core or other elective units. On completion of this unit, students should be able to demonstrate a detailed knowledge of the area chosen.

Course: IS25

Prerequisite: To be determined by the nature of the study.

Credit Points: 8 Contact Hours: 2 per week

### ■ ITP323 INTRODUCTION TO RECORDS MANAGEMENT

Records management theory, techniques and trends. Topics include the history and role of records management and the creation, control, organisation, maintenance, disposition and evaluation of records.

Course: IS25

Credit Points: 8 Contact Hours: 2 per week

### ■ ITP324 LIBRARY PROGRAMS & SERVICES

An introduction to the evaluation of users' informational needs and the development of library programs and services to meet the needs of special groups in the community, eg. young people, elderly people, disabled people, ethnic minorities, business people, etc.

Course: IS25

Prerequisite: ITP313

Credit Points: 8 Contact Hours: 2 per week

### ■ ITP325 PRESERVATION MANAGEMENT OF MATERIALS

Principles, strategies and practices of preservation of materials; various preservation techniques appropriate to the major storage media; the importance of preservation planning and security as a part of all routines; the implications of consequent losses to organisations and society should information agencies not formulate a preservation plan.

Course: IS25

Credit Points: 12 Contact Hours: 3 per week

### ■ ITP411 SYSTEMS ARCHITECTURE & OPERATING SYSTEMS

Computer organisation; the nature and role of system software and the nature of microcomputers and computer graphics; computer systems architecture; micro-operations; instruction formats; microprocessor types; machine language; system software including operating systems, assemblers, compilers, loaders.

Course: CS19

Credit Points: 12 Contact Hours: 3 per week

### ■ ITP412 SOFTWARE PRINCIPLES

Use of efficient data structures; languages illustrating the variety of features found in computer programming languages; structured program design techniques; advanced algorithms and methods of providing program correctness.

Course: CS19

Credit Points: 12 Contact Hours: 3 per week

### ■ ITP413 ADTS IN A C/UNIX ENVIRONMENT

This unit extends students' knowledge of the Unix environment and introduces the language C, with an emphasis on the implementation of ADTs in that language. Students will obtain extensive experience with this important practical language, including documentation and report writing. Topics covered include the Unix Environment, the shell and shell programming, the language C, implementation of a variety of data structures in C, generic ADTs, programming styles, documentation and standards.

Course: CS19

Credit Points: 12 Contact Hours: 3 per week

### ■ ITP460 PROJECT

Students, either individually or in small groups, undertake a substantial project relevant to the needs of industry and designed to give insight into industrial requirements. Each project is carried out under the supervision of a staff member whose interests lie in the field of the project. Before work commences on the project, student(s) and supervisor must agree on the topic of the project and the scope of the work to be attempted.

Course: CS19

Prerequisite: Successful completion of all other core units of the Graduate Diploma in Computing Science.

Credit Points: 12

### ■ ITP470 PROJECT

See ITB460.

Course: CS19

Prerequisite: Successful completion of all other core units of the Graduate Diploma in Computing Science.

Credit Points: 12

### ■ ITP480 PROJECT

As for ITP460. The project expands across two semesters.

Course: CS19

Credit Points: 24

**■ ITP481 PROJECT**

As for ITP460.

**Course:** CS19**Credit Points:** 24**■ JSB101 CONTEMPORARY ISSUES IN AUSTRALIAN SOCIETY 1**

Perspectives in sociology; major approaches; social structures: ethnicity, racism, aboriginality, patriarchy, feminism, the family, family violence; economic organisation: international economic order, class, wealth, poverty, work; the environment; the future.

**Courses:** JS31, JS33**Credit Points:** 12 **Contact Hours:** 3 per week**■ JSB102 SOCIAL ETHICS & THE JUSTICE SYSTEM**

The ethical domain, the significance of ethics for the criminal justice system. The topics addressed are: what is ethics?; what is justice?; justice reasoning; human rights; an ethic of care; an ethic of empowerment; criminal justice work; the role of the police; the ethics of punishment and correction; being ethical.

**Courses:** JS31, JS33**Credit Points:** 12 **Contact Hours:** 3 per week**■ JSB103 INTRODUCTION TO THE LEGAL SYSTEM**

Law and society; the Australian legal system; sources of our law; statutory interpretation; dispute resolution; a critical perspective of the legal system; introduction to the criminal justice process; investigation, adjudication and corrections; disadvantaged groups; the criminal justice process post-Fitzgerald.

**Courses:** JS31, JS33**Credit Points:** 12 **Contact Hours:** 3 per week**■ JSB104 COMMUNICATION FOR JUSTICE PROFESSIONALS**

Techniques in communication: application in the law enforcement and justice professions; feelings; perception and analysis; interpersonal communication: cultural and ethnic minorities; Aboriginal people; special needs groups; interviewing: theory and practice; practical, oral and written tasks.

**Courses:** JS31, JS33**Credit Points:** 12 **Contact Hours:** 3 per week**■ JSB105 PERSONAL & INTERPERSONAL RELATIONSHIPS**

Self-concept, self-esteem, self-image and their relationships to personal styles; expression formation; interpersonal effectiveness and self-disclosure including related skills application; human sexuality as a central force in interactional situations; co-dependency, assertion and component skills development; conflict resolution; negotiation and aggression; conflict negotiation and the legal system; suicide; associated issues, skills development and application.

**Courses:** JS31, JS33**Credit Points:** 12 **Contact Hours:** 3 per week**■ JSB107 INTRODUCTION TO CRIMINOLOGY**

Legal and criminological conceptions of crime: nature, scope and objects of criminology. Criminological theory: classical and neo-classical theories; the positivist school; physical and biological factors and theories; psychological and psychiatric explanations; crime as a social phenomenon; radical or critical criminology. Key issues in criminology; juvenile crime; Aborigines in the criminal justice system; Royal Commission into Aboriginal Deaths in Custody; reforming the correctional system; impact of

incarceration on offenders; victims of crime; white-collar and corporate crime; privacy.

**Courses:** JS31, JS33**Credit Points:** 12 **Contact Hours:** 3 per week**■ JSB108 INTRODUCTION TO PROFESSIONAL STUDIES**

The concepts of professionalism and professional knowledge and its application for a range of professional areas in law enforcement, justice administration and intelligence and protective security. Students study: creative problem solving and goal attainment; inter-professional cooperation in problem situations; basic social science research methodology; and the use of computers in research.

**Courses:** JS31, JS33**Credit Points:** 12 **Contact Hours:** 3 per week**■ JSB109 INTRODUCTION TO CRIMINAL LAW & EVIDENCE**

The principles, rules and concepts of criminal law and evidence; the understanding and applications of such principles, concepts and rules as they relate to the operation of the criminal justice system and the role of law enforcement in society.

**Courses:** JS31, JS33**Credit Points:** 12 **Contact Hours:** 3 per week**■ JSB201 PRINCIPLES OF CRIMINAL LAW 1**

History and theory of criminal law; the role of criminal law and concepts of justice; comparative criminal law; development and administration of criminal law in Queensland; legal research.

**Courses:** JS31, JS33**Credit Points:** 12 **Contact Hours:** 3 per week**■ JSB202 CONTEMPORARY ISSUES IN AUSTRALIAN SOCIETY 2**

Contemporary social issues affecting various organisational levels of society: the individual, the marital dyad, the family and society as a whole; issues of abuse, equity and security; role of policy development and implementation from a social justice perspective.

**Courses:** JS31, JS33**Credit Points:** 12 **Contact Hours:** 3 per week**■ JSB203 HUMAN DYNAMICS: THE JUSTICE SYSTEM**

Human factors and crime evolving personality; inherited factors, morality and moral development, human dynamics and the police focusing on perception, recognition and identification; human dynamics in relation to the courts including the concepts of memory and its effects on evidence, eye witness testimony, juror selection and reliability, and reaching a verdict – the process and consensus; human dynamics and crime prevention; offender rehabilitation and individual and societal reactions to them, changing the environment by reducing opportunities for crime, increasing risks of detection; community education.

**Courses:** JS31, JS33**Credit Points:** 12 **Contact Hours:** 3 per week**■ JSB204 PRINCIPLES OF CRIMINAL LAW 2**

Issues and problems of justice in criminal law: parties, proof, intent, responsibility, defences; the Queensland Criminal Code; legal research.

**Courses:** JS31, JS33**Credit Points:** 12 **Contact Hours:** 3 per week**■ JSB210 PROCEDURE & PRACTICE**

The role and function of policing; enforcement practices: non-arrest, arrest situations; supporting documentation; evidentiary sources and gathering

methodology; crime trends and their impact on policing practices.

**Courses:** JS31, JS33

**Prerequisite:** JSB108

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ JSB211 PROCESS THEORY & APPLICATION

Detailed study and application of the intelligence process (cycle); study of intelligence support to operational staffs and organisations; strategic, operational and tactical concepts of intelligence and security; threat and risk assessment relative to protective security – personnel, materials and infrastructure; industrial and commercial espionage and sabotage.

**Courses:** JS31, JS33

**Prerequisite:** JSB108

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ JSB212 INTER-PROFESSIONAL COOPERATION

The role and function of policing in conjunction with other agencies, particularly emergency service agencies; the cooperation necessary and the awareness of reciprocal roles and functions in given situations.

**Courses:** JS31, JS33

**Prerequisite:** JSB108

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ JSB213 PROTECTIVE SECURITY THEORY & APPLICATION

This unit deals with protective security in its broadest sense; it examines the threat to security in the public, private and national arenas. The nature of espionage, subversion, sabotage, theft and hostage situations are also examined. The basic areas of protective security are personnel, material, physical and information security. Students will also conduct risk/threat assessments and cover other areas such as inspections, audits, surveys and reviews; policy, procedures and controls; management aspects; legislation; case studies and models of security.

**Courses:** JS31, JS33

**Prerequisites:** JSB108, JSB211

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ JSB214 CONFLICT MANAGEMENT: ALTERNATIVE DISPUTE RESOLUTION

The ways in which individuals, communities, and whole societies respond to conflict has been and continues to be a rich source of study. Jerold Auerbach in his book *Justice Without Law* states that the way societies settle disputes and their choice of socially acceptable responses to conflict ultimately reveal our most basic values and indicate whether people want to avoid, encourage, suppress or resolve conflict.

**Courses:** JS31, JS33

**Prerequisite:** JSB108

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ JSB215 PUBLIC LAW 1: ADMINISTRATIVE LAW

The history of administrative law and the emergence at federal and state levels of statutory administrative and judicial review; legal principles in a social and political context; critical assessments of relevant legal structures and rules.

**Courses:** JS31, JS33

**Prerequisite:** JSB108

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ JSB217 CRIMINAL JUSTICE SYSTEMS – PERSPECTIVES OF PUNISHMENT

Introduction: scientific method; crime and society; four stages of reactions to crime; the shift in penal philosophy. Overview to the Correctional System: sociological and cultural implications; the correctional apparatus. Punishment: historical perspectives; classical/positivist dilemma; changing philosophies of punishment. The Prison: historical origins; antecedents of the penitentiary; historical perspectives – architecture, organisations, rules and regulations; philosophies. Contemporary Thinking in Corrections: conflicting models and their implications. Human Rights Perspectives and Minimum Standards: Human Rights conventions; Australian minimum standards. Probation and Parole: historical development.

**Courses:** JS31, JS33

**Prerequisite:** JSB108

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ JSB218 TRADITIONAL PUNISHMENT PROCESSES & ISSUES

Contemporary Penal Processes: the concept of Remand; security issues; prisoner placement in relation to placement; entering prison; assessment procedures; discipline and legal procedures inside; discharge mechanisms and processes. Statutory Decision Makers: boards, ombudsman, official visitors. Detention of Children in Jails: confinement and the inmate social system. Community Corrections Processes: community corrections centres; home detention; probation; parole; legal obligations and mechanisms. Interaction with general community programs.

**Courses:** JS31, JS33

**Prerequisite:** JSB108

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ JSB220 INTELLIGENCE ACTIVITY: LAW, MORALITY & THE MEDIA

Examines the relationships and responsibilities of the intelligence professional in society through analysis of intelligence and security practices and conventions from the perspectives of the law, morality and the media. Students examine: the nature of intelligence and protective security and their place in contemporary Australian society; laws and other instruments which protect individuals and their activities against unlawful intelligence and security actions and operations; human rights issues (Freedom of Information, Geneva Conventions and Protocols, etc.); the concepts of the right to know and need to know; perspectives on morality relative to personnel vetting processes, intelligence collection activities, research practices, current and archival intelligence records, investigations, interviewing and interrogation, private security industry, restricted access, and counterintelligence; the impact of investigative and public affairs reporting on security; the media's right to communicate intelligence to the public.

**Courses:** JS31, JS33

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ JSB221 INTELLIGENCE & NATIONAL SECURITY

Students examine the concept of national security and develop a basic understanding of the control, functions, roles and responsibilities at the national level in the Australian context. Comparative studies of overseas intelligence and security systems ensure students develop a broader understanding of national security through appreciation of different concepts and context. Case studies illustrate: abuses of intelligence and security (eg. political and ideological); intelligence failures; intelligence successes and changes in concepts of national security over the past fifty years. Issues which constitute actual and potential threats to national security in Australia.

**Courses:** JS31, JS33

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ JSB222 MANAGEMENT OF PROTECTIVE SECURITY

The security function and its performance are considered under a series of topics: formulating a security

policy and monitoring its performance; responsibility for security; employment of security staff; training security staff; security of records and reports; conducting surveys and report writing; security of building and sites; conference security; security and control of road transport; fire and accident prevention; aids to security; professional bodies; and law and practice.

**Courses:** JS31, JS33

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ JSB223 INTELLIGENCE, ORGANISATIONS, PERSONNEL & OPERATIONS

Students examine the various types of intelligence and protective security organisations from the perspective of the 'essentials of an intelligence system'. Using defined characteristics of the intelligence professional and the principles of intelligence and security, students evaluate the selection procedures, selection criteria and management for research analysts, administrative staff, counterintelligence and protective security personnel, technical specialists and generalists for a range of organisational types. Students: design systems, establish and resource them, and identify direction required to achieve defined organisational goals; and establish and critically examine assessment criteria for efficiency and effectiveness of the various systems. The concept of an intelligence (and security) operation is examined together with all factors which influence decision-making relative to targets and resources. Ethics, the law and political considerations feature in operational studies.

**Courses:** JS31, JS33

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ JSB230 PROTECTIVE SECURITY IN AUTOMATED SYSTEMS

Principles of protective security are applied to automated systems. Intelligence production is examined through existing data collection, collation and analysis programs (including computerised investigation aids). The unit addresses: the threat to automated systems (eg. espionage, sabotage, coercion, fraud); available security products; studies of hardware and software security, access controls, networks, data transmission security, and maintenance controls; planning of secure sites; case histories and methods by which security can be breached; and future directions in law enforcement technology and computers.

**Courses:** JS31, JS33

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ JSB301 LAW OF EVIDENCE & INVESTIGATION

Professionals involved in the fields of law enforcement and justice administration are frequently required to exercise investigative skills. This unit will provide students with a clear understanding of the law relating to the gathering of evidence, interrogation and admissibility of evidence in court. Study will include an examination of the general principles of judicial evidence, witnesses, rules of evidence, admissions and confessions. Issues of evidence of current importance eg issues arising out of enquiries such as 'Operation Trident' enquiry will also be explored.

**Courses:** JS31, JS33

**Prerequisites:** JSB201, JSB204

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ JSB302 IDEOLOGY, ETHICS & JUSTICE

A critical examination of the notions and related concepts of ideology, ethics and justice with regard to their heuristic value and utility in providing a basis for

social transformation. The nature of the various ideologies at both political and institutional levels in western society will be explored with specific emphasis on ideology within the legal and police cultures and how such considerations shape and constrain the notion of justice. Generally, the focus will be on integrating ethical reflection with application to various spheres of society in relation to law, policing, health, welfare and the environment.

**Courses:** JS31, JS33

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ JSB303 HUMAN DYNAMICS: THE JUSTICE PROFESSIONS

This unit is designed to acquaint student with the nature of the unique stresses within the justice professions and law enforcement agencies and to equip students with coping skills. Consideration will be given to examination of the phenomenon of stress and its effects on individuals, the nature of conflict and its resolution, personal assertiveness and to negotiation skills. Theories and practical aspects of counselling will also be examined. Student will be required to undertake independent research study.

**Courses:** JS31, JS33

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ JSB304 CRIMINOLOGY 2

Contemporary criminological constructs and debate; theories of punishment and sentencing; reforming the criminal justice system.

**Courses:** JS31, JS33

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ JSB310 ORGANISED CRIME

The apparent growth of organised crime, both nationally and internationally, in recent years has resulted in a deepening commitment on the part of the law enforcement agencies to its suppression. Although not confined to the association with illicit drugs, the so-called drug trade is a major enterprise behind the proliferation of organised crime. Another consequence of organised crime is the development of corruption through the diverse levels of society. Students therefore will gain an understanding of the historical development, social perceptions and consequences and the perceived extent of organised crime. Students will also consider the strategies employed to combat organised crime including the extent of investigations and/or Commissions of Inquiry documented to date.

**Courses:** JS31, JS33

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ JSB311 PROTECTIVE SECURITY ISSUES & PRACTICE

Personnel, material, physical and information security are the main areas with protective security. This unit covers the methods and techniques for the collection of information and its management and analysis. Students conduct formal audits and complete written reports on their findings. Planning and controlling the flow of information; anacapa, scan and other analysis tools will be studied.

**Courses:** JS31, JS33

**Prerequisites:** JSB108, JSB211, JSB213

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ JSB312 APPLIED POLICING RESEARCH PROJECT

This Project Study unit allows students undertaking the Law Enforcement Professional Minor to study a topic of personal academic interest which is not otherwise available as a formal subject in the area of policing. This unit differs from other units within the

professional minor in that there will be a minimum of scheduled lectures and the initiative to choose the topic and to organise the project must come from the student. Students choose a research topic related to contemporary law enforcement issues or activities.

Courses: JS31, JS33      Prerequisite: JSB108  
Credit Points: 12      Contact Hours: 3 per week

### ■ JSB313 INTELLIGENCE RESEARCH – ISSUES, PROCEDURES & PRACTICE

Addresses major intelligence issues, intelligence and related security procedures and professional practices. The concept of intelligence in this unit is 'that which confers an advantage' in any professional context. Drawing on knowledge and cognitive skills developed in JSB211, JSB213, and JSB311, students apply process methodology: in examining specific societal issues; in recognising different intelligence 'research' procedures for specific issues; and in practical analysis of selected issues. They examine issues from the strategic research perspective: terrorism, illegal drugs, fauna smuggling, organised crime (operating in, or having the potential to operate in Australia), corporate crime, community crime and areas of concern, environmental matters, illegal immigration, national defence and foreign intelligence activities. Students demonstrate knowledge of issues and procedures through selecting two areas for in-depth study and presentation as seminar papers.

Courses: JS31, JS33  
Prerequisites: JSB108, JSB211, JSB213, JSB311  
Credit Points: 12      Contact Hours: 3 per week

### ■ JSB314 PUBLIC LAW 2: HUMAN RIGHTS

This unit is of central importance in any course about law and the administration of justice. It will provide a basis for the examination of some of the main issues of human rights and how this will effect the operation of law. Its focus will be upon current issues in Australia but set in a wider international context. More particularly it relates these themes to certain disadvantaged groups, including aborigines, women, ethnic minorities and children. Content will include: the nature of human rights; existing Australian legislation on human rights; civil and political rights; economic, social and cultural rights.

Courses: JS31, JS33  
Prerequisites: JSB108, JSB214, JSB215  
Credit Points: 12      Contact Hours: 3 per week

### ■ JSB315 CURRENT ISSUES IN ADMINISTRATIVE LAW & JUSTICE

Current issues in the area of administrative law. The unit will raise methodological issues and move student into research action directed at substantive administrative law and justice issues.

Courses: JS31, JS33  
Prerequisites: JSB108, JSB215  
Credit Points: 12      Contact Hours: 3 per week

### ■ JSB317 PUNISHMENT SYSTEMS IN ACTION

The work setting: the impact of organisational factors on staff; managerial styles; inmate/staff relations; staff/staff relations; custodial work – conflicts and techniques. Special groups: persistently recalcitrant prisoners; mentally disturbed prisoners; the criminally insane; life sentenced prisoners; inadequate prisoners; dangerous prisoners; victims inside; young offenders; women, indigenous people; protection – self and others. 'Treatment' and the correctional institution: organisation of treatment strategies; sentence management; specialist personnel – medical,

psychiatry, psychologist, social/welfare workers, educationist; the chaplaincy. Correctional officers: role as change agents.

Courses: JS31, JS33      Prerequisite: JSB108  
Credit Points: 12      Contact Hours: 3 per week

### ■ JSB318 CONTEMPORARY ISSUES & TRENDS IN MODERN PUNISHMENT ADMINISTRATIONS

Evaluations of the models of penology. Controversial issues in corrections: death penalty; conjugal rights; homosexuality; aides and prison life; therapeutic communities. Returning to the community: reintegration difficulties; furloughs. Recidivism. The victim's place in the penal system. Society's perception/influence on prison: retribution; punishment; rehabilitation; protection. Fiscal constraints and overcrowding. Hidden agenda of imposing criminal status. Measuring success. Evaluation of the overall effectiveness of the penal system – present and future. International trends. The future prison.

Courses: JS31, JS33      Prerequisite: JSB108  
Credit Points: 12      Contact Hours: 3 per week

### ■ JSS001 THE LAW & LEGAL INSTITUTIONS

This unit will provide students with a sound knowledge of relevant legal institutions and procedures, as well as assist students to develop an ability to analyse and critique both the strengths and weaknesses inherent in our legal system. In so doing, the unit will trace the development of law in Australia from its early beginnings to the present, as an outcome of meeting the needs of a changing society.

Courses: ED50, JS31  
Credit Points: 12      Contact Hours: 3 per week

### ■ JSS002 LAW OF CONTRACT

The development of the law of contract; law governing the formation of contracts; application of the principles of contract law; matters affecting the validity of contracts; remedies for breach of contract; role of equity in modifying common law rules of contract; rational and objective methods in analysis sociolegal issues in contracts.

Course: ED50  
Credit Points: 12      Contact Hours: 3 per week

### ■ JSS003 LAW OF TORTS

The theoretical bases of Law of Tort in Australia; different types of tort and remedies; application of Law of Tort to case studies; examination of principles through specific decisions in Tort; Tortion remedies available within the social context.

Course: ED50  
Credit Points: 12      Contact Hours: 3 per week

### ■ JSS004 CRIMINAL LAW & PROCEDURE

The theoretical basis of Criminal Law in Queensland; application of the law to case studies; use of rational and objective methods when examining legal issues; how criminal law operates in practice within a legal and social context; analysis of the balance between the rights of citizens and police powers.

Course: ED50      Prerequisite: JSS001  
Credit Points: 12      Contact Hours: 3 per week

### ■ JSS005 INDIVIDUAL LEGAL RESPONSIBILITIES

Society demands certain responsibilities from persons classed as adult. Rights and duties fall to the adult person in some of the most important aspects in the accepted lifestyle in our society in terms of housing, relationships and employment. These responsibilities



will encompass the majority of adult life. A reasoned analysis of the legal responsibilities involved in housing, marriage and employment is essential.

**Courses:** ED50, JS31 **Pre/Co-requisite:** JSS001  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ JSS006 INTRODUCTION TO LAW & SOCIAL JUSTICE

The tradition of law as it has evolved in a variety of socio-historical settings as well as the evolution of the specific British/Australian tradition of law; how different concepts of law have evolved; the impact of different views of human nature, political values, and philosophical values on the role of justice and society.

**Course:** ED50 **Prerequisites:** JSS001 and JSS003  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAB261 LITERATURE & EDUCATION 2

Continuation of LAB260. Exploring how the language of childhood experiences and everyday interaction are translated into art forms in novels, plays and poetry. Examination of how the literature of different times and cultures reflects that culture. Students have the opportunity to concentrate on the study of literature or on the development of their own writing.

**Courses:** ED41, ED51 **Prerequisite:** LAB260  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAB262 LITERATURE & EDUCATION 3

This advanced unit requires students to use the work done in previous units in three ways: to engage in an area of specialised study not completely covered in earlier units; to select an aspect of their specialised study for independent reading and research over a range of genre and styles; and to present their work to their peers in a seminar format.

**Courses:** ED41, ED51 **Prerequisite:** LAB261  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAB270 LOTE EDUCATION

The development of classroom applications, strategies, resources, evaluation techniques for the teaching of languages other than English, through an application of knowledge from prerequisite units.

**Course:** ED41 **Prerequisites:** HUB419, LAB230  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ LAB320 STUDIES IN LANGUAGE

The language basis in current approaches to the teaching of English; nature and function of language; dynamics involved in interactive situations; appropriateness of language forms used in various social contexts; educational implications of linguistic diversity within the community; recognition of the developmental features of adolescent language.

**Course:** ED50  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAB321 WRITING WORKSHOP

This unit is based on contemporary understanding of writing. The student, as writer, uses all the language modes in social contexts (either genuine or simulated) to lead to writing in a range of situations. Engagement in these writing situations is designed to bring about personal understanding of the following: the nature of the writing process; the influence of audience and purpose on the final written product; the range of genres (or forms) falling within the writing activity.

**Courses:** ED50, ED51 **Prerequisite:** LAB320  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAB322 LITERATURE IN TEACHING

Literature teaching in historical perspective; recent developments in theory; poetry in the senior school;

teaching drama in the senior school; teaching the novel in the senior school; shorter works (novellas, short stories) and their use in the English curriculum.

**Course:** ED50  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAB323 YOUNG ADULT LITERATURE

The scope and nature of young adult literature; strategies for evaluation and selection; recent research into adolescents' reading needs, interests and responses; using young adult books in the curriculum.

**Course:** ED50 **Prerequisite:** HUB100  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAB325 ENGLISH CURRICULUM STUDIES 1

This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50  
**Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAB326 ENGLISH CURRICULUM STUDIES 2

This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50 **Prerequisite:** LAB325  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAB327 FILM & MEDIA CURRICULUM STUDIES 1

This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50  
**Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAB328 FILM & MEDIA CURRICULUM STUDIES 2

This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50 **Prerequisite:** LAB327  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAB329 LOTE CURRICULUM STUDIES 1

This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the

curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50

**Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB330 LOTE CURRICULUM STUDIES 2

This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50

**Prerequisite:** LAB329

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB331 LANGUAGE PROGRAMMING & ASSESSMENT

Develops an understanding and ability to design programs for promoting and monitoring individual language development through the study of: a structure and process for programming; objectives as a framework for programming and assessment; language resources for classroom use; classroom program development; and monitoring effectiveness.

**Courses:** ED50, ED51

**Prerequisite:** LAB338

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB332 CHILDREN'S LITERATURE IN THE PRIMARY CURRICULUM

Explorations of the role of children's literature in the primary school; criteria for selecting children's literature; exploration of the various literary genres; leading to the use of literature as an integrating device in the development of programs in the primary school.

**Course:** ED51

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB333 LANGUAGE IN KEY LEARNINGS

This unit will extend students knowledge of the relationship between language and learning and explore further the role of language across the curriculum, language in critical literacy and assessment.

**Course:** ED51

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB334 PRIMARY LOTE CURRICULUM STUDIES

This unit introduces concepts and skills in LOTE curriculum and methodology and prepares appropriately qualified students to teach French, German, Indonesian or Japanese in the upper primary school.

**Course:** ED51

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB335 LITERATURE IN TEACHING

Reading, literary response, and literature teaching in historical perspective; redefinitions of literature; reading practices and positions; contemporary approaches to integrating the teaching of reading and writing; issues in the literature classroom eg. criteria for text selection, censorship, and levels of response.

**Course:** ED51

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB336 LINGUISTICS IN TEACHING

This unit complements Literature in Teaching by providing a systematic study of linguistics, and in

particular Systemic Functional Linguistics, in a range of language learning settings at home and at school.

**Course:** ED51

**Prerequisite:** LAB335

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB337 WORKSHOP FOR WRITERS

Develops an understanding an ability to compose a range of texts for presentation in spoken, written, dramatic or audio-visual presentation. Students are involved in: the exploration of relevant personal and social issues; the composition and critical analysis of a range of texts; and reflection upon the language features and processes appropriate for composing and presenting effective texts.

**Course:** ED51

**Prerequisite:** LAB336

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB338 CLASSROOM LANGUAGE LEARNING

Promotes an understanding and ability to develop language learning activities, process and strategies through the study of: a functional view of language; the concept of genre, the child as a language learner; resources for language learning; strategies for promoting mastery of genre and associated language.

**Course:** ED51

**Prerequisite:** EDB324

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB410 LANGUAGE CURRICULUM ISSUES

Designed for primary and secondary teachers; involves a critical examination of the issues underpinning language education today and an action research project into classroom innovation or a detailed child study of language development.

**Course:** ED26

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB440 RECENT DEVELOPMENTS IN THE TEACHING OF WRITING

Development of writing in the light of the language in use model, recent research, and classroom practice. It is designed for the teacher P-12. Students are expected to develop their own folio of writing, an understanding of current approaches to writing curriculum, and writing programs for their classrooms.

**Course:** ED26

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB441 CHILDREN'S LITERATURE

Evaluative criteria in children's literature; genres; teaching strategies for promoting the use of children's literature; reader response theories.

**Course:** ED26

**Prerequisite:** Language arts and literature studies at Diploma of Teaching level.

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB442 TUTORING PARENTS AS LITERACY TUTORS

Parents are the most valuable resource available to teachers in the nineties. Today, with more emphasis on involving parents in all areas of decision making in schools, it is vital that teachers can communicate proficiently with parents of all educational and socioeconomic backgrounds. This provides background knowledge and practice in the skills and knowledge required for successful tutoring of parents as literacy tutors of their children.

**Course:** ED26

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LAB443 TRENDS IN THE TEACHING OF READING

Provides students with the opportunity to extend their understanding of the reading process; examines cur-

rent views about reading in order to identify key concepts of the theory; implications for classroom practice are drawn; identifies factors which influence readers and texts; the roles these play in the understanding of the meanings made; develops learning situations based on these understandings.

**Course:** ED26

**Prerequisite:** Studies in the teaching of reading at Diploma of Teaching level.

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAB444 LEARNING TO READ THROUGH READING/WRITING

Development of the teachers' understanding of the importance of teaching children how to use language to learn; recent research into the topic, a range of strategies for empowering children to use language to learn; the requirement to apply this knowledge in a classroom setting.

**Course:** ED26

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAB445 LANGUAGE LEARNING THROUGH FLIP

This unit is designed for students who fulfil guidelines 6.1 and 6.2 of FLIP. As well as presenting a learning log, students develop an action research project in language/literacy and report on that project (preferably in a symposium). In their report, students are expected to display a critical understanding of the issues in language curriculum relevant to their research.

**Course:** ED26

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAB446 GRAMMAR FOR WRITERS

Designed to help teachers develop some systematic knowledge about language and grammar in particular. It looks at the questions: What is grammar?; What grammars are available to us? It then focuses in some detail on systemic functional grammar.

**Course:** ED26

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAB490 RECENT DEVELOPMENTS IN LANGUAGE/READING

The nature of language; functions of language; language development; oracy and literacy and their interrelationships; planning and implementation of a language arts unit or program.

**Course:** ED26 (Upgrading)

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAN601 FOUNDATIONS OF ENGLISH/ LANGUAGE ARTS EDUCATION

Theoretical and historical perspectives on the development of English/language arts curricula; current debates, theory and research in the teaching of reading, writing, listening, speaking and viewing in the context of the primary and secondary classrooms; programming and assessment; continuity.

**Courses:** ED11, ED13

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAN602 LITERACY & SCHOOLING

Theoretical, historical and cultural models of literacy; literacy as a contemporary social and educational problem; literacy, gender and class; literacy and minority groups; literacy and changing theories of reading and writing; literacy and the curriculum; unit-specific literacies and whole-school literacy policies.

**Courses:** ED11, ED13

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAN604 CONTEMPORARY APPROACHES IN WRITING

Explores the role of writing in achieving the goal of 'effective literacy' in schools and in post-compulsory education; examines the evolution of approaches to writing, writing development of individuals, and writing across the curriculum areas with a special focus on grammar, especially Systemic Functional grammar; appropriate classroom applications.

**Courses:** ED11, ED13

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAN608 SECOND LANGUAGE ACQUISITION

Exploration of the major theories and research in the area with particular reference to instructed second language acquisition; individual differences in SLA and the linguistic environment for language acquisition/learning.

**Courses:** ED11, ED13

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAP401 ENGLISH CURRICULUM STUDIES 1

Introduction to English curriculum and its role in secondary education; examination of relevant English syllabuses and demonstration of ways to translate language learning principles into lesson plans and curriculum units.

**Course:** ED37

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAP402 ENGLISH CURRICULUM STUDIES 2

Continuation of LAP401. Content, processes and materials appropriate to the planning and implementation of English programs; methods of assessment; current professional issues in English teaching.

**Course:** ED37

**Prerequisite:** LAP401

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAP403 LOTE CURRICULUM STUDIES 1

Current theories and practice in LOTE teaching/learning with particular reference to the Queensland context.

**Course:** ED37

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAP404 LOTE CURRICULUM STUDIES 2

Continuation of LAP403. Development of a practical theory of teaching based on an understanding of the LOTE context in Queensland; development of language programs and teaching resources which are responsive to the diverse needs of learners.

**Course:** ED37

**Prerequisite:** LAP403

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAP405 FILM & MEDIA CURRICULUM STUDIES 1

Introduction to the Film and Media curriculum and its role in secondary education; examination of relevant media syllabuses and demonstration of ways to translate concepts in media education into lesson plans and curriculum units.

**Course:** ED37

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LAP406 FILM & MEDIA CURRICULUM STUDIES 2

Continuation of LAP405. Content, processes and materials appropriate to the planning and implementation of Media Studies programs; methods of assessment; current professional issues in media teaching.

**Course:** ED37

**Prerequisite:** LAP405

**Credit Points:** 12 **Contact Hours:** 3 per week

■ **LAP407 ENGLISH AS A SECOND LANGUAGE CURRICULUM STUDIES 1**

This unit introduces students to the design and development of curriculum, materials and resources to meet the general and specific needs of learners who are non-native English speakers and who require higher English language proficiency levels for study purposes.

Course: ED37

Credit Points: 12      Contact Hours: 3 per week

■ **LAP408 ENGLISH AS A SECOND LANGUAGE CURRICULUM STUDIES 2**

This unit builds on the content of LAP407 showing students how curriculum, materials and resources are implemented through appropriate approaches, methodologies and techniques for individuals, groups or whole classes of learners who are non-native speakers of English.

Course: ED37

Prerequisite: LAP407

Credit Points: 12      Contact Hours: 3 per week

■ **LAP440 LANGUAGE & LITERACY 1**

The role of language in society; how language changes according to the purpose for which it is used as well as the social and cultural contexts; the functions and structure of a range of genres; the contribution of the home to children's language development.

Course: ED36

Credit Points: 12      Contact Hours: 3 per week

■ **LAP441 LANGUAGE & LITERACY 2**

Development of a range of strategies/activities which promote language learning in a classroom; techniques/instruments for observing and monitoring language growth. Preparation and development of a unit of language experiences for a class.

Course: ED36

Prerequisite: LAP440

Credit Points: 12      Contact Hours: 3 per week

■ **LAP501 FOUNDATIONS OF TEACHER-LIBRARIANSHIP**

Philosophy and theories of teacher-librarianship and interpersonal communication necessary to be responsive to the needs of school communities and emerging educational trends.

Course: ED25

Credit Points: 12      Contact Hours: 3 per week

■ **LAP502 CURRICULUM & RELATED RESOURCES**

Current curricula P-12; content and processes; evaluative criteria for the selection of materials across the curriculum; basic reference and information sources; collection development.

Course: ED25

Credit Points: 12      Contact Hours: 3 per week

■ **LAP503 LITERATURE & LITERACY: RESOURCES & STRATEGIES**

Resources and strategies for teacher-librarians to enable them to work with teachers in language across the curriculum; developmental approach to reading and the selection of materials; genre studies; reader response theories; promotion strategies.

Course: ED25

Credit Points: 12      Contact Hours: 3 per week

■ **LAP504 SCHOOL LIBRARY RESOURCES: ORGANISATION & ACCESS**

School library administration and organisation systems, including computer applications; bibliographic organisation and implications for self-directed learning; organisation and maintenance of, and access to,

resources including equipment; field program, including school experience (3 weeks).

Course: ED25

Credit Points: 12      Contact Hours: 3 per week

■ **LAP505 COMMUNICATION & MANAGEMENT IN SCHOOL LIBRARY RESOURCE CENTRES**

Studies in management of school library resource centres; goal setting; time management, communication models; interpersonal and organisational communication patterns; problem solving and conflict management; innovation, intervention and change; advocacy and promotion; writing for a purpose.

Course: ED25

Credit Points: 12      Contact Hours: 3 per week

■ **LAP506 INFORMATION SERVICES FOR SCHOOLS**

Implications of the information age; advanced reference skills; computer-based information services with in-depth study of two, selected by the student.

Course: ED25

Credit Points: 12      Contact Hours: 3 per week

■ **LAP507 AUSTRALIAN LITERATURE FOR YOUNG PEOPLE**

History of Australian children's books to 1959; development and critical assessment of Australian children's literature since 1960 in book and film.

Course: ED25

Credit Points: 12

■ **LAP509 DIRECTED STUDY**

An individually designed unit which allows students, under the staff supervision, to increase their knowledge relevant to teacher-librarianship.

Course: ED25

Credit Points: 12

■ **LAP510 INTERACTIVE TECHNOLOGIES IN INSTRUCTION**

Interactive communications and resources; videodisk; teleconferencing; computer conferencing; electronic mail; planning an instructional program.

Course: ED25

Credit Points: 12

■ **LAP511 LITERACY EDUCATION & LIBRARIES**

Educational role of libraries; literacy and basic education programs; literacy resource collections; multicultural library services; international developments.

Course: ED25

Credit Points: 12

■ **LAP512 LITERATURE FOR YOUNG PEOPLE**

Historical development of imaginative literature; evolution of books for young people in present social and cultural contexts; writers and illustrators from European, Commonwealth and American countries; teaching strategies for eliciting reader responses.

Course: ED25

Credit Points: 12

■ **LAP513 MEDIA LITERACY & THE SCHOOL**

Mass media communication processes and their implications for teaching and learning; semiotics; influences of media on people; advertising and mass media research techniques; media ownership issues; future trends in mass media technologies.

Course: ED25

Credit Points: 12

### ■ LAP514 REFERENCE SERVICES & MATERIALS

Extension of studies in reference and information services relevant to schools; reference interview; using an existing school's resource collection; knowledge and use of information agencies and services external to the school. External with 3-day study school or six 2-hour evening sessions.

**Course:** ED25  
**Credit Points:** 12

### ■ LAP515 RESOURCE SERVICES FOR SPECIAL NEEDS

Resource services designed for students with special needs relating to physical or intellectual impairments, socio-economic or cultural circumstances; the theory and practice of mainstreaming; the inclusive School Resource Centre.

**Course:** ED25 **Prerequisite:** LAP502  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAP516 SPECIAL SEMINAR

Study of a specific aspect of teacher-librarianship, the unit to be determined by the University according to need and/or the availability of special expertise.

**Course:** ED25  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAP517 STORYTELLING

Function of the story and storytelling in learning and teaching; preparing, developing and delivering stories; resources; storytelling across the curriculum.

**Course:** ED25  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAP518 VISUAL LITERACY & RESOURCE DESIGN

Visual literacy; learning styles; interpretation; design and evaluation of visually-based resources.

**Course:** ED25  
**Credit Points:** 12

### ■ LAP521 PROGRAM DEVELOPMENT, IMPLEMENTATION & EVALUATION IN ADULT LITERACY

Existing adult literacy programs and resources; the language and communication principles underlying effective literacy programs and specific programs for defined adult literacy needs.

**Courses:** ED22, ED66  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAP522 SPECIFIC GROUPS OF ADULT LITERACY LEARNERS

The characteristics of the literacy problems, needs and applications and the different learning styles of specific adult groups defined as having limited literacy: non-native English speakers; physically disabled; intellectually disabled; emotionally disabled.

**Courses:** ED22, ED66  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAP523 UNDERSTANDING LITERACY – UNDERSTANDING ADULT LITERACY

The extent, manifestations, complex causes and personal and social effects of adult literacy problems in Australia: tracing those problems within a framework of changing definitions of literacy and current policies and provisions for adult literacy.

**Courses:** ED22, ED66  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAP524 TEACHING & LEARNING IN ADULT LITERACY

The diversity of adult learning styles, the relationships between oral language, reading, writing and visual

literacy, the uses of literacies as social practices, the role of libraries in adult literacy, and methods of assessing both adult literacy development and resources for adult literacy teaching.

**Courses:** ED22, ED66  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAP525 ISSUES IN LANGUAGE TEACHING

The teaching implications of a number of literacy issues, such as: intergenerational literacy; discourse structures; language and power; the political nature of literacy; critical literacy; plain English; workplace literacies; the needs of NESB students.

**Course:** ED22  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAP526 INDEPENDENT PROJECT IN ADULT LITERACY

Students explore a particular perspective on adult literacy of interest and relevance to them and present their findings in a student symposium. Topics which may be chosen could include: adult literacy in correctional institutions; urban aboriginals and adult literacy; technical literacy/competency-based training; delivery of adult literacy to remote locations.

**Course:** ED22  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAP601 LANGUAGE IN USE

Formal systems of language: the sentence, including phonology, morphology, syntax and semantics; formal systems of language beyond the sentence, including discourse, cohesive pragmatics and paralinguistic. Language in social-cultural contexts; standard and non-standard varieties of language, including dialects, sociolects and language in contact.

**Course:** ED60  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAP602 LANGUAGE TEACHING IN PRACTICE

Strategies for observation of second language lessons; analysis of the linguistic content of a variety of lessons; application of these principles.

**Course:** ED60 **Co-requisite:** LAP601  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAP603 THE NATURE OF LANGUAGE LEARNING

Behaviouristic, cognitive and psychosocial explanations of second language acquisition/learning; the effect of age; interlanguage and fossilisation; errors and error analysis; personality factors, cultural differences and environmental factors and language acquisition/learning; language proficiency; assessment.

**Course:** ED60  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LAP604 ESL MATERIALS & CURRICULUM

Implementation of a communicative syllabus response to the objective and subjective needs of particular learners; principles for the evaluation, selection and production of teaching materials.

**Course:** ED60  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LEB270 HUMAN RELATIONSHIPS EDUCATION

This elective has a dual focus: effective interpersonal communication by teachers as members of the school and community; and the curriculum and pedagogical process for teaching children. These curriculum programs focus on care, personal development, work

experience and community-based learning. Students undertaking this elective are introduced to these processes through lectures, seminars and workshops and appropriate field study experiences.

Course: ED41

Credit Points: 8

Contact Hours: 3 per week

### ■ LEB280 DEVELOPMENT & LEARNING ELECTIVE

Development and learning perspectives. A more in-depth understanding of specific psychological issues in education and their application to teaching.

Course: ED41 Prerequisites: LEB240, LEB241

Credit Points: 8

Contact Hours: 3 per week

### ■ LEB304 CHILDREN WITH SOCIAL & EMOTIONAL DIFFICULTIES

In this unit students will consider: the overview of social and emotional development, theories of social and emotional development, adult-child relationships and issues of authority and discipline; the socialisation of emotions, expression of emotions, emotional disturbances; self concept and self-esteem.

Course: ED51

Credit Points: 12

Contact Hours: 3 per week

### ■ LEB305 UNDERSTANDING CHILDREN WITH INTELLECTUAL DISABILITIES

Introduction to intellectual impairment, cognitive development delay, slow learners and the most prevalent conditions which include a degree of cognitive handicap; theory and practice relating to classroom responses in regular settings; assessment of functional attainments and planning learning in basic curriculum areas; second of four subjects which offer enhanced background in the mainstream integration of children with disabilities.

Course: ED51

Credit Points: 12

Contact Hours: 3 per week

### ■ LEB331 MAINSTREAMING CHILDREN WITH LOW INCIDENCE DISABILITIES

Students will be introduced to a wide range of low incidence exceptionalities (eg. sensory impairments, developmental delay and health impairments such as Epilepsy, Asthma and Hepatitis etc); methods of managing associated disabling conditions; implementation and evaluation of programming; support and referral services.

Courses: ED50, ED51, ED52

Credit Points: 12

Contact Hours: 3 per week

### ■ LEB332 TEACHING EXCEPTIONAL STUDENTS

Integrates a basic understanding and application of learning theory as it applies to exceptional populations. Focuses on specialised approaches to teaching particular exceptional groups. Provides an opportunity for development of specialist skills and resources in one of the following areas: (a) students with learning difficulties; (b) gifted students; (c) students with low incidence disabilities eg. hearing impaired, visually impaired or physically handicapped; (d) behaviourally or emotionally disturbed students.

Courses: ED50, ED51, ED52

Credit Points: 12

Contact Hours: 3 per week

### ■ LEB420 INTERPERSONAL PSYCHOLOGY IN EDUCATION

Historical development and major principles of interpersonal psychology; concepts related to the formation and development of interpersonal relationships; particular concepts and their application to education; interpersonal relationships with exceptional students;

emotionality; models of effective teaching; self-concept; small group development; applications of interpersonal psychology. Study school for external students strongly recommended.

Course: ED26

Credit Points: 12

Contact Hours: 3 per week

### ■ LEB421 APPLIED STRATEGIES IN CLASSROOM LEARNING

Contemporary theoretical approaches to human development and learning; dimensions and correlates of learning; developing teaching/learning strategies; gathering and interpreting information; consideration of a range of advanced teaching/learning strategies.

Course: ED26

Credit Points: 12

Contact Hours: 3 per week

### ■ LEB422 ADULT LEARNING

Contemporary theoretical perspectives and research in adult learning. Factors which influence learning. Application of theoretical perspectives to facilitate learning in adult educational environments.

Course: ED26

Credit Points: 12

Contact Hours: 3 per week

### ■ LEB430 CREATIVITY IN PROBLEM SOLVING

Creativity is an often advocated, loosely discussed, presumed phenomenon much sought after as an educational objective both in general and as curriculum specific. This unit aims to familiarise students with the history of this concept's emergence, its definitional problems, current theories and models, and to ensure that their presentation promotes the concept as an aspect of problem solving in personal development and pedagogical applications.

Course: ED26

Credit Points: 12

Contact Hours: 3 per week

### ■ LEB431 INNOVATIVE TEACHING STRATEGIES

Classroom strategies for all grade levels (preschool through TAFE/university) and subject areas, based on the principles of cooperative learning and offered as alternatives to 'chalk and talk'. Access to classroom or other structured learning group essential.

Course: ED26

Credit Points: 12

Contact Hours: 3 per week

### ■ LEB441 EDUCATIONAL COUNSELLING

The nature of counselling/helping in educational contexts; the educator as counsellor; characteristics of effective helpers, practical development of communications skills, building an empathic relationship; structuring the counselling process; application of some counselling theories to the educational contexts; practical sessions using educationally-based role plays to demonstrate effective use of the skills learned. Compulsory study school for external students. Incompatible with Studies in Counselling or equivalent at Diploma of Teaching level.

Courses: ED26, ED37, ED50, ED51, ED52

Credit Points: 12

Contact Hours: 3 per week

### ■ LEB442 ADVANCED EDUCATIONAL COUNSELLING

The major theoretical approaches to counselling are applied to problems and concerns arising in the educational context. Theories include: psychoanalytic, Adlerian, existential person-centered, Gestalt, transactional analysis, behaviour, rational-emotive, and reality. Skills and techniques associated with each major theory are presented and related to education-

ally-based problems and concerns. The effects and outcomes of counselling interventions.

**Course:** ED26

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LEB443 HUMAN SEXUALITY & LEARNING

Physical and psychological development; attitudes and beliefs about sex; sexuality and sex education in childhood and adolescence; sex roles; contraception; sexually transmitted diseases; sexuality, disability and illness; sexual abuse of children; sexual dysfunction; pregnancy; abortion; sex education in schools. Compulsory study school for external students.

**Course:** ED26

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LEB444 HUMAN SEXUALITY & DEVELOPMENT

Examines social and legal issues of human sexual behaviour; their impact on adult development and identity. Behaviours investigated are pregnancy, abortion, infertility, child sexual abuse, rape, pornography, prostitution and transexuality.

**Courses:** ED26, ED61

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LEB445 STUDIES IN ALCOHOL & OTHER DRUGS

Drug use, misuse and abuse covers a very wide range of substances and situations. This unit, rather than focus on lurid details of the street drug scene, aims at developing an awareness that supportive elements contributing to an overall drug education strategy need to be found in every part of the curriculum. While a range of strategies is encountered, some may not even mention drugs while others may help young people handle specific situations.

**Course:** ED26

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LEB446 PSYCHOEDUCATIONAL ASSESSMENT

Assessment techniques and strategies in the educational context; assessment of intelligence, academic skills, aptitude, personality; reliability, validity, test construction and standardisation procedures; the process of administering assessment instruments in schools; interpretation of test results and assessment data; using assessment data in programming and placement in educational institutions.

**Course:** ED26

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LEB448 WORKING IN TEAMS

Teachers, administrators, students, parents and other professionals in education, health, welfare, and law often work together in different team situations. Individual and group processes that lead to effective team building and teamwork within schools or between agencies are studied, along with practical applications relevant to professionals taking this unit.

**Course:** ED26

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LEB449 NEW PERSPECTIVES ON TEACHING & LEARNING

Contemporary theoretical perspectives and research in learning; factors which influence learning; applications of theoretical perspectives to facilitate learning in a range of educational environments.

**Course:** ED26

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LEN601 LEARNING & COGNITIVE DEVELOPMENT

Theories of cognitive development; the human information processing system; knowledge of the learning process and individual needs; a critical analysis and synthesis of major recent theories of cognition and learning as they apply to learning and teaching in an area of interest.

**Courses:** ED11, ED13

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LEN602 ADVANCED EDUCATIONAL COUNSELLING

The major theoretical approaches to counselling will be applied to problems and concerns arising in the educational context. Theories outlined include Psychoanalytic, Adlerian, Existential, Person-Centred, Gestalt, Transactional Analysis, Behaviour, Rational-Emotive, and Reality. Skills and techniques associated with each major theory will be presented and related to educationally based problems and concerns. The effects and outcomes of counselling interventions are investigated; ethical issues.

**Courses:** ED11, ED13

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LEN603 EDUCATIONAL COUNSELLING PROFESSIONAL PRACTICE

Explores the professional practices of educational counsellors working in the P-12 context; intervention, prevention, affective, and developmental programs; adolescent issues and career counselling; consultation: models, theories and practices; highlights self-management skills; discusses time management, program evaluation, accountability and decision-making.

**Courses:** ED11, ED13

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LEN604 PSYCHOEDUCATIONAL ASSESSMENT

Assessment techniques and strategies; assessment of intelligence, academic skills, aptitude, personality; reliability, validity, test construction and standardisation procedures; the process of administering assessment instruments; interpretation of test results and assessment data; in programming and placement.

**Courses:** ED11, ED13

**Credit Points:** 12      **Contact hours:** 3 per week

### ■ LEN605 LEARNERS WITH SPECIAL NEEDS

Special educational needs of school (P-12) and TAFE college learners arising from cognitive, behavioural and socio-cultural differences; diagnosing student functioning in cognitive, social-emotional, self-help and motor skill areas; developing teaching strategies suited to student learning styles; techniques of formative and summative assessment appropriate to student learning needs; mixed 'ability' teaching and learning.

**Courses:** ED11, ED13 **Incompatible with:** LEP523

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LEN606 REMEDIATING LEARNING DIFFICULTIES

Review of the research pertaining to significant learning difficulties among learners in schools (Years 1-12) and post secondary education; studies in language and learning; assessment and monitoring of curriculum tasks; test interpretation and development; related approaches to teaching, informed by principles derived from research in psycholinguistics, metacognition and approaches to learning.

**Courses:** ED11, ED13

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LEP515 HUMAN SEXUALITY & LEARNING

Physical and psychological development; attitudes and beliefs about sex; sexuality and sex education in childhood and adolescence; sex roles; contraception; sexually transmitted diseases; sexuality, disability and illness; sexual abuse of children; sexual dysfunction; pregnancy; abortion; sex education in schools; focuses on issues related to teaching human sexuality.

Courses: ED22, ED67

Credit Points: 12 Contact Hours: 3 per week

### ■ LEP516 HUMAN SEXUALITY & DEVELOPMENT

An examination of social and legal issues associated with human sexual behaviour and their impact on adult development and identity. Behaviours investigated are pregnancy, abortion, infertility, child sexual abuse, rape, pornography, prostitution and transsexuality. Focuses on issues related to teaching.

Course: ED67

Credit Points: 12 Contact Hours: 3 per week

### ■ LEP517 ETHICS & HUMAN RELATIONSHIPS EDUCATION

Philosophical approaches to human relationships; moral philosophy and education; development of an integrated and clearly articulated argument for a philosophy of human relationships education.

Courses: ED22, ED67

Prerequisite: LEP515

Credit Points: 12 Contact Hours: 3 per week

### ■ LEP518 HUMAN RELATIONSHIPS ACROSS THE LIFESPAN

The developmental processes; human development across the lifespan; development theory and research; development of human relations; the sociocultural context of development and relationships.

Courses: ED22, ED67

Credit Points: 12 Contact Hours: 3 per week

### ■ LEP519 INTERPERSONAL & PROFESSIONAL RELATIONSHIPS 1

An examination of the major concepts and models used to explain interpersonal relationship development, social influence and attitude change; the development of communication and counselling skills and theoretical understandings.

Courses: ED22, ED67

Credit Points: 12 Contact Hours: 3 per week

### ■ LEP522 INTERPERSONAL & SMALL GROUP TEACHING STRATEGIES

This unit is designed to provide human relationships educators with insight into the effects and usefulness of interactive and cooperative teaching strategies, and experience with their implementation.

Courses: ED22, ED67

Credit Points: 12 Contact Hours: 3 per week

### ■ LEP523 LEARNERS WITH SPECIAL NEEDS

Special educational needs of school (P-12) and TAFE college learners arising from cognitive, behavioural, sociocultural and physical disabilities and differences; learners with special educational needs; developing teaching/learning strategies suited to learners' needs. Participation in fieldwork experiences involves the investigation of the resource/support teacher's role in assisting students with special learning needs and collaborating with teachers and administrators.

Courses: ED24, ED75

Credit Points: 12 Contact Hours: 3 per week

### ■ LEP524 DEVELOPING RELATIONSHIPS & GROUPS

Overview of concepts relating to a model of interpersonal relationships; study of some human relationships concepts such as verbal and non-verbal interpersonal communication, power, influence, authority/control, trust and mistrust, confrontation and constructive resolution of conflict; interviewing and consulting skills; self concept studies; collaborative teaching and team building; students and teacher stress; assertion-related theory and skills; resource teacher as change agents for inclusive education.

Courses: ED24, ED75

Credit Points: 12 Contact Hours: 3 per week

### ■ LEP525 REMEDIATING LEARNING DIFFICULTIES

Review of significant learning difficulties among learners in schools (Years 4-12) and post secondary education in the areas of language/learning demands of the curriculum; composing and comprehending tasks as they relate to curriculum demands; test-wisdom, note taking, organisation, examination stress; applications of the content is strongly based on an adjunct model of service delivery.

Courses: ED24, ED75

Credit Points: 12 Contact Hours: 3 per week

### ■ LEP526 STUDY SKILLS, LITERACY & LEARNING

Review of significant learning difficulties among learners in schools (Years 1-12) and post secondary education; foundation studies in language and learning; assessment and monitoring of literacy related curriculum tasks; test interpretation and development; related approaches to teaching, informed by principles derived from psycholinguistics, metacognition and process approaches to literacy; adjunct model of service delivery.

Course: ED24

Credit Points: 12 Contact Hours: 3 per week

### ■ LPN300 RESEARCH DISSERTATION

A research dissertation of approximately 20,000 words. It is expected that the research dissertation relates to one of the core unit areas covered in the Graduate Diploma in Legal Practice and will have an applied law orientation. Examples of topics are: law and practice difficulties in staged resort development; analysis of judgement by default procedures and practices in the courts; jurisdictional issues and procedural difficulties in obtaining injunctive relief in the courts. Unit may be undertaken in various loads:

LPN300 = 24 credit points per semester

LPN301 = 48 credit points per semester

LPN302 = second 24 credit points per semester

LPN303 = 12 credit points per semester

LPN304 = second 12 credit points per semester

### ■ LSB001 INTRODUCTORY BIOLOGY

Designed for students who have not studied Senior Biology. It presents an overview of organisms with emphasis on the relationship between structure and basic biological function, including nutrition, excretion, reproduction and inheritance.

Course: SC30

Credit Points: 6 Contact Hours: 3 per week

### ■ LSB100 MICROBIOLOGY 1

As an introduction to the study of microbiology and biochemistry. The diversity of microbes is presented together with the various forms of microscopy used to study them. Important biological molecules, both inorganic and organic, are discussed with emphasis



on the mode of action of enzymes and their role in energy production. Detailed study of the morphology of eukaryotic cells, prokaryotic cells and viruses.

**Course:** LS36

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ LSB122 BIOLOGY 1

The structure, function and reproduction of living organisms at the molecular, cellular and whole organism levels; the interaction of organisms in communities, ecosystems and globally.

**Courses:** ED50, PU42, SC30

**Co-requisite:** LSB100 or Senior Biology

**Credit Points:** 12      **Contact Hours:** 5 per week

### ■ LSB130 ANATOMY 1

Structure of the generalised cell, epithelium, connective tissue, bone and cartilage, muscle tissue, nervous tissue, and cardiovascular system; the gross anatomical study of the skeletal, articular, and cardiovascular systems.

**Course:** LS36

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ LSB131 ANATOMY

Basic concepts of anatomy; overview of the structure of cells, body tissues, and body systems as well as aspects of surface anatomy which are relevant to human movement; musculoskeletal systems.

**Courses:** HM42, ME46

**Credit Points:** 12      **Contact Hours:** 6 per week

### ■ LSB132 CELL BIOLOGY

Cells viewed at the molecular level (membranes, proteins and nucleic acids); cells viewed at the microscopic level (membranes, organelles); cellular metabolism; cellular biophysics; cells in division (DNA, genes, chromosomes, protein biosynthesis); cells diversity.

**Course:** ME46      **Prerequisites:** LSB131, LSB231

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ LSB141 ANATOMY

A study of human anatomy of the body as a whole, including a detailed study of the skeletal system.

**Course:** PH38

**Credit Points:** 10      **Contact Hours:** 4 per week

### ■ LSB142 HUMAN ANATOMY & PHYSIOLOGY

A grounding in the principles of human anatomy and physiology for students not intending to continue with further study in this area. An introduction to the structure of the cell; organisation of tissues; chemistry of life; major systems that constitute the human body.

**Courses:** ED50, PU42, PU44, PU49, PH80

**Credit Points:** 12      **Contact Hours:** 5 per week

### ■ LSB151 HUMAN ANATOMY 1

See LSB130.

**Courses:** OP42, PU45

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ LSB161 BIOLOGY

An introduction to biology for students with no previous experience in the discipline. An overview of form and function in animal and plant systems; patterns and mechanisms of inheritance; fundamental ecological principles.

**Course:** OP42

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ LSB171 ANATOMY & PHYSIOLOGY 1

An integrated study of anatomy and physiology at the degree level. Emphasis is placed on gaining an ap-

preciation of the relationship between structure and function at the levels of cells, tissues, organs and organ systems, initially the morphology and physiology of cells and tissues is examined. The skeletal, muscular, nervous and integumentary systems.

**Course:** PU48

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ LSB181 ANATOMY

The general principles of anatomy; macroscopic and some microscopic and ultrastructures of the human body; introductory surface and regional anatomy in relation to systemic anatomy. This unit also focuses on the areas of anatomy relevant to nursing.

**Course:** NS40

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ LSB191 CLINICAL PHYSIOLOGY & PHARMACOLOGY

The physiological basis of the pathogenesis, clinical features and principles of treatment of the major disorders of body function.

**Courses:** NS40, NS48

**Prerequisite:** LSB281

**Incompatible with:** PNB116, or PNB758, or PNB340 + PNB540 + PND640, or PNB350 + PNB450 + PNB650.)

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ LSB210 QUANTITATIVE LABORATORY TECHNIQUES 2

The theoretical and practical aspects of instrumental analysis in the clinical laboratory. Topics include: glassware, plastics, balances, spectrophotometers, flamephoto-meters, auto-titrators, pH meters, specific ion meters, calculators and computers. Emphasis is throughout on the effective use of the instruments. Mathematical topics relevant to data analysis.

**Course:** LS36      **Prerequisites:** CHB142, PHB150

**Credit Points:** 12      **Contact Hours:** 5 per week

### ■ LSB221 INTRODUCTION TO PATHOLOGY

Application of scientific methods to the study of disease processes. Correct understanding and use of pathological terms and concepts.

**Course:** PH38

**Prerequisite:** LSB141

**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ LSB222 BIOLOGY 2

Macrobiology; populations of organisms, their interactions and association into communities, ecosystems, biomes and the global biosphere are studied in both qualitative and quantitative terms. The flow of energy and matter through the biosphere; the impact of humanity on this process; introduction to simple computer-based models of community ecology and ecosystem processes through practical sessions.

**Courses:** ED50, SC30

**Credit Points:** 12      **Contact Hours:** 5 per week

### ■ LSB230 ANATOMY 2

An extension of LSB130. An integrated course of lecturers and practicals dealing with the microscopic and macroscopic anatomy of the nervous, digestive, lymphatic, integumentary, respiratory, renal, haemopoietic, endocrine and reproductive systems.

**Course:** LS36

**Prerequisite:** LSB130

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ LSB231 PHYSIOLOGY

Introduces students to the basic concepts of physiology and pharmacology. It will provide an overview of the functions of body systems so that students can

understand biological disorders and pharmacological strategies which may be used in their treatment.

Courses: HM42, ME46

Credit Points: 12 Contact Hours: 6 per week

### ■ LSB232 CELL BIOLOGY

Introduction to cell structure and function in both eukaryote and prokaryote organisms; cell biology in relation to structure, function, systems, metabolism and differentiation in addition to basic molecular biology and genetic organisation; the molecular basis for genetic manipulation and other current advances based on molecular genetics.

Courses: ED50, SC30

Prerequisite: LSB122

Credit Points: 12 Contact Hours: 5 per week

### ■ LSB240 PHYSIOLOGY 2

Basic mechanisms: cells, fluids, electrolytes; energy metabolism; nutrients; transport mechanisms; blood; communication and control; excitable tissues. Control systems: nervous and endocrine.

Course: LS36

Prerequisite: LSB130

Credit Points: 8 Contact Hours: 4 per week

### ■ LSB241 ANATOMY

A course of lectures and practical exercises involving a basic, yet comprehensive, study of the anatomy and physiology of the various body systems.

Course: PH38

Prerequisite: LSB141

Credit Points: 10 Contact Hours: 4 per week

### ■ LSB251 MICROBIOLOGY

Basic microbiology with special emphasis on clinical microbiology; the characteristics of medically-important organisms, sterilisation and disinfection, host-parasite relationships, resistance and immunity, infectious diseases, diagnosis, selected microbial infections, chemotherapy and development of resistance by microorganisms.

Courses: NS40, NS48

Credit Points: 8 Contact Hours: 3 per week

### ■ LSB258 HUMAN ANATOMY & PHYSIOLOGY

An introduction to the principles of human biology for students intending to continue with further study of physiology. Each of the major systems that constitute the human body are examined to turn by the integrated study of both their anatomy and physiology.

Course: SC30

Credit Points: 12 Contact Hours: 5 per week

### ■ LSB261 SYSTEMATIC ANATOMY

An extension of LSB151. A unit dealing with the microscopic and macroscopic anatomy of the nervous, digestive, lymphatic, integumentary, respiratory, renal, endocrine, muscular and reproductive systems and the basic macroscopic anatomy of the lower limb.

Course: PU45

Prerequisite: LSB161

Credit Points: 8 Contact Hours: 3 per week

### ■ LSB281 PHYSIOLOGY & PHARMACOLOGY

The basic principles of normal body function; an introduction to pharmacology.

Courses: NS40, NS48

Incompatible with: PNB115, or PNB240 or PNB241

Credit Points: 8 Contact Hours: 3 per week

### ■ LSB300 MICROBIOLOGY 3

An introductory core unit in microbiology dealing with cytology, nutrition, genetics control of microbial populations and principles of taxonomy.

Course: LS36

Prerequisite: LSB100

Credit Points: 8

Co-requisite: LSB308

Contact Hours: 4 per week

### ■ LSB301 MICROBIOLOGY 1

Explores the diversity of microorganisms in public health microbiology providing a basic foundation in microbial classification, structure and function, reproduction, ecology; the economic, environmental and public health significance of microorganisms; groups examined include: viruses, bacteria, yeasts and fungi, algae, protozoa, helminths and arthropod vectors.

Courses: PU42, PU44

Credit Points: 8 Contact Hours: 3 per week

### ■ LSB302 ANIMAL BIOLOGY 1

Together with LSB402, this unit provides the foundation in animal biology that is essential for later specialist units in population studies and aquaculture. It deals with non-chordates and covers the following topics: taxonomy, systematics, nomenclature, classification, ultrastructure, life histories, structure and physiology, and evolutionary trends.

Courses: ED50, SC30

Prerequisite: LSB122

Credit Points: 12 Contact Hours: 5 per week

### ■ LSB305 BIOCHEMISTRY

The structures and functions of proteins, carbohydrates, lipids and nucleic acids, basic enzymology, mechanisms of cellular energy production and the role of ATP; the metabolism of carbohydrates, lipids and amino acids and the fundamentals of protein biosynthesis and molecular biology.

Course: PU49

Prerequisite: CHB259

Credit Points: 12 Contact Hours: 5 per week

### ■ LSB308 BIOCHEMISTRY 3

The structure and function of organic macromolecules. Topics include: the chemistry and function of proteins; enzymology; thermodynamics; bioenergetics; the structure and chemistry of carbohydrates and lipids.

Courses: ED30, LS36, SC30

Prerequisites: LSB232, CHB282 or CHB242

Credit Points: 12 Contact Hours: 5 per week

### ■ LSB310 QUANTITATIVE LABORATORY TECHNOLOGY 3

The unit deals with techniques encountered in the clinical laboratory. Topics include: immunoassay, enzymic analysis, electrophoresis, isoelectric focusing, gel filtration, ion exchange, and affinity chromatography. Emphasis is placed on the maintenance of accuracy, precision and quality control including statistical control in the clinical laboratory.

Course: LS36

Prerequisite: LSB210

Credit Points: 8 Contact Hours: 4 per week

### ■ LSB318 BIOCHEMICAL METHODOLOGY 3

A companion to LSB308 emphasising biochemical laboratory methods and practice and dealing with pH measurement and buffers, UV and visible spectrophotometry, chromatography, electrophoresis and isotope techniques.

Course: SC30

Prerequisites: CHB282, MAB237

Co-requisite: LSB308

Credit Points: 12 Contact Hours: 5 per week

### ■ LSB321 SYSTEMATIC PATHOLOGY

Diseases of the organ systems: cardiovascular, respiratory, alimentary, urogenital, nervous musculoskeletal, endocrine, haematologic and skin.

Course: PH38

Prerequisite: LSB221

Credit Points: 8 Contact Hours: 3 per week

**■ LSB322 PLANT BIOLOGY**

Plant biology: morphology, anatomy reproduction, taxonomy and identification in the plant kingdom; includes a small practical project; emphasis on species of economic value; a basis for further study in plant tissue culture, physiology and ecology.

Courses: ED50, SC30 Prerequisite: LSB122  
Credit Points: 12 Contact Hours: 5 per week

**■ LSB328 MICROBIOLOGY 3**

An introductory core unit of lectures and practical exercises in microbiology dealing with cytology, nutrition, genetics control of microbial populations and principles of taxonomy.

Courses: ED50, SC30 Prerequisite: LSB232 Co-requisite: LSB308  
Credit Points: 12 Contact Hours: 5 per week

**■ LSB331 ADVANCED ANATOMY**

Gross anatomy of the lower limb; anatomical knowledge fundamental to the understanding of the functional and applied aspects of podiatric anatomy; major topics: osteology, myology, arthrology, angiology and neurology.

Course: PU45 Co-requisite: LSB261 Co-requisite: PNB302  
Credit Points: 8 Contact Hours: 6 per week

**■ LSB332 PLANT PHYSIOLOGY 1**

Whole plant physiology and the functional systems of plants; an important unit for students continuing their studies in the plant biotechnology and ecology areas.

Courses: ED50, SC30 Prerequisite: LSB232  
Credit Points: 12 Contact Hours: 5 per week

**■ LSB340 PHYSIOLOGY 3**

Maintenance systems: gastrointestinal; cardiovascular; respiratory; and renal systems. Integrated mechanisms: sexual development; pregnancy; parturition; lactation; control of growth, energy intake, organic metabolism, body temperature, ECF osmolarity and volume, blood pressure and flow, respiration; response to tissue damage and foreign matter; adaptation to stress and exercise.

Course: LS36 Prerequisites: LSB230 and LSB240  
Credit Points: 8 Contact Hours: 4 per week

**■ LSB341 REGIONAL & SECTIONAL ANATOMY**

An expansion of the topics introduced in LSB141 and LSB241 to a detailed study of regional and sectional anatomy of the head, neck, thoracic, abdominal and pelvic regions of the human body.

Course: PH38 Prerequisite: LSB241  
Credit Points: 8 Contact Hours: 4 per week

**■ LSB351 HUMAN ANATOMY 3**

An extension of LSB151. Lectures and practicals on basic embryology, structure and development of the eye, and gross and microscopic anatomy of the major organ systems of the human body.

Course: OP42 Prerequisite: LSB151  
Credit Points: 10 Contact Hours: 5 per week

**■ LSB352 POPULATION ECOLOGY**

A broad theoretical background in the major concepts of plant and animal ecology; introduction to basic ecological models and modelling techniques. Topics include: ecology of single populations, life history and demography, interactions within and between populations, population regulation, management, behavioural ecology, energetics and biogeography.

Courses: ED50, SC30

Prerequisite: LSB222

Co-requisite: LSB362

Credit Points: 12

Contact Hours: 5 per week

**■ LSB358 PHYSIOLOGY 2S**

A course of lectures and practicals reviewing basic mechanisms: cells, fluids, electrolytes; energy metabolism; essential nutrients; transport mechanisms; blood; communication and control; excitable tissues; control systems: nervous and endocrine.

Course: SC30 Prerequisite: LSB242  
Credit Points: 12 Contact Hours: 5 per week

**■ LSB361 FUNDAMENTALS OF MEDICINE 1**

Provides students with the theoretical basis for an understanding of the process of medical care. Students must understand the nature of disease processes and the clinician's response to them in order to: design appropriate and efficient health information services for all types of health care facilities; communicate effectively with other health professionals involved in the care of patients; assist in research and quality assurance programs in the health services. A review of the important and frequently encountered diseases and disorders of the major body systems.

Course: PU48 Prerequisite: LSB271  
Credit Points: 12 Contact Hours: 3 per week

**■ LSB362 QUANTITATIVE METHODS IN LIFE SCIENCE**

Emphasises practical considerations of field and laboratory-based experimentation in life science, and provides experience in problem assessment, definition and formulation of testable hypotheses.

Courses: ED50, SC30 Prerequisite: MAB237 or MAB447  
Credit Points: 12 Contact Hours: 5 per week

**■ LSB370 DISEASE PROCESSES**

Principles of the study of disease and dealing with the causes and nature of circulation disorders, degenerative processes, metabolic and nutritional disorders, disturbances of development and growth, inflammation, infections and infestations, regeneration and repair, and neoplasia. Includes: the applications of general pathology to the study of diseases of the heart and circulatory system, digestive system, respiratory system, urogenital system, endocrine system, nervous system, haematologic system and skin.

Courses: LS36, OP42 Co-requisite: LSB306  
Prerequisite: LSB151 or LSB130  
Credit Points: 4 Contact Hours: 2 per week

**■ LSB371 BIOCHEMISTRY 4**

The structures and functions of proteins, carbohydrates, lipids and nucleic acids, basic enzymology, mechanisms of cellular energy production and the role of ATP; the metabolism of carbohydrates, lipids and amino acids and the fundamentals of protein biosynthesis and molecular biology.

Courses: OP42, PU45 Prerequisite: CHB242  
Credit Points: 8 Contact Hours: 4 per week

**■ LSB400 MICROBIOLOGY 4**

An extension of the core unit in Microbiology (LSB300), including aspects of microbial taxonomy, food and water microbiology, microbial ecology, industrial and agricultural microbiology, and the role of microorganisms as infectious agents.

Course: LS36 Prerequisite: LSB300 Co-requisite: LSB408  
Credit Points: 8 Contact Hours: 4 per week

**■ LSB401 MICROBIOLOGY**

An introductory core unit of lectures and practical exercises in microbiology dealing with cytology,

nutrition, genetics, control of microbial populations, and principles of taxonomy.

Course: PU45

Credit Points: 8 Contact Hours: 3 per week

#### ■ LSB402 ANIMAL BIOLOGY 2

This unit, together with LSB302, provides the foundation in animal biology essential for later specialist units in population studies and aquaculture. The unit deals with chordates and covers the following topics: embryology, development, structure, physiology, classification and major evolutionary trends.

Courses: ED50, SC30

Prerequisite: LSB302

Credit Points: 12 Contact Hours: 5 per week

#### ■ LSB405 MICROBIOLOGY

Introduction to different classes of microorganisms; basic characteristics of bacteria and bacterial nutrition; water microbiology; food preservation; food spoilage; food borne disease; food hygiene; microbial fermentation of foods.

Course: PU49

Prerequisite: CHB001

Co-requisite: CHB259

Credit Points: 12 Contact Hours: 5 per week

#### ■ LSB408 BIOCHEMISTRY 4

Aspects of carbohydrate metabolism in mammals, the chemistry and metabolism of lipids, amino acids, the chemistry and function of porphyrins, metabolic integration.

Courses: LS36, SC30

Prerequisite: LSB308

Credit Points: 12 Contact Hours: 5 per week

#### ■ LSB412 APPLIED ECOLOGY A

The theory and practice of methods used to determine and measure important population parameters and characteristics. The methods are an essential tool for the study of biological populations. Content includes estimation of population size, determination of dispersion patterns and detecting competition. Applications of methods are demonstrated using laboratory and field exercises.

Courses: ED50, SC30

Prerequisites: LSB352, LSB362

Credit Points: 12 Contact Hours: 5 per week

#### ■ LSB418 BIOCHEMICAL METHODOLOGY 4

Extended studies of chromatographic and electrophoretic methods, protein binding techniques and the methodology of biochemical analysis.

Course: SC30

Prerequisite: LSB318

Co-requisite: LSB408

Credit Points: 12 Contact Hours: 5 per week

#### ■ LSB421 IMAGING PATHOLOGY

The appearances of pathology on medical images with particular emphasis on the radiographic image.

Course: PH38

Prerequisite: LSB321

Credit Points: 4 Contact Hours: 2 per week

#### ■ LSB422 APPLIED ECOLOGY B

The principle and concepts of plant community ecology and ecosystem structure: biogeochemical cycles, soils, nutrient cycling, vegetation classification and mapping, and techniques for characterising the physical environment. Field work is incorporated.

Course: ED50, SC30

Prerequisite: LSB352

Credit Points: 12 Contact Hours: 5 per week

#### ■ LSB428 MICROBIOLOGY 4

An extension of LSB328; aspects of microbial taxonomy, food and water microbiology, microbial ecology, industrial and agricultural microbiology; micro-organisms as infectious agents.

Course: SC30

Prerequisite: LSB328

Co-requisite: LSB408

Credit Points: 12

Contact Hours: 5 per week

#### ■ LSB430 IMMUNOLOGY 4

The mechanisms of the immune process including the nature of antigen, antibodies, antigen-antibody reactions, antibody formation, control of the humoral and cell-mediated immune responses, hypersensitivity and allergy, immunisation of man against infections.

Course: LS36 Prerequisites: LSB300 and LSB340

Credit Points: 8 Contact Hours: 4 per week

#### ■ LSB431 MICROBIOLOGY 2

Continuation of LSB301. Topics covered include: microbial growth and measurement; laboratory and field analysis; microbial control methods; food hygiene; water quality; principles of disease and epidemiology.

Courses: PU42, PU44

Prerequisite: LSB301

Credit Points: 8 Contact Hours: 3 per week

#### ■ LSB432 GENETICS

An introductory unit in basic genetics. Topics include: the molecular basis of genetics, Mendelian genetics, nuclear and cytoplasmic inheritance, genotype-phenotype interactions, quantitative and behavioural genetics, and basic evolutionary theory.

Courses: ED50, SC30

Prerequisite: LSB122

Credit Points: 12 Contact Hours: 5 per week

#### ■ LSB437 MOLECULAR BIOLOGY

Structure and biochemistry of the nucleic acids and methodologies for their analysis; genome organisation and replication in bacteriophages, plasmids, bacteria and eukaryotes; the enzymes involved in replication of DNA and RNA; nucleic acid isolation and purification; the mechanisms of transcription and translation of the genetic code *in vivo*.

Course: LS36

Prerequisite: LSB308

Co-requisite: LSB408

Credit Points: 8 Contact Hours: 5 per week

#### ■ LSB438 IMMUNOLOGY 4

The mechanisms of the immune process: nature of antigen, antibodies, antigen-antibody reactions, antibody formation, control of the humoral and cell-mediated immune responses, hypersensitivity and allergy, and immunisation of man against infections.

Course: SC30

Prerequisites: LSB328, LSB242

Credit Points: 12 Contact Hours: 5 per week

#### ■ LSB441 IMAGING ANATOMY

A study of the appearances on medical images of normal anatomy.

Course: PH38

Credit Points: 8

Contact Hours: 4 per week

#### ■ LSB442 PLANT TISSUE CULTURE

A broad introduction to plant tissue culture. Techniques and media preparation leading to a coverage of micropropagation; topics include: organogenesis, embryogenesis, genetic variability, anther culture and secondary metabolite production. Some emphasis is placed on the tissue culture of horticultural crops and a field excursion may be included.

Courses: ED50, SC30

Prerequisite: LSB332

Credit Points: 12 Contact Hours: 5 per week

#### ■ LSB450 HAEMATOLOGY 4

In the first of the three haematology units the student is introduced to the theory of the origin, development and composition of normal blood. Laboratory tests, principles, techniques and interpretation used in the

screening of blood samples. Basic haematologic tests: preparation, staining and examination of blood films, determination of the red cell indices, supravital staining, erythrocyte sedimentation rate, screening tests used in the investigation of a bleeding disorder.

**Course:** LS36 **Co-requisite:** LSB408  
**Prerequisites:** LSB230, LSB308, LSB310, LSB340  
**Credit Points:** 8 **Contact Hours:** 4 per week

#### ■ LSB451 HUMAN PHYSIOLOGY

A course of lectures and practicals. The lectures are the same as LSB240 and LSB340. Presented as a one semester program.

**Courses:** OP42, PU45  
**Prerequisite:** LSB351 or LSB261  
**Credit Points:** 12 **Contact Hours:** 7 per week

#### ■ LSB452 MARINE STUDIES

Marine ecosystems, their importance to all life along the coastal areas and to people's livelihood; management and conservation of the sea; appreciation of its infinite value to humanity's changing lifestyle.

**Courses:** ED50, SC30 **Prerequisite:** LSB122  
**Credit Points:** 12 **Contact Hours:** 5 per week

#### ■ LSB458 PHYSIOLOGY 3S

A continuation of LSB358.

**Course:** SC30 **Prerequisite:** LSB358  
**Credit Points:** 12 **Contact Hours:** 5 per week

#### ■ LSB460 HISTOPATHOLOGY 4

An introductory unit presenting methods of preparing tissue samples for examination by the various methods of light and electron microscopy. Topics include: fixation, embedding, microtomy and an introduction to staining and microscopy techniques.

**Course:** LS36 **Prerequisites:** LSB230, CHB242  
**Credit Points:** 8 **Contact Hours:** 4 per week

#### ■ LSB461 FUNDAMENTALS OF MEDICINE 2

Continues the study of the process of medical care begun in LSB361. The roles and functions of allied health professions, and of technological services in the diagnosis and treatment of disease.

**Course:** PU48 **Prerequisite:** LSB361  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LSB468 MOLECULAR BIOLOGY

An introduction to the structure and biochemistry of the nucleic acids and methodologies for their analysis. Topics include: genome organisation and replication in bacteriophages, plasmids, bacteria and eukaryotes; the enzymes involved in replication of DNA and RNA; nucleic acid isolation and purification; transcription and translation of the genetic code *in vivo*.

**Courses:** LS70, SC30  
**Prerequisite:** LSB308 **Co-requisite:** LSB408  
**Credit Points:** 12 **Contact Hours:** 5 per week

#### ■ LSB470 DISEASE PROCESSES 4

See LSB370.

**Course:** PU45  
**Credit Points:** 8 **Contact Hours:** 4 per week

#### ■ LSB480 PROFESSIONAL PRACTICE

Students (both full-time and part-time) undertake a 2-4 week work experience program.

**Course:** LS36

#### ■ LSB485 AUSTRALIAN BIOLOGY

The geological and climatic history of the Australian continent, Australian ecosystems and the evolution of the Australian flora and fauna. Major groups of extant plants and animals are examined in some detail. While emphasis is placed on vertebrate animals, inver-

tebrates of particular relevance because of their abundance, scientific interest or economic importance are discussed. The structure of selected plant communities and their social and economic relevance.

**Course:** ED26 **Incompatible with:** LSB322  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ LSB491 MICROBIOLOGY 3

An introductory core unit of microbiology for students of optometry: with cytology, nutrition, genetics, control of microbial populations and principles of taxonomy in relation to optometry.

**Course:** OP42  
**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ LSB500 MICROBIOLOGY 5

Parasitology: the laboratory diagnosis of parasitic disease in humans. Clinical virology: nature of viruses and propagation, cell culture of viruses, detection and diagnostic methods and viral infections in humans and animals. Clinical mycology: classification of mycoses, collection of material for culture and characterisation of fungi responsible for superficial, cutaneous, sub-cutaneous and systemic infections in humans.

**Course:** LS36 **Prerequisite:** LSB400  
**Credit Points:** 16 **Contact Hours:** 7 per week

#### ■ LSB502 PROJECTS 1

Develops the student's capacity for managing their own work. Projects emphasise specific investigatory skills in reviewing, collating, interpreting and presenting data; contribution to a seminar is usually required. Projects, supervised by staff members, are graded individually. The Head of School coordinates assessment, and may request external assessment. Projects are to be selected by the 12th week of the fourth semester of the course. There are a number of compulsory field trips. This unit leads into LSB602.

**Course:** SC30  
**Credit Points:** 12 **Contact Hours:** 5 per week

#### ■ LSB508 BIOCHEMISTRY 5

The catabolic and anabolic pathways for the major macromolecules in mammalian systems; non-mammalian metabolism; concepts in bioenergetics and thermodynamics in the context of cellular metabolism; integration of metabolism including production of mixed conjugates of biological significance such as amino-sugars and lipopolysaccharides, hormone action and regulation.

**Course:** SC30 **Prerequisite:** LSB408  
**Credit Points:** 12 **Contact Hours:** 5 per week

#### ■ LSB520 CLINICAL BIOCHEMISTRY 5

Introduces the study of chemical aspects of human life in health and illness and discusses the application of chemical laboratory methods to diagnosis, control of treatment and prevention of disease. Topics include: kidney, pancreas, liver and gastric functions, the metabolism of lipids, carbohydrates and proteins.

**Courses:** LS36, SC30  
**Prerequisites:** LSB408, LSB310, LSB340  
**Credit Points:** 8 **Contact Hours:** 4 per week

#### ■ LSB522 POPULATION MANAGEMENT

The principles of biological population management; natural populations and three forms of management; pest control, harvesting and conservation. Field trips and computer simulations are used to investigate management methods.

**Course:** SC30  
**Credit Points:** 12 **Contact Hours:** 5 per week

### ■ LSB528 MICROBIAL PHYSIOLOGY & METABOLISM

The composition, organisation, structure and activity of the microbial cell: bacteria, yeasts and moulds. Topics include: light microscopy and staining methods; cell structure; enrichment, isolation and growth of cultures; the kinetics of growth; biosynthesis of cellular materials; regulation of metabolism; microbial genetics; sporogenesis and germination.

Course: SC30 Prerequisite: LSB428  
Credit Points: 12 Contact Hours: 5 per week

### ■ LSB530 IMMUNOLOGY 5

This unit builds on the basic understanding provided in LSB430 to provide an understanding of the genetic control of antibody diversity, the function of antibody and complement at a molecular level, cell interactions in the immune response and immunological process in resistance to and recovery from infection. Practical classes place emphasis on the competent performance of immunological procedures rather than just a demonstration of immunological principles.

Course: LS36  
Prerequisites: LSB430, LSB408, LSB400  
Credit Points: 8 Contact Hours: 4 per week

### ■ LSB532 POPULATION GENETICS

An extension of Introductory Genetics. Topics include: the genetic structure of populations and processes of evolutionary change; natural selection, inbreeding and co-adaptation; species and speciation theory; ecological genetics and the genetics of behaviour. Students may be required to undertake semester-long project topics on practical or theoretical problems.

Course: SC30 Prerequisite: LSB432  
Credit Points: 12 Contact Hours: 5 per week

### ■ LSB537 GENETIC ENGINEERING

The development of concepts and skills in the recombinant DNA technologies used in genetic engineering. Topics include: the enzymes, vectors and host cells for gene isolation and cloning; strategies and procedures for cellular transformation and gene library construction; nucleic acid hybridisation techniques; methods for the screening for recombinant clones using radioactive and non-radioactively-labelled gene probes.

Courses: LS70, LS85, SC30, SC60  
Prerequisite: LSB468  
Credit Points: 12 Contact Hours: 5 per week

### ■ LSB542 PLANT TISSUE CULTURE 2

Cellular and biochemical aspects of plant growth are integrated with standard plant tissue culture practice in this unit. Theories and techniques of modern plant biotechnology are introduced, including cytogenetics, protoplast isolation, and the unusual carbohydrate metabolism of plants in tissue culture.

Course: SC30 Prerequisite: LSB442  
Credit Points: 12 Contact Hours: 5 per week

### ■ LSB548 BIOCHEMICAL SEPARATIONS

An advanced course of lectures and a comprehensive project designed to integrate a number of specialist biochemical procedures including centrifugation, chromatography, electrophoresis and spectrophotometry. Students are required to design and execute an experimental protocol for the separation of selected macromolecules.

Course: SC30  
Prerequisite: LSB318 Co-requisite: LSB508  
Credit Points: 12 Contact Hours: 5 per week

### ■ LSB550 HAEMATOLOGY 5

The first of two units in which the student is introduced to the diseases of the blood: cause, laboratory investigation, prognosis, principles of treatment and laboratory monitoring of treatment. The blood disorders discussed include: anaemias of defective haem and porphyrin synthesis, anaemias caused by abnormalities in globin biosynthesis, macrocytic anaemias, hypoproliferative anaemias, anaemia of chronic renal failure, liver disease, haemolytic anaemias.

Course: LS36  
Prerequisites: LSB310, LSB408, LSB450  
Credit Points: 8 Contact Hours: 4 per week

### ■ LSB552 AQUACULTURE 1

Methods and techniques associated with the commercial production of aquatic animal species in hatcheries and on aquafarms. Topics include: water quality measurement and management; intensive production of food organisms; induction of maturation and spawning; nursing and rearing larvae and fry; feeding; diagnosis and treatment of health problems; handling and husbandry.

Course: SC30 Prerequisite: LSB302  
Credit Points: 12 Contact Hours: 5 per week

### ■ LSB558 ADVANCED PHYSIOLOGY

An extension of prior knowledge of physiological processes which occur in a specific range of cardiovascular, renal, and neurological functions; basic nutritional concepts and factors affecting nutrient requirements.

Courses: PU62, SC30, SC60  
Prerequisite: LSB458  
Credit Points: 12 Contact Hours: 5 per week

### ■ LSB560 HISTOPATHOLOGY 5

A detailed study of techniques used in routine histopathology including methods for immunohistochemistry and transmission electron microscopy. Emphasis is placed on the application and relevance of methods to particular diagnostic areas.

Course: LS36 Prerequisites: LSB408, LSB460  
Credit Points: 8 Contact Hours: 4 per week

### ■ LSB568 ELECTRON MICROSCOPY

A theoretical and practical background to the operation and use of scanning and transmission electron microscopes in biological, materials and forensic science; basic principles of specimen preparation are included with emphasis on methods complementary to biology, microbiology and molecular biology. Analytical capabilities of electron beam instruments.

Courses: ED50, SC30  
Credit Points: 12 Contact Hours: 5 per week

### ■ LSB578 VIROLOGY

Lectures and practical classes designed to introduce students to the basic concepts of virology. A range of viruses and virus diseases will be examined and topics include: virus morphology and composition, taxonomy and classification, replication, purification, diagnosis and assay, transmission and control.

Course: SC30 Prerequisite: LSB428  
Credit Points: 12 Contact Hours: 5 per week

### ■ LSB582 SELECTED TOPICS 1

Students complete a study on a specific topic. Such study involves selected reference material and may also include a lecture program or project work.

Course: SC30 Prerequisite: LSB362  
Credit Points: 12 Contact Hours: 5 per week

**■ LSB592 FIELD STUDIES 2**

A field-based unit in which students use the background information gained in LSB352 to sample aquatic populations; may include extended field trips.

Course: SC30

Prerequisite: LSB352

Credit Points: 12

Contact Hours: 5 per week

**■ LSB600 CLINICAL BACTERIOLOGY 6**

A study of clinical bacteriology, dealing with the characteristics, isolation and identification of bacteria implicated in human disease, the collection and examination of clinical specimens, the initial use of computerised data bases in bacterial identification and antibiotic sensitivity tests on laboratory isolates, the interpretation and clear reporting of results.

Course: LS36

Prerequisite: LSB400

Credit Points: 16

Contact Hours: 7 per week

**■ LSB602 PROJECTS 2**

This elective unit may be undertaken by students who have taken LSB984 and who have the strand coordinator's permission to continue project work. The student either: continues a project undertaken in LSB502, or involves one or more additional projects aimed at developing to a greater depth aspects of the unit matter of experimental units previously completed, such projects being established for either individuals or groups. Assessment is conducted as for LSB502. There are a number of excursions.

Course: SC30

Credit Points: 12

Contact Hours: 5 per week

**■ LSB608 BIOCHEMISTRY 6**

Advanced studies in protein biochemistry, including structure, analysis and evolution of proteins, sequencing, synthesis, structure predictions; applications in the areas of enzymology and active site chemistry; macromolecular assemblies such as muscle.

Course: SC30

Prerequisites: LSB418, LSB308

Credit Points: 12

Contact Hours: 5 per week

**■ LSB612 AQUACULTURE 2**

The theoretical and applied aspects of warm-water aquaculture. Topics include: design and operation of production facilities; water quality requirements and management; biology of commercially important species; reproduction and its control; nutrition, feeding and growth; diseases and their control; production improvement; polyculture; case studies.

Course: SC30

Prerequisite: LSB372

Credit Points: 12

Contact Hours: 5 per week

**■ LSB618 ANALYTICAL BIOCHEMISTRY 6**

A companion to unit LSB608 extending the material of LSB418 into biochemical analysis: enzyme-based analyses, advanced analysis using isotopes, immunoassays and the major biomolecules.

Course: SC30

Prerequisite: LSB418

Co-requisite: LSB608

Credit Points: 12

Contact Hours: 5 per week

**■ LSB620 CLINICAL BIOCHEMISTRY 6**

Study of clinical biochemistry with emphasis on enzymes, electrolytes, blood gases, drugs, vitamins, functions of the thyroid and adrenal gland, auto-analyses, quality control and steroid metabolism.

Courses: LS36, SC30

Prerequisite: LSB520

Credit Points: 8

Contact Hours: 4 per week

**■ LSB622 CASE STUDIES**

Application of skills and techniques to a current research problem in biology. Skills in problem appraisal, experimental design and data handling and processing are developed, with field work.

Course: SC30

Credit Points: 12

Prerequisite: LSB412

Contact Hours: 5 per week

**■ LSB628 APPLIED MICROBIOLOGY**

Aspects of the microbiology of foods, water and agriculture. Topics include: sampling plans, food-borne infections, food hygiene, food standards and the law, food ecology and its relationship to food spoilage and preservation, industrial fermentations, NATA requirements for laboratory registration and methods of microbiological examination of foods, plant, soil, and water microbiology.

Course: SC30

Prerequisite: LSB428

Credit Points: 12

Contact Hours: 5 per week

**■ LSB630 IMMUNOHAEMATOLOGY 6**

Designed to supply the competence in theoretical and practical blood transfusion required of a scientist working in a hospital blood bank. The understanding of immunology gained in LSB430 and LSB530 is applied to the area of blood banking. Topics include: blood group systems, compatibility testing, antibody identification, antenatal serology, clinical use of blood and blood products and quality control.

Course: LS36

Prerequisite: LSB530

Credit Points: 8

Contact Hours: 4 per week

**■ LSB632 PLANT PHYSIOLOGY 2**

The sequence of biochemical and physiological events during the life history of a plant. Topics include: starch and oil mobilisation during seed germination, biosynthesis of cell membranes, cell pigments (carotenoids, chlorophylls), and plant cell walls; photosynthetic assimilation of nitrogen and sulphur (overview of biosynthesis of all amino acids); biosynthesis of so-called secondary plant products, eg. terpenoids, flavonoids, and the lignin component of wood; biosynthesis of starch and oils in new seeds. Laboratory classes emphasise techniques of value to plant biochemical research.

Course: SC30

Credit Points: 12

Contact Hours: 5 per week

**■ LSB637 MOLECULAR GENETICS**

Polymerase Chain Reaction and associated technologies; chromosome separation; walking and jumping; genetic recombination, mutagenesis and evolution; advanced techniques including DNA footprinting; nucleic acid sequencing and reverse genetics.

Courses: LS70, LS85, SC30

Prerequisite: LSB537

Credit Points: 12

Contact Hours: 5 per week

**■ LSB648 MICROBIAL TECHNOLOGY**

An advanced course of lectures and practical sessions dealing with the industrial use of microorganisms. Topics include: screening and strain development; large scale fermentation; product recovery; biochemical engineering; microbial fermentation of food products; primary and secondary metabolites of industrial importance; single cell protein; microbial transformations; biodeterioration and bioleaching.

Course: SC30

Prerequisite: LSB528

Credit Points: 12

Contact Hours: 5 per week

**■ LSB650 HAEMATOLOGY 6**

Continues the study of blood diseases. Topics include: inherited and acquired coagulation factor disorders, fibrinolysis, thrombosis, anticoagulant therapy platelet disorders, cellular kinetics, growth factors, non malignant and malignant leucocyte disorders, paediatric and veterinary haematology.

Course: LS36

Prerequisite: LSB550

Credit Points: 8

Contact Hours: 4 per week

### ■ LSB652 BIOLOGICAL RESOURCES

Aspects of ecosystem management related to naturally occurring materials and their supply to the human economy. Limitations on specific exploitation of natural genetic (species), soil, and energy resources are identified and linked with relevant aspects of land tenure, administration and law; threats to biological resources due to pollutants. Strategies leading to sustained yield and conservation are contrasted with those resulting in resource degradation.

Course: SC30

Credit Points: 12      Contact Hours: 5 per week

### ■ LSB658 CLINICAL PHYSIOLOGY

The physiological basis and pathogenesis; clinical features and treatment of the major disorders of the cardiovascular, respiratory, haematological, renal, gastrointestinal, nervous and endocrine systems.

Course: SC30      Prerequisites: LSB358, LSB458

Credit Points: 12      Contact Hours: 5 per week

### ■ LSB660 HISTOPATHOLOGY 6

Reviews recent advances in diagnostic histopathology and introduces advanced and specialised methods including scanning electron microscopy and X-ray microanalysis. Techniques for diagnostic cytology concentrating on specimen preparation and the microscopic detection of cancerous and other abnormal cells in human tissues and body fluids.

Course: LS36

Prerequisite: LSB560

Credit Points: 8      Contact Hours: 4 per week

### ■ LSB682 SELECTED TOPICS 2

A final semester unit providing students with an opportunity to complete a detailed study on a specific topic. The study normally is based on project work and may include a lecture program.

Course: SC30

Credit Points: 12      Contact Hours: 5 per week

### ■ LSB722 RESEARCH STRATEGIES

A series of seminars presented by staff of the Faculties of Health and Science and other research scientists on their area of expertise. A series of tutorials and lectures on such topics as library searches, oral communications, written communications and ethics. A written assignment in the areas of microbiology, biochemistry and biotechnology. A seminar presented by the student covering the background literature relevant to the student's research project.

Course: SC60

Credit Points: 16      Contact Hours: 4 per week

### ■ LSB723 READINGS IN LIFE SCIENCE 1

The preparation of a literature review of direct and associated relevance to the Honours research project under the guidance of the supervisor(s). Includes an indepth computer search, the presentation of a written paper demonstrating a considerable knowledge, understanding and appreciation of the literature as well as a critical appraisal of future research requirements.

Course: SC60

Credit Points: 16

### ■ LSB725 PROJECT

All students undertaking honours in biotechnology, biochemistry or microbiology are required to select and undertake, in consultation with a supervisor, a suitable project.

Course: SC60

Credit Points: 10

### ■ LSB734 ANALYTICAL ELECTRON MICROSCOPY

An advanced course in electron microscopy with emphasis on the applications of labelling and analytical techniques. Methods covered include immunocytochemistry, in situ hybridisation, energy and wavelength dispersive X-ray analysis, electron energy loss spectroscopy and image analysis. Specialised preparation methods necessary for use of these techniques in SEM, TEM and STEM instruments are discussed, together with their advantages and limitations. Applications are drawn from the biological, materials and forensic science areas.

Course: SC60

Credit Points: 12      Contact Hours: 5 per week

### ■ LSB801 ADVANCED PLANT PHYSIOLOGY & BIOCHEMISTRY

Plant physiology and biochemistry of current research interest are covered, expanding upon material in the third year Plant Biochemistry unit. Students select from a reading list and present seminars.

Course: LS60

Credit Points: 12      Contact Hours: 5 per week

### ■ LSB804 ADVANCED POPULATION BIOLOGY

An extended treatment of major questions in population biology. Students are expected to develop a detailed understanding of population processes and aspects of evolutionary theory at both the individual and population level. The unit includes theoretical core material, group tutorials and individual programs designed around student needs. Students are required to present a review paper and a formal seminar on an assigned topic.

Course: SC60

Credit Points: 12      Contact Hours: 5 per week

### ■ LSB825 PROJECT

The preparation of a paper reporting the methods and results of investigations in the Honours Research Projects. The paper also includes an introduction, analysis and discussion of the project in a style and length deemed to be appropriate by the Head of School. Students should relate this project work to published work already undertaken in the field.

Course: SC60

Credit Points: 48      Contact Hours: 1 per week

### ■ LSN009 READINGS IN LIFE SCIENCE 4

A review of literature in an area determined in consultation with the supervisor. The area can be associated with the research project topic and can be broadly or narrowly focussed but should not include any significant material covered in LSN013. The review should cover the background to the area as well as recent advances and identify deficiencies and possible future research directions. The review should be a critical analysis of the area. Reviews should normally be approximately 5,000 words.

Courses: IF49, SC80

Credit Points: 12      Contact Hours: 1 per week

### ■ LSN010 READINGS IN LIFE SCIENCE 5

See LSN009.

Courses: IF49, SC80

Credit Points: 12      Contact Hours: 1 per week

### ■ LSN011 RESEARCH SEMINARS IN LIFE SCIENCE 1

A 30 minute public seminar to include a presentation and question period addressing the background to the proposed research topic in the postgraduate degree



and outlining the proposed directions of the research program. The seminar should normally be presented within 12 months (full-time) or 24 months (part-time) of commencement of the postgraduate program.

**Courses:** IF49, SC80

**Credit Points:** 6 **Contact Hours:** 1 per week

### ■ LSN012 RESEARCH SEMINARS IN LIFE SCIENCE 2

A 30 minute public seminar to include a presentation and question period outlining the progress made in the postgraduate research program as well as the proposed research to complete the project.

**Courses:** IF49, SC80

**Credit Points:** 6 **Contact Hours:** 1 per week

### ■ LSN013 READINGS IN LIFE SCIENCE 3

A comprehensive and critical review of the background and current literature directly related to the research project topic. The review should identify major and minor deficiencies in the research literature and identify possible directions for future research. The review should be approximately 10,000 words and at least one draft should be presented to the supervisor prior to final submission.

**Courses:** IF49, SC80

**Credit Points:** 24 **Contact Hours:** 1 per week

### ■ LSN023 RESEARCH SEMINARS IN LIFE SCIENCE 3

A 60 minute public seminar to include a presentation and question period outlining the results of the postgraduate research program as well as possible future research directions in this area.

**Courses:** IF49, SC80

**Credit Points:** 12 **Contact Hours:** 1 per week

### ■ LSN102 CELLULAR BASIS OF DISEASE

Cell injury and stress mechanisms. Cellular communication. The responses of organelles, cells and tissues to injury and stress including: immune, inflammation, thrombosis, ageing and neoplastic responses. Transplantation and regeneration.

**Course:** LS85

**Prerequisite:** 24 credit points in LS85

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LSN110 MOLECULAR BASIS OF DISEASE

The aetiology, diagnosis and treatment of various diseases; study of molecular structures, biochemical reactions, integration and control of metabolism. Topics include: gene structure and function, proteins – structure and molecular dysfunction, and enzymes – properties and alterations in diseases; metabolic integration and hormone action, hormones and organ disease, disorders of carbohydrate and lipid metabolism and chemotherapy.

**Course:** LS85

**Prerequisite:** 24 credit points in LS85

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LSN150 EPIDEMIOLOGY & RESEARCH STRATEGIES

The principles and applications of epidemiology, its scope and value in establishing disease aetiology. Topics include: epidemiological methods (descriptive, analytical and experimental), epidemiological concepts, causal relationships, measurement of morbidity and mortality, statistical overview of the health of the Australian population, and the investigation of an epidemic.

**Courses:** LS85, NS85

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LSN158 ULTRASONIC PATHOLOGY

Pathology as applicable to diagnostic ultrasound; basic embryology and genetics.

**Course:** PH80

**Credit Points:** 6 **Contact Hours:** 2 per week

### ■ LSN159 ADVANCED PATHOLOGY

The fundamentals of anatomy, physiology and pathology; emphasis on applied cross-sectional anatomy and integration of knowledge of pathological processes.

**Course:** PH80

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ LSN306 PATHOPHYSIOLOGY

A study of selected pathophysiological states which represent major alteration in physiological functioning, occurring in each developmental phase.

**Courses:** LS85, PH80

**Prerequisite:** 72 credit points in LS85

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LSN401 ADVANCES IN MEDICAL LABORATORY SCIENCE

A series of lectures to provide current and topical information across the general field of medical laboratory science. In addition, topics which have significant implications on the advancement of the profession are presented, eg. computers, laboratory automation, biotechnology, self-diagnosis. The lecture program is flexible to allow for the incorporation of visiting speakers or for the introduction of a current interest topic. In addition to formal lectures the unit offers tutorial and student seminar sessions.

**Course:** LS85

**Prerequisite:** 72 credit points in LS85

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LSN510 CLINICAL BIOCHEMISTRY 1

The use of clinical biochemistry in the diagnosis of diseases. Disorders of fluid and electrolyte balance systems, disorders of the gastrointestinal, pancreatic and hepato-biliary systems, and disorders of the cardiovascular system and hypertension are studied, concentrating on diagnosis and the interpretation of biochemical results. In addition, aspects of instrumentation and laboratory methods are reviewed.

**Course:** LS85

**Prerequisite:** 96 credit points in LS85

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LSN511 HAEMATOLOGY 1

Haematologic diseases; their aetiology, laboratory investigation, pathogenesis, principles of treatment and laboratory monitoring. The study program includes seminars, oral presentations and assignments selected from: haemopoietic kinetics, haemolytic disease, haemostasis and the haematologic implications of systemic disease. Assessment is by formal examination, assignments and seminar participation.

**Course:** LS85

**Prerequisite:** 96 credit points in LS85

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LSN512 HISTOPATHOLOGY 1

Recent advances and modern methods in diagnostic histopathology. Topics include: immunohistochemistry, enzyme histochemistry and transmission electron microscopy methods.

**Course:** LS85

**Prerequisite:** 96 credit points in LS85

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LSN515 MICROBIOLOGY 1

Bacteriology, virology, mycology and parasitology. Topics are chosen to increase the knowledge and understanding of microorganisms associated with human infection. Recent trends and developments in diagnostic microbiology are studied. A critical approach to the assessment of laboratory practices and interpretation of data will be developed.

Course: LS85

Prerequisite: 96 credit points in LS85

Credit Points: 12 Contact Hours: 3 per week

### ■ LSN517 IMMUNOLOGY 1

Information retrieval systems and scientific writing. Five essay topics are selected following discussion with students, supervisor/employer.

Course: LS85

Credit Points: 12 Contact Hours: 3 per week

### ■ LSN518 DIAGNOSTIC CYTOLOGY 1

Review of recent advances and modern methods in diagnostic cytology. The major topics are in gynaecological cytology.

Course: LS85

Credit Points: 12 Contact Hours: 3 per week

### ■ LSN530 DISSERTATION 1

The dissertation includes a supervised project in an approved topic area selected by the student. The project area may be novel, developmental or directed at an investigation of the introduction of a new system into the laboratory. Other areas which are considered appropriate include epidemiological analyses, laboratory safety, laboratory design or the efficacy of laboratory service. Each student submits a written project report in a style to present the data.

Course: LS85

Prerequisite: 96 credit points in LS85

Credit Points: 12 Contact Hours: 3 per week

### ■ LSN531 DISSERTATION 2

See LSN530.

Course: LS85

Prerequisite: 96 credit points in LS85

Credit Points: 12 Contact Hours: 3 per week

### ■ LSN610 CLINICAL BIOCHEMISTRY 2

Clinical biochemistry in the diagnosis of diseases. Endocrinology, disorders of the muscular and skeletal systems, disorders of special groups, nutrition and drugs, neurochemistry and neural disorders, cancer-associated biochemical abnormalities, and the seriously ill patients are studied, concentrating on diagnosis and the interpretation of results.

Course: LS85

Prerequisite: LSN510

Credit Points: 12 Contact Hours: 3 per week

### ■ LSN611 HAEMATOLOGY 2

Topics include: age-related changes to the haemopoietic system, perinatal haematology, paediatric haematology and haematology in the elderly, nutrition anaemias, non-malignant and malignant leucocyte disorders, transplantation, automation and quality control. Since outside lecturers participate in these specialist electives some interchange of topics between this unit and LSN511 may be necessary.

Course: LS85

Prerequisite: LSN511

Credit Points: 12 Contact Hours: 3 per week

### ■ LSN612 HISTOPATHOLOGY 2

Methods in diagnostic histopathology. The design and assessment of diagnostic programs to aid the identification of tumours and diseases of selected organ systems. Specialised techniques including aspiration

cytology, scanning electron microscopy and analytical electron microscope methods.

Course: LS85

Prerequisite: LSN512

Credit Points: 12 Contact Hours: 3 per week

### ■ LSN615 MICROBIOLOGY 2

Areas of bacteriology, virology, mycology and parasitology. Topics are chosen to increase the knowledge and understanding of micro-organisms associated with human infection. Recent trends and developments in diagnostic microbiology are studied. A critical approach to the assessment of laboratory practices and interpretation of data is developed.

Course: LS85

Prerequisite: LSN515

Credit Points: 12 Contact Hours: 3 per week

### ■ LSN617 IMMUNOLOGY 2

Assist with the preparation of scientific publications and the presentation of data orally. Students are expected to prepare a short scientific paper based on raw data provided. They also prepare and present a short seminar based on the scientific paper.

Course: LS85

Prerequisite: LSN517

Credit Points: 12 Contact Hours: 3 per week

### ■ LSN618 DIAGNOSTIC CYTOLOGY 2

Exploration of recent advances, methods and their applications in diagnostic cytology of body sites. Topics include: respiratory and urinary tract, body fluids and techniques such as fine needle aspiration.

Course: LS85

Prerequisite: LSN518

Credit Points: 12 Contact Hours: 3 per week

### ■ LSP120 ADVANCED GENETIC ENGINEERING

The isolation of mRNA and DS viral RNA; DNA analysis using Restriction Fragment Length Polymorphisms (RFLPs) and nucleotide sequence determination in plasmids and bacteriophage M13; separation of chromosomes using Pulsed Field Gel Electrophoresis (PFGE); oligonucleotide synthesis and the application of gene probes in diagnosis; electroporation and chemical transformation of cells; and DNA amplification using the Polymerase Chain Reaction (PCR). Note: 1993 final year offered.

Courses: LS70, SC60

Credit Points: 12 Contact Hours: 5 per week

### ■ LSP127 TOPICS IN BIOTECHNOLOGY

Commercial perspectives of a biotechnology company; funding for commercial research; research patents and intellectual property; strategies in biotechnology; methods of reviewing the biotechnology literature. Students present a seminar on some aspect of biotechnology research.

Course: LS70

Credit Points: 12 Contact Hours: 5 per week

### ■ LSP145 PROJECT

Students in the Graduate Diploma in Biotechnology may be required to select, in consultation with their employer and an academic supervisor, a research project. The aims of the project are that students, under supervision, should participate in the selection of a suitable topic for investigation; conduct a literature search in the unit area; plan an experimental program which includes scheduling laboratory space, equipment and consumables; undertake work at the bench; record, assess and interpret the results; write a concise thesis in a standard form of presentation.

Course: LS70

Credit Points: 12 Contact Hours: 3 per week

# ■ LSP735 HUMAN MOLECULAR BIOLOGY

A course of specialist lectures and research assignments for postgraduate students relating to the organisation and regulation of expression of information stored in the human genome. Additional subject areas include the molecular basis of genetic disorders, cancer, oncogenes and infectious disease; and clinical applications of nucleic acid diagnostic procedures eg. linkage analysis, DNA profiling, genetic screening.

Courses: LS70, LS85, SC60

Prerequisite: LSB637

Credit Points: 12 Contact Hours: 5 per week

# ■ LSP737 PLANT & ANIMAL MOLECULAR BIOLOGY

Techniques and applications of molecular biology for the genetic manipulation of plants and animals.

Courses: LS70, SC60 Prerequisite: LSB637

Credit Points: 12 Contact Hours: 5 per week

# ■ LSP739 CLINICAL MOLECULAR BIOLOGY

The theory behind the use of restriction endonucleases; radioisotopes and nucleic acid hybridisation procedures and their applications in the Polymerase Chain Reaction; linkage analysis, DNA profiling and genetic screening using oligonucleotides and gene probes.

Courses: LS85, SC60

Prerequisite: LSB437

Credit Points: 12 Contact Hours: 5 per week

# ■ LSX010 EXTERNAL PROJECT 1

This unit can only be completed by students who are involved in an approved research program as part of employment duties. Before enrolling it is necessary for the student to present to the course coordinator a proposal outlining the aims of the project together with the name of the supervising scientist at the place of employment.

Course: SC10

Credit Points: 8 Contact Hours: 3 per week

# ■ LSX011 EXTERNAL PROJECT 2

Continuation of LSX010.

Course: SC10

Prerequisite: LSX010

Credit Points: 8 Contact Hours: 3 per week

# ■ LSX123 MICROBIOLOGY 1

An introduction to the biology of bacteria, fungi, algae, protozoa and viruses, with consideration of structure, nutrition, reproduction, genetics, and classification systems. The practical course is aimed at developing the manipulative skills necessary for laboratory identification of microbial forms.

Course: LS15

Credit Points: 8 Contact Hours: 3 per week

# ■ LSX223 MICROBIOLOGY 2

Microbial populations and methods of controlling growth; sterilisation and disinfection methods; enzymic activity of microorganisms; the identification of the micro-organisms relevant to public health; host-parasite relationships and immunity.

Course: LS15

Prerequisite: LSX123

Credit Points: 8 Contact Hours: 3 per week

# ■ LSX310 INTRODUCTION TO BIO CULTURE

Techniques of algal culture and plant tissue culture. Topics include: nutrition, continuous production techniques, and the use of growth regulators to control growth. The role of environmental factors in controlling growth also is discussed. This unit provides the

theoretical basis for students undertaking electives in aquaculture techniques and/or plant tissue culture.

Course: SC10

Credit Points: 8 Contact Hours: 3 per week

# ■ LSX311 COMPUTER APPLICATIONS IN BIOLOGY

Microcomputers and applications-software such as wordprocessing, databases, spreadsheets, and computer graphics for report presentation. This unit is not oriented towards any specific computer language.

Course: SC10

Credit Points: 8 Contact Hours: 3 per week

# ■ LSX312 ANIMAL & PLANT TECHNIQUES

Care and maintenance of animal and plant resources, both micro- and macroscopic. Animal handling, maintenance of glasshouse resources, culture collections and sterile techniques, preparation of specimens for permanent collections and their maintenance.

Course: SC10

Credit Points: 12 Contact Hours: 4 per week

# ■ LSX313 TAXONOMY

Investigation and identification of local flora and fauna; use and construction of keys. The concepts of systematics, classification, taxonomy and nomenclature procedure. Short lectures and tutorials associated with the practical exercises.

Course: SC10

Credit Points: 8 Contact Hours: 3 per week

# ■ LSX314 AQUACULTURE TECHNIQUES

Topics include: water quality monitoring; culture methods for microscopic food organisms; disease and parasite identification and treatment; spawning, rearing, handling and stock assessment.

Course: SC10

Credit Points: 8 Contact Hours: 3 per week

# ■ LSX315 PLANT PHYSIOLOGY

An introduction to the important aspects of whole-plant physiology, including nutrition, water relations, photosynthesis, translocation and stress physiology.

Course: SC10

Prerequisite: BEA108

Credit Points: 8 Contact Hours: 3 per week

# ■ LSX316 HYDROBIOLOGICAL TECHNIQUES

An introduction to the characteristics of aquatic ecosystems. Students gain practical experience using methods, equipment and instrumentation to: estimate population abundance, distribution, biomass and productivity; determine community structure and diversity; determine physical characteristics and morphology and assess water quality. Compulsory field studies form a significant part of this unit.

Course: SC10

Credit Points: 8 Contact Hours: 3 per week

# ■ LSX320 CLINICAL BIOCHEMICAL TECHNIQUES 3

A study of the basic chemical procedures used in biochemical laboratories with emphasis on technique and accuracy. Topics include: tests of renal, pancreatic and hepatic functions; the estimation of serum proteins, lipids and carbohydrates.

Course: SC10

Prerequisites: LSX221, LSX225, LSX222

Credit Points: 8 Contact Hours: 4 per week

# ■ LSX321 CLINICAL MICROBIOLOGICAL TECHNIQUES 3

The techniques used in isolation and identification of bacteria important in human and animal infections;

the use of computerised data bases to assist in bacterial identification; tests for the sensitivity of bacteria to antibiotics; preparation, sterilisation, quality control and use of bacteriological media.

**Course:** LS15 **Prerequisite:** LSX223  
**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ LSX322 HAEMATOLOGICAL TECHNIQUES 3

Lectures and practical work in haematological techniques. Topics include: the counting of blood cells; the preparation, staining and examination of blood films; the determination of the red cell indices; supravital staining techniques erythrocyte sedimentation rate and origin and maturation of blood cells.

**Course:** LS15  
**Prerequisites:** LSX122, LSX221, LSX225  
**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ LSX323 HISTOLOGICAL TECHNIQUES 3

Preparing tissue samples for examination by the various forms of light microscopy. Topics include: fixation, tissue processing, microtomy and an introduction to staining and light microscope techniques.

**Course:** LS15  
**Prerequisites:** LSX122, LSX221, LSX225  
**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ LSX324 IMMUNOLOGICAL TECHNIQUES 3

Introduction to immunology with particular emphasis on the principle and performance of immunological techniques including blood grouping. Topics include: antigens, antibodies and the immune system.

**Course:** LS15 **Prerequisites:** LSX125, LSX225  
**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ LSX325 CYTOLOGICAL TECHNIQUES 3

Lectures and associated practical sessions in cytological methods and normal gynaecological cytology. Basis for clinical cytology offered in LSX425.

**Course:** LS15 **Prerequisites:** LSX221, LSX225  
**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ LSX331 FOUNDATIONS OF ANAESTHETIC TECHNIQUES

Introduction to the ethical, moral and legal responsibilities of anaesthetic technicians; the standard equipment used in the operating rooms.

**Course:** LS15  
**Credit Points:** 12 **Contact Hours:** 5 per week

### ■ LSX332 PHYSIOLOGY & PHARMACOLOGY

A study of the anatomy and physiology of the main systems, with emphasis on the major pathological disturbances. Also an introduction to the pharmacology of drugs used in anaesthesia.

**Course:** LS15 **Prerequisite:** LSX225  
**Credit Points:** 12 **Contact Hours:** 5 per week

### ■ LSX333 ELECTRONICS & COMPUTING

An understanding of the basic principles of electronics, enabling an understanding of the complex equipment used for the dispensing of anaesthesia; the basic hardware and software of computers; word processing, databases and spreadsheet.

**Course:** LS15  
**Credit Points:** 12 **Contact Hours:** 5 per week

### ■ LSX334 OPERATING ROOM EQUIPMENT

Introduction to the ancillary equipment used in operating rooms; the methods in use in the operating rooms; team roles in the operating room.

**Course:** LS15  
**Credit Points:** 12 **Contact Hours:** 5 per week

### ■ LSX410 ENVIRONMENTAL BIOLOGY

Ecosystems and energy flow. Productivity, decomposition and nutrient cycling. Niche, species packing, diversity, colonisation and community structure. Short compulsory field trips.

**Course:** SC10  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ LSX411 POPULATION BIOLOGY

Population biology: structure and dynamics, evolution and differentiation; the relationships between the genetics, energetics and dynamics of populations leading to particular life-history strategies. Field excursions are compulsory.

**Course:** SC10 **Co-requisite:** LSX412  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ LSX412 FIELD TECHNIQUES

Activities include surveying, soil and climatic measurements, assessment and sampling of animal and plant populations, evaluation of spatial changes in plant and animal communities in relation to environmental gradients. Skills are gained not only in sampling and analytical techniques, but also in the establishment and running of a field camp. An extended field excursion is a compulsory part of the unit.

**Course:** SC10  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ LSX413 APPLICATIONS IN ELECTRON MICROSCOPY

The roles played by various forms of electron microscopy in the biological sciences and an introduction to the basic techniques and their limitations.

**Course:** SC10 **Prerequisites:** BEA108, BEA198  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ LSX414 ANIMAL PHYSIOLOGY

The general physiological processes which sustain life; animal-environment interactions.

**Course:** SC10  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ LSX415 PLANT CELL & TISSUE CULTURE

Topics include: techniques, equipment and media used in plant tissue culture, the role of plant growth regulators, and micropropagation. The significance of organogenesis, somatic embryogenesis and genetic variability in plant tissue culture are discussed. Appropriate laboratory exercises.

**Course:** SC10  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ LSX420 CLINICAL BIOCHEMICAL TECHNIQUES 4

A study of more complex techniques used in clinical biochemical laboratories, including enzyme assays, estimations of electrolytes, blood gases, drugs, vitamins and hormones. Auto-analytical techniques and quality control are also treated.

**Course:** LS15 **Prerequisite:** LSX320  
**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ LSX421 CLINICAL MICROBIOLOGICAL TECHNIQUES 4

Basic microbiological techniques in the following disciplines: virology, mycology and parasitology (enteric parasites). The practical periods are used to reinforce the theoretical aspects of the unit.

**Course:** LS15 **Prerequisite:** LSX223  
**Credit Points:** 8 **Contact Hours:** 4 per week

#### ■ LSX422 HAEMATOLOGICAL TECHNIQUES 4

An extension of LSX322. The student is introduced to the common blood disorders. A brief outline of their aetiology and laboratory investigation is given. The main emphasis is the use of basic haematological techniques and some specialised laboratory procedures used in the investigation of commonly encountered blood diseases. The basic theory of haemostasis and the screening tests used in the investigation of the bleeding disorders are discussed.

Course: LS15 Prerequisite: LSX322  
Credit Points: 8 Contact Hours: 4 per week

#### ■ LSX423 HISTOLOGICAL TECHNIQUES 4

An advanced course dealing with specialised methods for identifying tissue components. Topics include: electron microscopy, histochemistry, immunohistochemistry. Emphasis is placed on the practical application of these methods in histopathology.

Course: LS15 Prerequisite: LSX323  
Credit Points: 8 Contact Hours: 4 per week

#### ■ LSX424 TRANSFUSION TECHNIQUES 4

The basic knowledge of immunology gained in LSX324 applied to the study of human blood group systems. Topics include: principles of immunohaematology, ABO blood group, Rh blood group system, compatibility testing, antibody identification, transfusion reactions, antenatal testing, quality control, intravenous fluids, blood products.

Course: LS15 Prerequisite: LSX324  
Credit Points: 8 Contact Hours: 4 per week

#### ■ LSX425 CYTOLOGICAL TECHNIQUES 4

A course of lectures and associated practical work presenting specialised preparative methods for non-gynaecological cytology and demonstrating the evaluation of specimens commonly encountered in routine diagnostic cytology.

Course: LS15 Prerequisite: LSX325  
Credit Points: 8 Contact Hours: 4 per week

#### ■ LSX431 CARDIAC CARE & RESUSCITATION

In the operating room and intensive care units, the cardiac status of patients is monitored by several devices. Students are introduced to these devices as well as to the resuscitation equipment and special equipment used in lung and cardiac surgery.

Course: LS15 Prerequisite: LSX332  
Credit Points: 12 Contact Hours: 5 per week

#### ■ LSX432 CARE OF RESPIRATORY AIRWAYS & INTENSIVE CARE

The care and maintenance of equipment used for the respiratory airways and in intensive care; acid-base balance, blood gases, and the equipment needed for the monitoring of those parameters.

Course: LS15 Prerequisite: LSX332  
Credit Points: 12 Contact Hours: 5 per week

#### ■ LSX433 ANAESTHESIA FOR SPECIALISED SURGERY

Surgical interventions requiring anaesthesia; the techniques used and their effects on the vital parameters of patients in these special circumstances.

Course: LS15 Prerequisite: LSX332  
Credit Points: 12 Contact Hours: 5 per week

#### ■ LSX434 PROFESSIONAL PRACTICE

The practical skills needed for the proper delivery of anaesthetics. This is essentially a practical unit, which can only be taken towards the end of the course. The

aim is for students to become proficient and confident in assisting with the delivery of anaesthesia.

Course: LS15 Prerequisite: LSX334  
Co-requisites: LSX431, LSX432, LSX433  
Credit Points: 12 Contact Hours: 5 per week

#### ■ LWB101 INTRODUCTION TO LAW

The institutions of the law: the courts, Parliament, the judiciary, the legal profession, the doctrines and methodology of the Law, the doctrine of precedent, the principles of statutory interpretation.

Courses: IF31, IF33, IF34, IF36, LW31, LX31  
Contact Hours: 3 per week  
Credit Points: 12 per semester

#### ■ LWB102 LAW OF CONTRACT

Contract law: definition of the Law of Contract, outline of remedies; formation of contracts; equitable estoppel; express and implied terms; factors vitiating contracts; capacity to contract; privity of contract; discharge of contract; breach of contract.

Courses: IF31, IF33, IF34, IF36, LW31, LX31  
Contact Hours: 3 per week  
Credit Points: 12 per semester

#### ■ LWB103 TORTS

At its most general level this branch of the law is concerned with the question of compensation to be given by a person causing a loss to a person suffering a loss. Areas of everyday conflict which may be resolved by principles of tort liability include damage sustained as a result of a motor-vehicle collision, and injury to a person's reputation from publication of defamatory material. The rules are examined to ascertain whether they satisfy the critical test: functional adequacy in terms of contemporary values.

Courses: IF31, IF33, IF34, IF36, LW31, LX31  
Contact Hours: 3 per week  
Credit Points: 12 per semester

#### ■ LWB104 LEGAL RESEARCH & WRITING 1

Basic legal research skills and methodology, and how to write assignments and solve legal problems. The hierarchy of the courts and the doctrine of precedent; how to use a law library effectively; practice in handling the most important research materials. An introduction to the use of computerised legal research.

Courses: IF31, IF33, IF34, IF36, LW31, LX31  
Contact Hours: 1 per week  
Credit Points: 4 per semester

#### ■ LWB130 INTRODUCTION TO THE STUDY OF LAW

The fundamental aspects of law and the legal system; an introduction to the learning environment at QUT including different learning styles, the objectives and structure of the course, the skills and knowledge required and the learning environment in which they will be acquired; an orientation or guidance map at the point of entry to the LLB learning environment.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

#### ■ LWB131 LAW IN CONTEXT

The varied contexts of law; some of the sources and traditional doctrinal approaches supplemented by contextual material describing other ways of seeing law from a number of perspectives including ideological, historical, political, social, economic and comparative.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33  
Incompatible with: LWB101  
Credit Points: 24 Contact Hours: 3 per week

### ■ LWB132 CONTRACTS

Contract law: definition of the Law of Contract, outline of remedies; formation of contracts; equitable estoppel; express and implied terms; factors vitiating contracts; capacity to contract; privity of contract; discharge of contract; breach of contract.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB102

**Credit Points:** 24      **Contact Hours:** 3 per week

### ■ LWB133 TORTS

At its most general level this branch of the law is concerned with the question of compensation to be given by a person causing a loss to a person suffering a loss. Areas of everyday conflict which may be resolved by principles of tort liability include damage sustained as a result of a motor-vehicle collision, and injury to a person's reputation from publication of defamatory material. The rules are examined to ascertain whether they satisfy the critical test: functional adequacy in terms of contemporary values.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB103

**Credit Points:** 24      **Contact Hours:** 3 per week

### ■ LWB134 RESEARCH & LEGAL REASONING

Legal reasoning involves the application of rules or standards of law to the resolution of legal problems, which typically arise in disputes, or potential disputes, between parties. In this unit students will learn: how to find the existing rules or standards of law and apply them to the solution of straightforward legal problems; and how to try to anticipate the way in which courts will decide the more complex or controversial matters.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB104

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LWB135 LEGISLATION

Legislation (Acts of Parliament and delegated legislation) is the source of a very high and increasing proportion of law within the Australian system. An ability to understand the legislative process and the ability to read and interpret legislation provide some of the essential building blocks and background to the study and practice of statute based areas of the law. Such areas constitute the majority of later year units.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB101

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LWB201 LAND LAW

The principles relating to the law of Real Property in Queensland: the rights, interests and obligations which can exist in relation to land, and the methods of creating, enforcing, assigning and extinguishing such rights, interests and obligations. The course encompasses: the concept of real property; the doctrines of tenure and of estates; equitable interests; the Torrens system; easements; mortgages; leasehold interests; covenants affecting land; co-ownership; future interests and perpetuities; building units title and group title; time-sharing; Crown leasehold.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31

**Contact Hours:** 3 per week

**Credit Points:** 12 per semester

### ■ LWB202 CRIMINAL LAW & PROCEDURE

The criminal law in force in Queensland, encompassing criminal responsibility, parties to offences, and major indictable offences. The wider context of the operation of the criminal law, penal principles and the justifications for imposing punishment by the State, to aspects of the disposition of offenders in the sentencing part of a criminal trial, imprisonment and release procedures.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31

**Contact Hours:** 3 per week

**Credit Points:** 12 per semester

### ■ LWB203 CONSTITUTIONAL LAW

The power of the institutions which make, administer or apply the law. The federal constitution divides power between the State and Commonwealth governments, and between the legislative, executive and judicial branches of the Commonwealth government and actions which ignore those divisions can be challenged successfully in courts of law.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32

**Contact Hours:** 3 per week

**Credit Points:** 12 per semester

### ■ LWB231 INTRODUCTION TO PUBLIC LAW

The basic institutions of government - the executive, the Parliament and the judiciary; the general principles to which legislative power is subject, and the principles by which executive decision-making is kept open and accountable.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB203 and LWB311

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LWB232 CRIMINAL LAW AND PROCEDURE

The criminal law in force in Queensland; criminal responsibility; parties to offences; major indictable offences. The wider context of the operation of the criminal law; penal principles and the justifications for imposing punishment by the State; aspects of the disposition of offenders in the sentencing part of a criminal trial; imprisonment and release procedures.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB202

**Credit Points:** 24      **Contact Hours:** 3 per week

### ■ LWB233 PROPERTY 1

The general principles of property law; the nature of property, ownership and title and the differences between various types of property; Aboriginal native title and the rules relating to real property.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB201

**Credit Points:** 24      **Contact Hours:** 3 per week

### ■ LWB234 EQUITY AND TRUSTS

The major principles of equity including: fiduciaries, unconscionable dealings and the principal equitable remedies; trusts and trusteeship.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB301

**Credit Points:** 24      **Contact Hours:** 3 per week

### ■ LWB235 AUSTRALIAN FEDERAL CONSTITUTIONAL LAW

The constitutional arrangements effected by the Commonwealth Constitution; the structure and institutions

of the constitution; the division of power between commonwealth and states; and relations between the different levels of government; emphasis to Commonwealth legislative powers, executive and judicial powers.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Prerequisites:** LWB231

**Incompatible with:** LWB203

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LWB301 EQUITY

Equitable doctrines were developed to complement the sometimes inflexible rules of the common law. In Semester 1, students are introduced to basic equitable principles, including a study of equitable estates and interests. Unconscionable dealings are also studied in some detail. In Semester 2, major areas of study include the law of trusts and equitable assignments.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32

**Contact Hours:** 3 per week

**Credit Points:** 12 per semester

### ■ LWB302 FAMILY LAW

The manner in which the law treats the special social relationships which exist among members of a family and transforms them into legal rights and duties. The family as a legal phenomenon; annulment of marriages; dissolution of marriages; consequences of separation and divorce, such as maintenance, adjustment of interests in property and custody.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LWB303 COMMERCIAL LAW

The legal framework; kinds of personal property recognised in the Australian legal system; rules which especially affect commercial transactions; nature and sources of commercial law; personal property; negotiable instruments including bills of exchange and cheques; bailment; sale of goods; consumer protection under the Trade Practices Act 1974; insurance.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32

**Credit Points:** 24 **Contact Hours:** 3 per week

### ■ LWB305 JURISPRUDENCE

Jurisprudence involves the application of insights gained from philosophy: in particular from logic and from moral, political and social philosophy: to the study of law. Topics include: historical background to modern theories, sociological and historical descriptions of law and legal change, theories of limited or unlimited government power, recognition of valid law and legal systems, legal reasoning, proper objects of law and the proper direction of legal change.

**Courses:** LW31, LX31

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LWB306 LOCAL GOVERNMENT AND PLANNING LAW

The sources of legal authority for the Government of cities, towns and shires, with particular reference to the City of Brisbane: laws relating to town planning and subdivision, including the principles applicable to the rezoning of land; uses of land; control of developments by local authorities; rights to object to development; control exercised over subdivision of land by local authority; rights of appeal from local authority decisions; structure, purpose and procedure of the Planning and Environment Court; other legislation

related to the town planning process, such as heritage legislation and contaminated land legislation.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ LWB307 INSOLVENCY LAW

The insolvency of individuals and the Bankruptcy Act 1966 (Cth); winding up of companies, provisional schemes of arrangement and official management as procedures other than winding up which may be open to an insolvent company; law relating to receivership and agents of and mortgagees in possession; relevant provisions of the Corporations Law.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Prerequisites:** LWB132 and LWB234

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LWB308 INDUSTRIAL LAW

Rights and duties of employers and employees under the law of employment, breach of these duties, and the remedies of both parties; entitlement to workers compensation and the benefits available; the law governing the operation of trade unions and the rights of members; settlement of industrial disputes in the Commonwealth and State spheres by conciliation and arbitration.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ LWB309 SUCCESSION

Intestate and testate succession; definitions; joint and mutual wills; formal requirements for execution of valid will; alteration, revocation and revival of wills; administration of assets: duties, powers, rights and liabilities of personal representatives; family maintenance provisions: power of court to vary a will.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ LWB311 ADMINISTRATIVE LAW

An examination of the basis on which the courts review both administrative action taken by governments and delegated legislation, and of the remedies available and restrictions on judicial review; the alternative means of review, the Ombudsman and the Administrative Appeals Tribunal and access to government information; the special position of the Crown.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32

**Credit Points:** 24 **Contact Hours:** 3 per week

### ■ LWB312 LAND CONTRACTS

The principles involved in the construction of contracts for the sale of land, with special emphasis on the current standard REIQ Contract in use in Queensland. Statutory requirements as they affect such contracts, including those relating to building units and group titles conveyancing.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Prerequisites:** LWB132, LWB233, LWB234

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LWB313 DISCRIMINATION/EQUAL OPPORTUNITY LAW

An examination of the law and policy with respect to discrimination and equal opportunity in Australia; relevant international treaties and Australian legislation such as the Racial Discrimination Act, Sex Discrimination Act, Human Rights and Equal Oppor-

tunity Commission Act and Privacy Act; the Human Rights Commission and state bodies.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ LWB315 JESSUP INTERNATIONAL LAW MOOT

The Philip C. Jessup International Law Moot, run under the auspices of the American Society of International Law, is the premier mooting competition in any area of the law in the world attracting participants from every major jurisdiction. The competition requires the ability to research, analyse, apply and communicate (both orally and in written form) legal argument with respect to a complicated problem in Public International Law. Members of the QUT team will participate in the joint preparation of two memorials (one for the applicant and one for the respondent) satisfying the requirements of the Official Rules of the competition, with respect to the contents of and issues raised by the problem for the given year. Some or all of the team members will then present oral arguments in the Australian rounds of the Jessup Moot competition, and at the international rounds in the United States if the team wins the Australian round.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8      **Contact Hours:** 2 per week

#### ■ LWB331 ADMINISTRATIVE LAW

The law relating to the control of government officials and public authorities; especially where the exercise of power affects the rights and interests of individuals.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Prerequisite:** LWB231

**Incompatible with:** LWB311

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ LWB332 PROPERTY 2

Fundamental concepts of personal property law; the concept of negotiability; transfers of personal property; protection of personal property interests; agency; bailment.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Prerequisite or Co-requisite:** LWB233

**Incompatible with:** LWB303

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ LWB333 THEORIES OF LAW

The legal theories of the twentieth century; historical contexts; underlying values and assumptions; economic, political and social objectives; the practical consequences of application to legal and social problems.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Prerequisites:** LWB131

**Incompatible with:** LWB305

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ LWB334 CORPORATE LAW

The basic legal principles relating to registered companies; the principle of the veil of incorporation, internal functioning of a registered company including the memorandum and articles of association; dealings with third parties; legal rules relating to share capital, dividends and loan capital; introduction to obligations of company officers and shareholder rights.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB401

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ LWB351 AUSTRALIAN INDIGENOUS PEOPLE AND THE LAW

Customary law, issues of legal identity and statutory definition, Aboriginal Native Title (*Mabo* and its implications) and legislative schemes for claiming title, anti-discrimination laws, the criminal justice system, legal aid and effective communication with clients, sovereignty, self-determination and proposals for a Treaty.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8      **Contact Hours:** 2 per week

#### ■ LWB361 DRAFTING

Drafting of deeds, contract conditions, leases and mortgage clauses in a plain English format. Stamp duties on instruments.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB414

**Credit Points:** 8      **Contact Hours:** 2 per week

#### ■ LWB364 INTRODUCTION TO TAXATION LAW

The principles relating to the distinction between income and capital and the concept of deductions; introductory capital gains tax, the tax avoidance provisions and liability of tax advisers.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB403

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ LWB366 LAW OF COMMERCIAL ENTITIES

The legal principles pertaining to partnerships, joint ventures, unit trusts and commercial associations, statutory corporations. Partnerships and joint ventures: definition and existence, relationship to third parties, relationship inter-se and termination. Unit trusts: private unit trusts.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8      **Contact Hours:** 2 per week

#### ■ LWB401 COMPANY LAW & PARTNERSHIP

Company law and registered companies. Topics include: the nature of registered companies, including procedure to obtain registration, and classification of registered companies; prospectuses; general meetings; enforcement of directors' and controlling members' duties; shares, share capital and dividends; winding-up.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32

**Credit Points:** 24      **Contact Hours:** 3 per week

#### ■ LWB402 EVIDENCE

The rules and principles that relate to the presentation and proof of facts to a Court of Law. Litigation largely involves the application of substantive law to the facts that are determined according to the rules of evidence.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ LWB403 TAXATION LAW

The Income Tax Assessment Act 1936 (Cth) and some related statutes; the administrative structure and scheme of the Act; residence of taxpayers; determining assessable income and deductions; taxation of



partnerships; trusts and companies; capital gains tax; tax planning; liability of tax advisors, aspects of fringe benefit tax.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32  
**Credit Points:** 24      **Contact Hours:** 3 per week

#### ■ LWB404 CIVIL PROCEDURE

Procedures by which Superior Courts resolve civil disputes; Supreme, District and Federal Court rules and their application to civil litigation.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32  
**Credit Points:** 24      **Contact Hours:** 3 per week

#### ■ LWB405 SOLICITORS' TRUST ACCOUNTS

Intending solicitors must study this unit which examines the Trust Account Act and Regulations and related legislation, including the Legal Assistance Act and Queensland Law Society Act. The legislation for practical and accounting purposes, including the format for documentation and records; reconciliations; investments; internal control and trust ledger accounts and trial balance. The role of the auditor, audit requirements and Ministerial involvement.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32  
**Credit Points:** 8      **Contact Hours:** 2 per week

#### ■ LWB406 FUNDAMENTALS OF PUBLIC INTERNATIONAL LAW

The legal rules which govern the activities of nations between themselves and with international organisations, such as the UN; the creation of international law: treaties, customary law, general principles of law; the concept of international legal personality: statehood, self-determination, recognition; the effects of international law: sovereignty, international responsibility.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33  
**Credit Points:** 8      **Contact Hours:** 2 per week

#### ■ LWB407 CONFLICT OF LAWS

The body of law governing the resolution of private legal problems with a significant foreign element; jurisdiction of domestic courts to determine matters having a foreign element; enforcement of foreign judgments in the domestic jurisdiction; choice of law for the resolution of the dispute, both generally and in relation to family law, contract, tort, property and succession.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Prerequisite:** LWB131

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ LWB409 PROFESSIONAL CONDUCT

Barristers – conduct and etiquette at the Bar, specifically the character of practice at the Bar; regulation of practice at the Bar in Queensland; the respective duties of Barristers to the Law, the Court, the public, the client and the opponent. Solicitors – professional courtesies, division of the profession in Queensland, the Statutory Committee, malpractice, professional conduct, duties of a solicitor, respective functions of barristers and solicitors, a solicitor acting for more than one party, advertising fees, trust accounts and legal professional negligence.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32  
**Contact Hours:** 2 per week for 5 weeks (10 hours)  
**Credit Points:** 2

#### ■ LWB410 TRADE PRACTICES

The Trade Practices Act 1974 (C'th) and the cases decided under it; restrictive trade practices and unfair practices.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8      **Contact Hours:** 2 per week

#### ■ LWB412 RESEARCH & WRITING PROJECT

An arranged and supervised piece of research into some area of legal knowledge, and the writing of a paper of between 10,000 and 15,000 words on the results of the research and conclusions drawn therefrom. The paper becomes the property of the Faculty of Law and may be placed in the Law Library. A student wishing to undertake the Research and Writing Project should discuss the matter as early as possible in the semester immediately before that in which he or she proposes to undertake it. The written proposal must reach the Dean at least two clear weeks before the beginning of the teaching semester in which the project is undertaken, and the proposal is accepted or refused, and the student notified accordingly, not later than the first day of that semester.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8      **Contact Hours:** 2 per week

#### ■ LWB414 DRAFTING & LEGAL TRANSACTIONS

A study of the general principles of drafting and analysis of instruments commonly used in practice including deeds, special conditions in Torrens Title conveyancing contracts, options to purchase and renew, Land Act contracts, business contracts and leases. Topics include: an introductory study of stamp duty and its applications, an examination of securities and trust instruments. Drafting covers mortgages, unit trusts and discretionary trusts, stamp duty.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32  
**Contact Hours:** 2 per week

**Credit Points:** 8 per semester

#### ■ LWB415 LEGAL RESEARCH & WRITING 2

Sources from other jurisdictions such as the UK, Canada, New Zealand and the USA are included. An important section of this unit is the researching/writing of an assignment based on a problem which involves a number of units studied during the LLB course, including researching recent developments.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32  
**Credit Points:** 8      **Contact Hours:** 1 per week

#### ■ LWB431 CIVIL PROCEDURE

The structures and processes of litigation conducted in the Supreme and Federal Courts; examination of jurisdiction, limitation of actions, motor vehicles insurance, client care, originating process, appearance, service, parties, joinder, pleadings, evidence, subpoena, settlement, trial, appeal costs and execution

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB404

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ LWB432 EVIDENCE

The rules and principles that relate to the presentation of facts to a court of law.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB402

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ LWB433 PROFESSIONAL RESPONSIBILITY

The ethical principles upon which the practice of all professions is based; the principles which underpin the discipline of law and the workings of the legal profession; the history, nature, organisation and operation of the legal profession.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LWB434 ADVANCED RESEARCH AND LEGAL REASONING

Exploration of suitable theoretical frameworks for understanding Australian legal reasoning generally, topical developments in substantive areas of law by way of illustration of the theoretical models; advanced skills of legal research and analysis.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Prerequisite:** LWB134

**Incompatible with:** LWB415

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LWB451 (ALTERNATIVE) DISPUTE RESOLUTION

The emergence of Alternative Dispute Resolution methods, particular in the context of our court system; comparative advantages and disadvantages of the different processes; basic skills involved in negotiations and mediation.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ LWB452 ASIAN LEGAL SYSTEMS

Basic knowledge of Asian legal systems; a general overview of the region; specific countries eg. China, Japan and Malaysia; practical areas of the law are studied and comparisons drawn with Australian law.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ LWB455 LEGAL CLINIC (INDIVIDUAL PLANNED EXERCISE)

This unit allows students to participate in planning their own individual program in co-operation with some section of the legal profession, government or industry. Programs combine academic objectives with professional development or community service objectives.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ LWB456 LEGAL CLINIC (ORGANISED PROGRAM)

This unit provides students with the opportunity to see law in action through involving the student in the delivery of legal services to members of the community under the umbrella of the Legal Aid Office (Queensland).

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ LWB462 SECURITIES

Security interests over real and personal property; Torrens Title Mortgages, bills of sale and credit legislation as it applies to security interests.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB414

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ LWB480 MEDIA LAW

Journalists and their sources of information; defamation; contempt; confidential information; access to information; the Broadcasting Tribunal; and regulation of advertising and of ownership.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ LWB481 MINERAL LAW

The legal principles governing the mining of 'hard' minerals, particularly in Queensland: explanation of basic concepts with respect to the meaning of mining, minerals and ownership of minerals; mineral titles; enforcement of mining interests; government agreements; joint ventures; project financing environmental controls on exploration and mining; revenue aspects.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ LWB482 COMPUTERS & THE LAW

The role of computers in legal practice; the body of law that has arisen in relation to computers and computer applications.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ LWB483 MEDICO-LEGAL ISSUES

The constitutional framework supporting the regulation of health care; the relationship between the individual and the health care provider in terms of consent to treatment and negligence; the impact of the criminal law: abortion, removal from life support systems; mental illness and fitness to plead; medical records and evidence: ownership and confidentiality of records, expert evidence; the role of the coroner; complaints against hospitals and health care workers.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32, IF37, IF38, LX33, LW33

**Prerequisites:** LWB131, LWB133

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ LWB485 ENVIRONMENTAL LAW

An introduction to environmental law in Queensland; the sources, nature and development of environmental law in Queensland; the concepts of environmental law (eg. property, administrative control, law and policy, planning, management); access to the environment; planning to prevent environment degradation and pollution; protecting the environment; managing the environment; conservation; ecologically sustainable development; enforcement of environmental law; the role of the Commonwealth.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ LWB486 INTELLECTUAL PROPERTY LAW

The most significant of the legislative enactments creating or protecting intellectual property in Australia, including those governing copyright, designs, patents and trade marks; application of the common law, particularly confidential information and passing off.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ LWB487 MARITIME LAW

Carriage of goods by sea; charterparties; marine insurance; general average; salvage; collisions; admiralty jurisdiction and arrest of ships; oil pollution; registration, sale and mortgage of ships; and limitation of ship operators' liability.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

Credit Points: 8 Contact Hours: 2 per week

### ■ LWN003 ADVANCED FAMILY LAW

A detailed examination of the law and underlying principles of selected areas of Family Law including: jurisdiction; financial aspects of marriage and divorce; children; marital and non-marital relationships. Where appropriate, comparisons with other countries are used and the impact of treaties.

Courses: LW50, LW51

Credit Points: 24 Contact Hours: 2 per week

### ■ LWN008 COMMERCIAL LEASES

The principles governing standard clauses of a modern Australian commercial lease in the light of recent case law and Queensland statutory provisions affecting such interests. Topics include: negotiation of leases, subject matter of leases, construction of leases, covenants for repair, user, assignment, quiet possession, options to renew and purchase, insurance, the phenomenon of default, remedies of lessor and lessee, guarantees of leases.

Courses: LW50, LW51

Credit Points: 24 Contact Hours: 2 per week

### ■ LWN017 RESTITUTION

The law of Restitution is concerned with those cases where a plaintiff obtains a money remedy and/or recovers property from a defendant who has been unjustly enriched by the receipt of money or other benefits at the expense of the plaintiff. The theoretical basis and scope of restitutionary claims and defences to them and their relationship with those claims founded on the traditional common law obligations, torts and contract and the law of property will be considered.

Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week

### ■ LWN018 SELECT PROBLEMS OF TRUSTS

Aspects of express trusts including a short refresher, management of trustee investments, and consideration of a model trustee code; the nature of the constructive trust; the acquisition of property by a fiduciary and the constructive trust; the acquisition of property on death and the constructive trust; the acquisition of land under an oral agreement or trust and the constructive trust; unconscionable insistence on legal rights, unconscionable conduct and the constructive trust with particular reference to estoppel and relief against forfeiture; determining the ownership of property in disputes between unmarried partners.

Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week

### ■ LWN020 NON-RESIDENT & FOREIGN SOURCE TAXATION

Questions relating to residence, source, transfer pricing and the legislation relating to Controlled Foreign Entities; the effect of Double Tax Treaties.

Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week

### ■ LWN021 BANKING & FINANCE LAW 1

The legal environment of the financial industry, which contributes approximately 10 per cent of Australia's annual GNP, and which operate the clearing and payment system through which most debts of any significance are settled, and which provides the bulk of debt financing on which Australian industry and commerce depends.

Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week

### ■ LWN022 BANKING & FINANCE LAW 2

Securitisation of debts; factoring; SWAP transactions (interest rate and currency swaps); options and derivatives, foreign exchange transactions, the concepts of 'money' and 'payment' and 'legal tender'; the nature of interest; advanced security techniques; personal property security law reform; letters of credit and the UCP; corporate finance - capita selecta; commodity financing.

Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week

### ■ LWN023 INTERNATIONAL TRADE LAW

Origins, sources and modern developments; harmonisation of law; international commercial transactions; international sale of goods; countertrade; marketing arrangements; financing international transactions; carriage of goods by sea; litigation; international commercial arbitration; other alternative dispute resolution; export assistance; investment protection; ANZCERTA; globalisation of legal services; principles of international business conduct; examination of the trade law of a selected trading partner of Australia.

Courses: LW50, LW51

Credit Points: 24 Contact Hours: 2 per week

### ■ LWN024 SELECT PROBLEMS OF TRIBUNALS & ENQUIRIES

Investigation of problems that occur in the law relating to the activities of tribunals and enquiries; concentrates on Royal Commissions and related forms of enquiries, as well as statutory tribunals exercising quasi-judicial functions. Topics include: the power to require information; the privilege against self-incrimination; Crown privilege and duties of secrecy; do the rules of procedural fairness apply?; can an enquiry commit a contempt of court?; enquiries and the rules of parliamentary privilege; the power of the courts to review the activities of enquiries; enquiries that investigate a mixture of Federal and State matters; the laws of privacy and confidentiality. Legislative attempts to oust judicial review of inquiries and tribunals.

Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week

### ■ LWN025 RESEARCH PROJECT 1A

A supervised research project over one semester approved by the Postgraduate Studies Committee.

Courses: LW50, LW51

Credit Points: 12

### ■ LWN026 RESEARCH PROJECT 2A

A supervised research project over the whole year approved by the Postgraduate Studies Committee.

Courses: LW50, LW51

Credit Points: 24

### ■ LWN028 ADVANCED SECURITIES

Competing claims to fixtures on land; the nature of a charge and a mortgage; security over bank accounts; recent problems with Bills of Sale legislation; the

mortgagee's power of sale; guarantees and indemnities; fixed and floating securities; some problems arising from receiverships and mortgagees in possession; securities and the Trade Practices Act; bank guarantees and unconditional performance bonds; the demise of the scintilla temporis principle; romalpa clauses; co-ownership and security interests; negative pledges; securities over future property; the nature of various security interests; and the giving of formal opinions in relation to security documentation.

**Courses:** LW50, LW51

**Credit Points:** 12

#### ■ LWN029 THEORETICAL CRIMINOLOGY

Legal and criminological conceptions of crime and punishment: nature, scope and objects of criminology. Criminological theory: classical and neo-classical theories; the positivist school; physical and biological factors and theories; psychological and psychiatric explanations, including the notion of danger; crime as a social phenomenon; radical or critical criminology; law and social change; theories of punishment.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN030 DISPUTE RESOLUTION/MEDIATION

A study of mediation looking at both the theory and practice. Students are expected to be involved in a number of class workshops to learn mediation skills; therefore an attendance rate of 80 per cent (ie 11 out of 14 classes) is necessary to gain a mark in the unit. Issues include: mediation in Australia; theories of mediators; different forms of mediation, ie. neighbourhood, family, commercial; the advantages and disadvantages of mediation; power imbalance; when mediation is not appropriate; ethical and professional issues relating to mediation.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN031 FOREIGN INVESTMENT LAW & PRACTICE

The law and policy regime for Australian foreign investment at Commonwealth and State levels; direct regulation of foreign investment; indirect regulation of foreign investment and general project infrastructure regulation.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN032 CREDIT FOR UQ SUBJECT 1

Under the course rules, a coursework student may, with the prior approval in writing of the Deans of the Faculties of Law of the Queensland University of Technology and of the University of Queensland, undertake one whole year or two one-semester subjects offered in the LL.M degree by Coursework at the University of Queensland. This unit code represents a one-semester subject taken pursuant to that course rule at the University of Queensland.

**Courses:** LW50, LW51

**Credit Points:** 12

#### ■ LWN033 CREDIT FOR UQ SUBJECT 2

See LWN032.

**Courses:** LW50, LW51

**Credit Points:** 12

#### ■ LWN034 CREDIT FOR UQ SUBJECT 3

See LWN032.

**Courses:** LW50, LW51

**Credit Points:** 24

#### ■ LWN035 MEDICO-LEGAL ISSUES

The Constitutional framework supporting the regulation of health care; the relationship between the individual and the health-care provider in terms of consent to treatment and negligence; the impact of the criminal law; abortion, removal from life support systems; mental illness and fitness to plead; medical records and evidence; ownership and confidentiality of records, expert evidence; the role of the coroner; complaints against health-care workers.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN036 SELECT ISSUES IN INTELLECTUAL PROPERTY LAW

The application of intellectual property law to common commercial arrangements; develops an awareness of emerging issues in intellectual property including application to computers, performers' rights and moral rights; examines the remedies, procedures and processes in this field.

**Course:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN037 STAMP DUTY & COMMERCIAL TRANSACTIONS

Whilst stamp duty remains a tax on instruments, amendments to the Stamp Act have had the result that it is essentially a transactional impost. On completion, students have a sound understanding of the scope of the Act and of the circumstances in which commercial transactions attract a liability to duty. Topics include: territorial nexus; stamp duty administration; transactions concerning companies; transactions concerning trusts; partnership transactions; planning and structuring issues; anti-avoidance provisions.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN038 CAPITAL GAINS TAX & COMMERCIAL TRANSACTIONS

The capital gains tax provisions contained in Part IIIA of the Income Tax Assessment Act have the potential to apply to innumerable acts, transactions and events. Upon completion of this unit, students have a sound understanding of the scheme of taxation which underpins the Part and of the application of that scheme to commercial transactions. Topics include: the relationship between Part IIIA and the other taxing provisions of the Act; the general scheme of Part IIIA; the threshold conditions to the application of the Part; the calculation provisions of the Part; the function and operation of roll-over provisions; companies and capital gains tax; partnerships and capital gains tax; trusts and capital gains tax; planning and structuring issues; tax avoidance and capital gains tax.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN039 APPLIED CRIMINOLOGY

Identification and exploration of key issues in criminology including the identification and measurement of crime; the social context (ecology) of crime; aboriginality and the criminal justice system; the politicisation of crime, law and order; organised crime; victimisation and victimology; crime prevention and aspects of law enforcement; theories of punishment and sentencing.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN040 THEORIES OF JUSTICE 1

This unit compliments LWN042. However, both units stand alone and neither is a prerequisite for the other.

It will provide a comparative analytical perspective from which to consider the notion of justice and related concepts. A thematic approach will be adopted to issues arising in various spheres of society to do with the environment, welfare, law, religion and women. Topics include: a consideration of the following. Epistemologies of justice; Justice in the context of post-modern Western Society; the environmental paradigm of Justice; Welfare, equality and distributive justice; the law profession and juridical culture; religion; faith doing justice; women; feminist perspectives on law and justice; comparative justice: the voice of other cultures. Includes seminars and guest lectures. Students lead one presentation.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN041 ECONOMIC ANALYSIS OF THE LAW

This course will consider the manner in which, and the extent to which, the principles and methodologies of economics can be applied in the analysis of statutes and the common law, in evaluating proposals for the reform of the law, and in explaining, justifying or criticising particular rules of law. Particular focus will be placed on the analysis of various contemporary issues in the law of torts and the law of contract. A previous course in economics is recommended.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN042 THEORIES OF JUSTICE 2

This unit compliments LWN040. However, both units stand alone and neither is a prerequisite for the other. Our chief interest in this unit will be to relate mainly contemporary legal theory to the concept of justice. This endeavour will be further contextualised where possible into students practice contexts. Areas covered will include feminism, the critical legal studies movement, positivism, utilitarianism, economic analysis and post-modernist theories.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN043 LAW OF COMPANY TAKEOVERS

Aspects of Corporation Law which regulate acquisition of shares which effect a change in a company's control; practical perspectives and conceptual analysis in relation to the present law; the regulation of takeovers of Australian corporations.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN044 INSTITUTIONAL INVESTORS

The unit is an advanced corporate banking financial institution course. Institutional investors are financial institutions like premium funds, insurance companies, mutual funds, savings and trust departments of banks, trust companies, securities firms, all of which invest on behalf of the public. The way they make investments is governed by statute and by common law as well as by contract. Institutional investors now are investors in the global financial and capital markets. The course would entail three parts. The first part would deal with a description of institutional investors in Australia, Asia, North America and Europe. The second part canvasses the common and statutory law regulating and governing institutional investors as well as contract law. The third part deals with special topics such as conflict of interest, exclusive self dealing and the investors role in corporate covenants especially in proxy battles, mergers and

take overs as well as social investments and the breach of the prudent man rule. The unit will also familiarise students with modern portfolio theory as an alternative paradigm to the prudent man rule which considers investments in black and white terms like risky, non-risky, productive and non-productive.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN045 LAW RELATING TO PUBLIC & OFFICIAL CORRUPTION

Concept of public duty; response of the general law; investigation and prosecution of official corruption from the perspective of the Criminal Law.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN046 ADVANCED PLANNING

A detailed study of town planning law with special emphasis on the following: Relevant Queensland legislation and in particular the Local Government Planning & Environment Act 1990 and the impact of the 1992 amendments thereto. The implementation, structure and operation of town planning schemes, Strategic Plans and their legal effect. The role and jurisdiction of the Planning & Environment Court, its Rules of Court, rights of appeal therefrom and the power of costs. Applications for town planning consent, rezoning and subdivision of land and relevant considerations in connection therewith. The rights and obligations of objectors, objector appeals and appeals by applicants. Reasonable and relevant conditions in certain specified case areas together with an examination of relevant case law applicable thereto. Existing and non-conforming uses; other legislation impacting on town planning. Prior experience in town planning is not a prerequisite.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN047 LEGAL EDUCATION

An introduction to the main schools of thought on legal education. A review of legal education from an historical and sociopolitical perspective noting more modern developments such as the introduction of the training guarantee levy and funding policies. Consideration of the implications on legal education of new schools of contemporary thought on legal education such as feminist legal theory and critical legal studies. An analysis of the learning process considering varying learning styles; consideration of a variety of teaching styles/techniques and the appropriateness and effectiveness of each. Consideration of matching learning styles with teaching methods and the validity and effectiveness of such an approach. Consideration for the need, role and implementation of training needs analyses and goal setting. Analysing the elements of objectives and aims and how to set them with a view to designing a teaching/training program. Consideration of the means of evaluating teaching/training effectiveness. Consideration of the legal education continuum. Consideration of the needs of adult learners.

**Courses:** LW50, LW51

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ LWN048 ADVANCED LEGAL RESEARCH

The unit deals with concepts, techniques, aims and methods of legal research and other research relevant to an interdisciplinary perspective. The course contains extensive training in finding source material, including the use of advanced technology in locating and organising source materials. The unit will also

deal at length with the presentation and defence of research including the respective roles of researcher and supervisor, structuring research material in support of a thesis, the diagnosis and remedy of structural problems. It will also deal with the conventions of presentation, 'assessment' of research in terms of the differing criteria for refereeing and judging 'worth' and quality and ethics of research. Different research objectives will be considered for attention, for example research in government or for law reform.

**Courses:** LW50, LW51

**Credit Points:** 12      **Contact Hours:** 2 per week

#### ■ LWN049 INTERNATIONAL ENVIRONMENTAL LAW

The development of international environmental law; State responsibility for environmental protection; protection of the marine environment from pollution; protection of the atmosphere; protection of wildlife and habitats; hazardous wastes and toxic chemicals; conservation of the world heritage; international trade and the environment; international dispute resolution; enforceability of international legal regimes.

**Courses:** LW50, LW51

**Credit Points:** 12      **Contact Hours:** 2 per week

#### ■ LWN050 RESTRICTIVE TRADE PRACTICES LAW

The unit is concerned with an analysis of those sections of the *Trade Practices Act* dealing with horizontal and vertical restraints of competition, misuse of market power, price discrimination and mergers. These substantive prohibitions are intended to regulate workable competition in markets. The early part of the course focuses on basic concepts such as markets, competition, market power and the structure, conduct, performance paradigm. The main part of the course is concerned with analysing the elements of each of the substantive prohibitions contained in Part IV of the Act and the way in which they may apply to various agreements and business practices. After considering the substantive prohibitions, the final part of the unit is concerned with remedies and defences and the role played by the Trade Practices Commission, the Tribunal and the Courts.

**Courses:** LW50, LW51

**Credit Points:** 12      **Contact Hours:** 2 per week

#### ■ LWN051 CONSUMER PROTECTION & PRODUCT LIABILITY

The statutory and common law actions which are available to protect consumers from misleading or deceptive conduct; the statutory and common law actions available when loss or damage is suffered as a result of defective products.

**Courses:** LW50, LW51

**Credit Points:** 12      **Contact Hours:** 2 per week

#### ■ LWN052 LITIGATION

Contains three modules: civil procedure, evidence and forensic skills. The civil procedure module seeks to address current issues which present interest of difficulty in relation to the rules of practice and procedure for civil cases. The evidence module seeks to address current issues which present interest or difficulty in relation to the rules of admissibility of evidence in Queensland and Commonwealth courts. The forensic module seeks to address elected attributes which are considered necessary adjuncts to an appreciation of the substantive rules governing procedure and evidence.

**Courses:** LW50, LW51

**Credit Points:** 12      **Contact Hours:** 2 per week

#### ■ LWN053 RESEARCH PROJECT 1B

A supervised research project over one semester approved by the Postgraduate Studies Committee.

**Courses:** LW50, LW51

**Credit Points:** 12

#### ■ LWN054 AUSTRALIAN COMMERCIAL THEORY & PRACTICE

The exploration of topical Australian legal developments across different areas of law which affect commercial practice; theoretical frameworks for understanding Australian legal interpretation generally and recent High Court decisions in particular (covering such matters as the influence of 'policy' on judges); judicial law-making; crown immunity developments; liability in professional negligence to clients and third parties; legal problems in property valuation.

**Courses:** LW50, LW51

**Credit Points:** 12      **Contact Hours:** 2 per week

#### ■ LWN055 CIVIL RIGHTS

The central principles concerning the protection of human rights under domestic law; the impact of international human rights law on domestic law; other jurisdictions are compared with the relevant areas of Australian law and practice, particularly in Queensland.

**Courses:** LW50, LW51

**Credit Points:** 12      **Contact Hours:** 2 per week

#### ■ LWN056 RESEARCH PROJECT 1C

A supervised research project over one semester approved by the Postgraduate Studies Committee. Students may undertake up to 48 credit points of Research Projects only with the approval of the Director of Postgraduate Studies.

**Courses:** LW50, LW51

**Prerequisites:** LWN025, LWN053

**Credit Points:** 12      **Contact Hours:** 2 per week

#### ■ LWN057 RESEARCH PROJECT 1D

See LWN056.

**Courses:** LW50, LW51

**Prerequisites:** LWN025, LWN053, LWN056

**Credit Points:** 12

#### ■ LWN058 RESEARCH PROJECT 2B

See LWN056.

**Courses:** LW50, LW51

**Prerequisite:** LWN026

**Credit Points:** 24

#### ■ LWN059 REMEDIES

The theoretical bases of major common law and equitable remedies and the substantive law relating to those remedies; the operation of the law of remedies in Australia and the need for reform of the law of remedies.

**Courses:** LW50, LW51

**Credit Points:** 12      **Contact Hours:** 2 per week

#### ■ LWN060 ENVIRONMENTAL LEGAL SYSTEM

Analysis of the principles and concepts of environmental law in Queensland; understanding of the law in Queensland for the protection and conservation of the environment; examination of the way in which the law accommodates private interests and the public interest. Included are pollution control, environmental impact assessment, environmental management, conservation of the natural and cultural environments.

**Courses:** LW50, LW51

**Incompatible with:** LWN014

**Credit Points:** 12      **Contact Hours:** 2 per week

## ■ LWN061 NATURAL RESOURCES LAW

The principles and concepts of natural resources law in Queensland dealing with the ownership and control of natural resources, providing access to these resources, controlling the operational side of the development of these resources, and recognising commercial structures for achieving these operational objectives; an assessment of a number of developed and evolving mechanisms for achieving these objectives such as policy objectives, management plans, incentives and inducements, market instruments and property rights.

**Courses:** LW50, LW51 **Prerequisite:** LWN027  
**Credit Points:** 12 **Contact Hours:** 2 per week

## ■ LWN062 FEDERAL ENVIRONMENTAL LAW

History of Commonwealth involvement in environmental management; the Inter-Governmental Agreement of 1992; relevant paragraphs of s.51 of the Constitution; judicial interpretation of the paragraphs; impact of ss 90, 92 and 109 of the Constitution; federal legislation dealing with offshore development, marine environment protection, environmental impact assessment, national estate, wildlife conservation, Great Barrier Reef, hazardous waste and industrial chemicals, world heritage, ozone protection, ecologically sustainable development and biological diversity.

**Courses:** LW50, LW51  
**Credit Points:** 12 **Contact Hours:** 2 per week

## ■ LWN063 COMPARATIVE ENVIRONMENTAL LAW

The principles of environmental regulation in other jurisdictions and the range of policy and legal instruments being utilised to achieve environmental objectives; jurisdictions studied include European countries, both within the EEC and potentially so, North America and the Asia Pacific Region.

**Courses:** LW50, LW51  
**Credit Points:** 12 **Contact Hours:** 2 per week

## ■ LWN064 THEORIES OF CONTEMPORARY LEGAL CRITIQUE

The influence upon legal, political and institutional reform of contemporary critiques of orthodox law; these oppositional critiques have been based upon legally entrenched power inequalities, especially of race, gender, culture and class; the impact of the 'new world order' of the 1990's upon these legal critiques will also be analysed.

**Courses:** LW50, LW51  
**Credit Points:** 12 **Contact Hours:** 2 per week

## ■ LWN065 CONSTRUCTION & ENGINEERING LAW

Standard contracts used in the Australian construction and engineering industries and the legal issues confronting users of these documents; the law of contract and legislation as it applies to the construction and engineering industries at an advanced level; issues of drafting in relation to the relevant standard forms.

**Courses:** LW50, LW51  
**Credit Points:** 12 **Contact Hours:** 2 per week

## ■ LWN100 HONOURS DISSERTATION

A dissertation by students enrolled in the Master of Laws by Coursework who have obtained 96 credit points with a GPA of 6 or better. The dissertation is between 20,000 and 30,000 words in length.

**Courses:** LW50, LW51  
**Credit Points:** 48

## ■ LWS001 MEDICINE & THE LAW

This unit seeks to teach students to appreciate the impact of some important fields of law upon the medical profession and upon hospital staff, patients and visitors. Introduction to law and the legal system. The Federal and State systems; general principles of the law of tort; principles of negligence; trespass; liability of hospitals; industrial law and industrial relations; workers' compensation; legal aspects of medical practice; medico-legal investigations; medical ethics. A consideration of emerging legal issues surrounding surrogate motherhood and test-tube babies. Relevant Commonwealth and Queensland legislation and regulations and court decisions.

**Courses:** LS85, NS48, PU48  
**Credit Points:** 12 **Contact Hours:** 3 per week

## ■ LWS005 LAW & NURSING

Introduction to the Australian legal system; Commonwealth and State powers concerning health; consent and treatment/restraint of patients; negligence; the relationship between employer and employee; removal of patients from life support equipment and the law on euthanasia; abortion; transplantation of organs and tissue; medical records and confidentiality; control of poisons; the Coroners Act (Qld).

**Courses:** NS40, NS48  
**Credit Points:** 8 **Contact Hours:** 3 per week

## ■ LWS006 HEALTH ETHICS & THE LAW

This unit enables students to develop an awareness of the legal issues associated with the matter of public health and an appreciation of the legal and ethical implications of the work done by health care professionals in this area. Topics include: introduction to the Australian legal system; tort law and its impact upon the public health system; workplace health and safety legislation; medical records and confidentiality; criminal law and the health care profession; transplantation of organs and tissues; complaints against hospitals and health care professionals.

**Courses:** HL85, NS48  
**Credit Points:** 12 **Contact Hours:** 3 per week

## ■ MAA251 STATISTICS & DATA PROCESSING

A basic unit in statistics, including statistical terminology and organisation of data, elementary probability, binomial and normal distribution, sampling theory, regression and correlation.

**Courses:** LS15, ME23, SC10  
**Prerequisite:** Approval of Head of School of Mechanical and Manufacturing Engineering.  
**Credit Points:** 8 **Contact Hours:** 3 per week

## ■ MAB003 MATHEMATICS FOR SCIENCE & TECHNOLOGY 1

Algebra: Complex numbers, Cartesian form, Argand diagram; determinants and matrices; solution of linear equations; elementary vector algebra. Differential Calculus: functions of a single variable, limits, derivatives of standard functions, higher derivatives, series expansions, applications.

**Courses:** CE42, EE44, IF23, IF34, IF52, IF53, ME45, SC30  
**Credit Points:** 6 **Contact Hours:** 3 per week

## ■ MAB004 MATHEMATICS FOR SCIENCE & TECHNOLOGY 2

Algebra: Complex numbers, polar and exponential forms, applications. Vector Analysis: scalar and vector products, differentiation of vectors, applications.

Differential Calculus: hyperbolic functions, partial derivatives, total derivative, applications.

**Courses:** CE42, EE44, IF23, IF34, IF52, IF53, ME45, SC30

**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ MAB102 BASIC MATHEMATICS

Algebra; factorising polynomials; index and logarithm laws; AP and GP; trigonometrical ratios; Pythagorean identities; graphs; sine rule and cosine rule; coordinate geometry; equations of lines and standard conics; introduction to differential calculus; curve sketching; Newton-Raphson method; elementary integration; definite and indefinite integrals; use of tables of integrals; Simpson's rule.

**Course:** SC30

**Credit Points:** 12 **Contact Hours:** 4 per week

#### ■ MAB151 QUANTITATIVE TECHNIQUES

A basic mathematics unit with emphasis on the interpretation of data and the application of numerical techniques.

**Course:** PH38

**Credit Points:** 4 **Contact Hours:** 2 per week

#### ■ MAB152 QUANTITATIVE METHODS

Organisational, analysis and interpretation of data; practical problems in basic calculus techniques and numerical methods; probability distributions; sampling; estimation; regression and correlation.

**Courses:** PU42, PU44, PU45

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ MAB172 STATISTICAL METHODS

Organisation and analysis of data; use of computer packages in data analysis; probability and probability distributions; sampling theory; estimation: testing of hypotheses; regression and correlation.

**Courses:** BS50, IS08, IS43, IT20

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ MAB173 QUANTITATIVE METHODS

To enable students to use mathematical reasoning and skills to obtain solutions to financial, economic and general business problems. On completion, students should have an understanding of the types of problems amenable to a mathematical solution; they should be able to develop appropriate mathematical models and appreciate any limitations or assumptions and solutions to these models.

**Courses:** BS50, IF31

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ MAB177 MATHEMATICS FOR DATA COMMUNICATIONS

This unit provides the basic mathematical background required for the study of data communication; coding theory and cryptography.

**Course:** IT20

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ MAB178 PROBABILITY FOR TELECOMMUNICATIONS

Fundamentals of probability and random processes as required for the modelling and mathematical analysis of data communication networks; basics of queueing theory and queueing models and their applications in the study of telecommunication networks.

**Course:** IT20

**Prerequisite:** MAB177

**Credit Points:** 12 **Contact Hours:** 2 per week

#### ■ MAB181 APPLIED MATHEMATICS FOR DESIGNERS 1

Applications of plane and solid geometry in design; revision of basic geometry; symmetry; construction

and packing of solids; spherical geometry and its applications. Applications of trigonometry in design; revision of basic trigonometry; calculation of heights, distances, areas and volumes. Data collection and analysis in design; introduction to statistics; use of computers in data analysis; computer programming.

**Course:** BN30

**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ MAB182 APPLIED MATHEMATICS FOR DESIGNERS 2

Applications of plane and solid geometry in design; revision of basic geometry; symmetry; construction and packing of solids; spherical geometry and its applications. Applications of trigonometry in design; revision of basic trigonometry; calculation of heights, distances, areas and volumes. Data collection and analysis in design; introduction to statistics; use of computers in data analysis; computer programming.

**Course:** BN30

**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ MAB183 MATHEMATICS 1

Computational mathematics; circular functions-trigonometric identities; vector algebra-addition/subtraction of vectors, components and projections, modulus, unit vectors, scalar products; linear algebra-elementary matrix algebra, solution of linear equations; complex numbers-cartesian form, addition/subtraction, multiplication, modulus and argument, Argand diagram; differential calculus-elementary functions, product and quotient rules, chain rule.

**Course:** ME35

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ MAB184 MATHEMATICS 2

Computational mathematics: errors/accuracy, solution of equations, use of mathematical support software (DERIVE); vector algebra-vector products, scalar and vector triple products; complex numbers-polar and exponential forms, applications; differential calculus-trigonometric, exponential and logarithmic functions, applications to max/min, limits, rates of change; indefinite integration-standard forms; integration by parts, integration by substitution, applications.

**Course:** ME35

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ MAB185 INTRODUCTION TO STATISTICS

Data and its presentation, qualitative reporting of graphical presentations; distributions: properties and parameters, normal probability plots; sampling: correlated versus independent observations, mean and other statistics, normal case; confidence intervals for means/proportions and differences of means/proportions, pairing, tolerance limits, introduction to quality and SPC, variance; hypothesis testing, tests for means/proportions; basic concepts of experimentation, and ANOVA; introduction to regression; introduction to product and system reliability.

**Course:** ME35

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ MAB186 MATHEMATICS 3

Computational mathematics: numerical integration; differential calculus: hyperbolic functions, partial derivatives, total differential, applications; vector calculus: differentiation of vectors, applications; definite integration-areas, volumes, arc lengths, centroids, moments of inertia, multiple integrals.

**Course:** ME35

**Credit Points:** 8 **Contact Hours:** 3 per week



### ■ MAB187 ENGINEERING MATHEMATICS 1A

Computational mathematics: errors/accuracy, solution of equations, use of mathematical support software (DERIVE); vector algebra-vector products, scalar and vector triple products; complex numbers: cartesian, polar and exponential forms, Argand diagram, complex arithmetic/algebra, applications; differential calculus: trigonometric, exponential and logarithmic functions, applications to max/min, limits, rates of change; indefinite integration: standard forms, integration by parts, integration by substitution, applications.

**Courses:** CE42, EE43, EE44, IF23, IF52, IF53, ME45, SV34

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ MAB188 ENGINEERING MATHEMATICS 1B

Computational mathematics: numerical integration; differential calculus: hyperbolic functions, partial derivatives, total differential, applications; vector calculus: differentiation of vectors, applications; definite integration: areas, volumes, arc lengths, centroids, moments of inertia, multiple integrals.

**Courses:** CE42, EE43, EE44, IF23, IF52, IF53, ME45, SV34

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ MAB195 QUANTITATIVE METHODS 1

Applications of plane and solid geometry in design, revision of basic geometry; construction and packing of solids; spherical geometry and its applications. Application of trigonometry in design; calculation of heights, distances, areas and volumes.

**Course:** BN30

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ MAB196 QUANTITATIVE METHODS 2

Data collection and analysis in design; introduction to statistics; use of computers in data analysis.

**Course:** BN30

**Credit Points:** 6 **Prerequisite:** MAB181 **Contact Hours:** 3 per week

### ■ MAB212 MATHEMATICS 1

Vectors, algebra; matrices; solution of systems of linear equations. Differentiation; second and higher derivatives; exponential, trigonometric, hyperbolic and inverse functions. Logarithmic, implicit and parametric differentiation. Rates of change, maxima and minima, curve sketching, L'Hopital's rule. Definite and indefinite integrals, fundamental theorem of calculus. Integration by substitution and by parts. Improper integrals. Polar coordinates.

**Courses:** CH32, ED50, IT20, SC30

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ MAB222 MATHEMATICS 2

Areas, volumes, lengths of curves and surface areas. Simple improper integrals. Rotation of axes in the plane. Differentiation of vectors, simple kinematic applications. Series expansions of functions by Taylor and Maclaurin series; ratio test; approximations. Complex numbers; modulus, Argand diagram, exponential form; De Moivre's theorem; applications. Ordinary differential equations. First order: variables separable; exact linear. Second order: linear homogeneous differential equations with constant coefficients. Partial differentiation; geometrical interpretation, partial derivatives of higher order.

**Courses:** ED50, SC30 **Prerequisite:** MAB212 **Credit Points:** 12 **Contact Hours:** 4 per week

### ■ MAB232 DISCRETE MATHEMATICS

Combinatorics; logic; set theory; axiomatic systems; modular arithmetic; rings, integral domains, fields; finite groups; number theory; difference equations.

**Courses:** ED50, IT20, SC30

**Co-requisite:** MAB222

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ MAB237 STATISTICS

This unit shows students how to collect statistical data from surveys and experiments, how to investigate and analyse the data and how to draw valid conclusions. Students study real data via computer packages and are introduced to estimation, hypothesis testing, regression and analysis of variance.

**Courses:** CH32, ED50, SC30

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ MAB251 MATHEMATICS 1

Data handling; determinants and matrices; differentiation with applications; partial differentiation; integral calculus with applications; numerical methods.

**Course:** OP42

**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ MAB252 STATISTICS

Organisation and analysis of data; probability and probability distributions; sampling theory; estimation; tests of hypothesis; regression and correlation.

**Course:** OP42

**Credit Points:** 4 **Prerequisite:** MAB251 **Contact Hours:** 2 per week

### ■ MAB258 EXPERIMENTAL DESIGN

Examination of experimental design and data analysis in optometry; topics include: goodness of fit tests and tests of independence using chi-square distribution; introduction to multiple regression; statistical quality control; analysis of variance, introduction to non-parameter methods.

**Course:** OP42

**Credit Points:** 4 **Prerequisite:** MAB252 **Contact Hours:** 2 per week

### ■ MAB272 RESEARCH METHODS

Students in the information management and information systems fields should have knowledge of a variety of techniques associated with collecting and analysing data, be capable of critical interpretation of survey research and be able to use data reduction techniques themselves. In addition to an introduction to descriptive statistics and statistical inference, this unit introduces historical and theoretical approaches and compares rationalisation with experimentation.

**Course:** IT20

**Prerequisite:** Completion of at least 60 credit points from the Information Management or Information Systems majors in IT20.

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MAB297 MATHEMATICS FOR CONSTRUCTION

Data handling and basic algebra, geometry, trigonometry, vector techniques; introduction to financial mathematics, probability and statistics.

**Course:** CN31

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ MAB298 MATHEMATICS & STATISTICS

See MAB297.

**Course:** CN32

**Credit Points:** 4 **Contact Hours:** 2 per week

**■ MAB301 CALCULUS & ANALYSIS A**

Real value functions; differentiation; introduction to partial differentiation; integration.

**Courses:** MA34, SC30

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB303 ALGEBRA & ANALYSIS B**

Set theory, relations and functions; introduction to difference equations; infinite series; complex numbers; linear equations; matrices and determinants; vector spaces; eigenvalues and eigenvectors.

**Courses:** MA34, SC30

**Co-requisite:** MAB301

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB304 CALCULUS & VECTOR ALGEBRA**

Improper integrals; first and second order linear differential equations; elementary vector algebra; Euclidean spaces; introduction to differential geometry of curves, conic sections.

**Courses:** MA34, SC30

**Prerequisite:** MAB301

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB321 COMPUTATIONAL MATHEMATICS**

Sources of errors; computer arithmetic; computations with polynomials, standard functions, recurrence relations and series; computations with data, searching, sorting, sums and means; computations with arrays; use of calculators, programing languages and graphical/mathematical software.

**Courses:** ED50, MA34, SC30

**Co-requisite:** MAB301 or MAB212

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB342 MATHEMATICS OF FINANCE**

Interest rates; solution of problems in compound interest; annuities; applications of annuities; capital redemption policies; valuation of securities; introduction to basic modelling techniques.

**Courses:** ED50, MA34, SC30

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB347 STATISTICS 1A**

Collection and representation of data, parameters and statistics; sampling; sample mean and variance; statistical estimation and tests of hypotheses based on the normal, t, F and chi-square distributions; control charts; linear regression; introduction to experimental design and ANOVA.

**Courses:** MA34, SC30

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB348 STATISTICS 1B**

Probability; conditional probability; random variables and probability distributions; binomial, Poisson, exponential, uniform, normal; expected values and moments, sums and differences of random variables; q-q plots, correlation, multiple regression; power; goodness-of-fit; introduction to non-parametric tests.

**Courses:** ED50, MA34, SC30

**Prerequisite:** MAB347 or credit in MAB237

**Co-requisite:** MAB212 or MAB301

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB422 TOPICS IN MATHEMATICS**

Topics in geometry, recreational mathematics, and the history of mathematics.

**Courses:** ED50, SC30

**Prerequisite:** MAB222

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB432 MATHEMATICS 3**

Laplace transforms; ordinary differential equations of first and higher order; multivariable calculus.

**Course:** SC30

**Prerequisite:** MAB222

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB452 MATHEMATICS 4**

Partial differential equations. Complex analysis; Cauchy-integral theorem, Laurent-series; residue theorem. Fourier series and Fourier transforms. Vector analysis, Green's theorems, Stokes' theorem, the Divergence theorem. Applications to physics.

**Course:** SC30

**Prerequisite:** MAB432

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB493 ENGINEERING MATHEMATICS 2**

Solution of systems of linear equations by direct and iterative methods, rank of a matrix; representation of a function by Taylor series, Maclaurin series, Fourier series; finite differences, polynomial interpolation, Newton-Gregory interpolation formula; solution of first and second order differential equations, operator-D and Laplace transform methods. Taylor series and Runge-Kutta techniques; basic descriptive statistics, probability theorems, distributions.

**Courses:** CE42, EE43, EE44, IF23, IF53, ME45

**Prerequisite:** MAB193

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ MAB494 SURVEY MATHEMATICS 1**

Spherical trigonometry: definition of sphere, circles on sphere and spherical triangles; columnar, antipodal and polar triangles; sine, cosine and half-angle formulae, Napier's and Delembre's analogies; solution of spherical triangles, spherical excess, area of spherical triangle; relation between plane and spherical trigonometry; differential calculus; Taylor and Maclaurin series for functions of a single variable; extension to functions of several variables; maxima and minima with constraints, Lagrange multipliers; integral calculus: evaluation of double and triple integrals, change of order of integration.

**Course:** PS47

**Prerequisite:** MAB188

**Credit Points:** 6      **Contact Hours:** 3 per week

**■ MAB495 SURVEY MATHEMATICS 2**

Calculus. Matrix algebra. Spherical trigonometry. Three-dimensional coordinate geometry.

**Courses:** IF52, SV34

**Prerequisite:** MAB199

**Credit Points:** 12      **Contact Hours:** 6 per week

**■ MAB496 SURVEY MATHEMATICS 2**

Linear algebra: systems of linear equations in two and three dimensions, the no solution, many solution and unique solution cases, geometric interpretation; extension of concepts to large scale systems, matrix formulation. Matrices: elementary matrix algebra, equality, addition, multiplication by a scalar, matrix products, inverse matrix, transpose matrix; types of matrix, elementary matrices, identity matrices, singular and non-singular matrices, symmetric matrices; orthogonal matrices; reduction of a matrix to echelon form. Eigenvalue problem: solution of characteristic equation in two and three dimensions, corresponding eigenvectors; reality of eigenvalues in symmetric cases; quadratic forms, principal axes; geometrical applications, (classification of conics), extension of concepts to large scale system.

**Course:** PS47

**Prerequisite:** MAB497

**Credit Points:** 6      **Contact Hours:** 3 per week

**■ MAB601 MULTIVARIABLE CALCULUS**

Differentiation, extrema; double integrals, triple integrals, surface integrals; functions of a complex variable, analyticity, complex integration.

**Courses:** MA34, SC30

**Prerequisites:** MAB303, MAB304

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB602 VECTOR FIELD THEORY**

Vector analysis; scalar and vector fields; line integrals; surface integrals; differential field operators; the integral properties of fields. Tensor analysis; curvilinear coordinates; application to potential theory; hydrodynamic theory, and electromagnetic theory; calculus of variations; functionals; Euler's differential equation; problems with subsidiary conditions.

**Courses:** MA34, SC30 **Prerequisite:** MAB601  
**Credit Points:** 12 **Contact Hours:** 4 per week

**■ MAB612 DIFFERENTIAL EQUATIONS**

Linear differential equations, series methods, Laplace transforms; self adjoint boundary value problems and Fourier series; partial differential equations; mathematical modelling, differential equations.

**Courses:** MA34, SC30  
**Prerequisites:** MAB303, MAB304  
**Credit Points:** 12 **Contact Hours:** 4 per week

**■ MAB618 NUMERICAL ANALYSIS 1**

Linear equations; numerical solution of a single non-linear equation; interpolation; quadrature; numerical solution of a single first order differential equation.

**Courses:** IT20, MA34, SC30  
**Prerequisite:** MAB321  
**Credit Points:** 12 **Contact Hours:** 4 per week

**■ MAB620 FINITE MATHEMATICS**

Set theory; relations and functions; finite group theory; Boolean algebra; methods of proof including induction; introduction to combinatorics; finite state machines; number theory; introduction to ring theory.

**Courses:** IT20, MA34, SC30  
**Prerequisite:** MAB303  
**Credit Points:** 12 **Contact Hours:** 4 per week

**■ MAB630 LINEAR ALGEBRA & ITS APPLICATIONS**

Real and complex vector spaces, inner products; linear operators in finite dimensional space; eigen analysis, vector and matrix norms; quadratic forms.

**Courses:** ED50, IT20, MA34, SC30  
**Prerequisite:** MAB303  
**Credit Points:** 12 **Contact Hours:** 4 per week

**■ MAB635 MECHANICS**

Statics; kinematics of a particle; relative motion; conservation laws of dynamics; motion of a particle in one and two dimensions; impulsive motion.

**Courses:** MA34, SC30 **Prerequisite:** MAB304  
**Credit Points:** 12 **Contact Hours:** 4 per week

**■ MAB637 OPERATIONS RESEARCH 1A**

Linear programming; replacement, maintenance and reliability; project scheduling techniques; simulation.

**Courses:** ED50, IT20, MA34, SC30  
**Prerequisites:** LSB155, MAB303, MAB347  
**Credit Points:** 12 **Contact Hours:** 4 per week

**■ MAB638 OPERATIONS RESEARCH 1B**

Transportation, transshipment and assignment models; introduction to sensitivity analysis; inventory models; introduction to queueing theory.

**Courses:** IT20, MA34, SC30  
**Prerequisite:** MAB637  
**Credit Points:** 12 **Contact Hours:** 4 per week

**■ MAB641 ACTUARIAL MATHEMATICS**

The life table; demographic techniques; pure endowments and annuities; assurance; policy values; laws of mortality; benefits depending on other contingencies; pension funds.

**Courses:** MA34, SC30  
**Prerequisites:** MAB301, MAB342  
**Credit Points:** 12 **Contact Hours:** 4 per week

**■ MAB642 METHODS OF MATHEMATICAL ECONOMICS**

The nature of mathematical economics; optimization theory and its application in economics; ordinary differential equations and economic dynamics; difference equations in the theory of growth and trade cycles; systems of simultaneous equations, multi-market equilibrium, stability, equilibrium of dynamic macroeconomic models.

**Course:** MA34  
**Credit Points:** 12 **Contact Hours:** 4 per week

**■ MAB647 STATISTICS 2A**

Bivariate distributions; conditional distributions; covariance; moment generating functions; joint mgf's and their uses in iid cases; transformations; sampling distributions; sampling from finite populations; introductory Markov chains; time series and auto correlation; convergence ideas; order statistics.

**Courses:** MA34, SC30 **Co-requisite:** MAB303  
**Prerequisites:** MAB348, MAB301  
**Credit Points:** 12 **Contact Hours:** 4 per week

**■ MAB648 STATISTICS 2B**

Experimental design and linear models; least squares; replication, interaction; factors, levels, factorial designs; missing values, data quality; regression; residuals; use of covariates; using time diagnostics; transformations; non-parametric techniques.

**Courses:** MA34, SC30 **Prerequisite:** MAB348  
**Credit Points:** 12 **Contact Hours:** 4 per week

**■ MAB795 SURVEY MATHEMATICS 3**

Transformation in three dimensions: central projection, the near parallel case. Numerical analysis: propagation of errors, solution of nonlinear equations. Approximation and interpolation. Solution of simultaneous linear equations, Gaussian elimination, compact methods, Choelsky, iterative methods.

**Courses:** IF52, PS47, SV34  
**Prerequisite:** MAB495  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ MAB893 ENGINEERING MATHEMATICS 3**

Data analysis in engineering contexts with emphasis on real data and use of computer packages; estimation, testing, SPC, regression, ANOVA, reliability.

**Courses:** CE42, EE43, EE44, IF23, ME45  
**Prerequisite:** MAB493  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ MAB894 ENGINEERING MATHEMATICS 4**

Solution of linear systems of differential equations employing operator-D and Laplace transform methods, variation of parameters methods for non-homogenous equations; solution of partial differential equations, separation of variables method, introduction to numerical techniques; complex variables, Cauchy-Riemann equations, conformal mapping.

**Courses:** EE43, EE44, IF23  
**Prerequisite:** MAB493  
**Credit Points:** 6 **Contact Hours:** 3 per week

**■ MAB906 TOPICS IN ANALYSIS**

Topics selected from the following: measures; Lebesgue integrals; product of measures; normed spaces; metric spaces; constrained optimisation, Gateaux and Frechet derivatives.

**Courses:** MA34, SC30, SC60  
**Prerequisite:** MAB601  
**Credit Points:** 12 **Contact Hours:** 4 per week

**■ MAB907 STATISTICS 3A**

Estimation; testing; exponential; linear models; introduction to generalised linear models; multicollinearity, heteroscedasticity, effect of auto-correlation; non linear LSE; diagnostics.

**Courses:** MA34, SC30

**Prerequisites:** MAB647, MAB648, MAB303

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB908 STATISTICS 3B**

Experimental design; response surfaces; optimal design; transformations, diagnostics, influential observations, some EDA, likelihood, deviance.

**Courses:** MA34, SC30      **Prerequisite:** MAB648

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB911 NUMERICAL ANALYSIS 2**

Systems of linear equations: direct methods, measure of work, iterative refinement, error analysis; indirect methods, convergence considerations; systems of non-linear equations; quadrature, Romberg integration; ordinary differential equations (initial and boundary value problems); eigenvalue problems, (power method, inverse iteration).

**Courses:** MA34, SC30

**Prerequisite:** MAB618      **Co-requisite:** MAB630

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB912 FLUID DYNAMICS**

Mathematical models of fluid motion, equations of motion and some exact solutions. Dimensional analysis and similitude, incompressible potential flow, Reynolds Numbers, boundary layer equations.

**Courses:** MA34, SC30      **Prerequisite:** MAB602

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB913 NUMERICAL ANALYSIS 3**

Hilbert spaces; the projection theorem; application to discrete polynomial and trigonometric approximation; Legendre polynomials; Gaussian quadrature; Chebyshev polynomials; Chebyshev approximation. Reduction of a matrix to upper Hessenberg form by similarity transforms, orthogonal reductions, Givens and Householder methods, determination of eigen-systems by the QR algorithm, emphasis on symmetric matrices. Stability analyses for IVPs, types of instability, inherent and induced, partial instability.

**Courses:** MA34, SC30, SC60

**Prerequisite:** MAB619

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB927 OPERATIONS RESEARCH 2A**

Algorithms of linear programming; integer and mixed integer programming; non-linear programming; dynamic programming; heuristic methods.

**Courses:** MA34, SC30      **Prerequisite:** MAB638

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB928 OPERATIONS RESEARCH 2B**

Simulation; queueing theory; decision analysis; implementation in operations research.

**Courses:** MA34, SC30      **Prerequisite:** MAB637

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB929 TIME SERIES & STATISTICAL FORECASTING**

Review of smoothing and decomposition methods; ARMA time series methods; Box-Jenkins method; pooling of time series and cross-sectional data; causality; recursive estimation and prediction of stationary processes; multivariate time series; comparison and selection of forecasting methods.

**Courses:** MA34, SC30, SC60

**Prerequisite:** MAB642      **Co-requisite:** MAB601

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB941 MATHEMATICAL MODELLING IN ECONOMICS**

Mathematical models in economics; macro and micro economic models; simulation; growth and decay models; dynamic economic models; introduction to stability theory; stability of linear systems.

**Courses:** MA34, SC30

**Prerequisites:** MAB601, MAB612

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB942 OPTIMISATION METHODS**

Analytic calculation of maxima and minima in functions; constrained optimisation using Lagrange multiplier and penalty techniques; quadratic and convex programming; one dimensional search techniques; direct search techniques; gradient methods; least squares; global optimisation strategies.

**Courses:** MA34, SC30

**Prerequisites:** MAB601, MAB618

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB960 PROJECT WORK**

Students, either individually or in small groups, undertake a substantial project which is relevant to the needs of industry and which is designed to give students insight into industrial requirements. Each student, or group of students, undertakes a different project and is supervised, generally by a member of staff, throughout the duration of the project.

**Courses:** MA34, SC30

**Prerequisite:** Successful completion of at least 192 credit points including at least two units from List D of the course requirements.

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB970 PROBABILITY THEORY & STOCHASTIC PROCESSES**

Probability measures, conditional probability; distributions and random variables. Convergence of random variables; strong and weak laws of large numbers; central limit theorems. Markov processes: birth and death, queues; epidemics; inference. Point processes: marked point processes; filtered processes; inference, simulation. Branch process.

**Courses:** MA34, SC60, SC30

**Prerequisite:** MAB647

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB971 ADVANCED MATHEMATICS OF FINANCE**

Background to investments, asset classes; risk theory; mathematical theories of finance; assets versus liabilities; investment performance measurement.

**Courses:** MA34, SC30, SC60

**Prerequisite:** MAB641

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB973 PARTIAL DIFFERENTIAL EQUATIONS**

Derivation and solution of first order partial differential equations. Derivation and classification of second order partial differential equations: the wave equation, the heat conduction equation, the equation of a bending beam, equations for fluid flow; boundary conditions. Second order equations: characteristics, separation of variables, integral transforms.

**Courses:** MA34, SC30, SC60

**Prerequisites:** MAB602, MAB612

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ MAB974 SAMPLING & SURVEY TECHNIQUES**

Random sampling; estimates; design of questionnaires; data quality and errors in surveys; systematic,

cluster and double sampling plans; imputation techniques; alternatives to household surveys.

**Courses:** MA34, SC30, SC60

**Prerequisites:** MAB647, MAB648

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ MAB975 ORDINARY DIFFERENTIAL EQUATIONS & CHAOS

Ordinary differential equations; eigenvalues of systems of ordinary differential equations; system stability using phase plane portraits; chaotic systems; analytic and numerical solution of equations describing systems with chaotic and singular behaviour.

**Courses:** MA34, SC30, SC60

**Prerequisites:** MAB601, MAB612, MAB619

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ MAB976 RELIABILITY & SURVIVAL ANALYSIS

Failure rates; life distributions and inference; extreme values; fitting tails; flood data; IFR, NBU; system reliability; censored sampling; Cox's proportional hazards model; competing hazards.

**Courses:** SC30, SC60

**Prerequisites:** MAB647, MAB648

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ MAB977 SCHEDULING & NETWORKS

Deterministic and probabilistic inventory models. Aggregate planning and master scheduling. Requirement planning. Operations sequencing and balancing. Project management: network models, minimum cost paths. 'Just in time' problems and enhanced scheduling. Replacement, maintenance and reliability.

**Course:** SC60

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ MAB978 STATISTICAL SIGNAL PROCESSING & IMAGE ANALYSIS

Signal processing: time domain; Kalman filtering and prediction. Frequency domain: spectral representation of stationary processes. Inference for the spectrum of a stationary process. The cross spectrum. Spectral representation of multivariate stationary time series. Prediction in the frequency domain. Statistical image analysis: spatial processes. Regression and spatial autocorrelation. Two dimensional spectral analysis. Two dimensional filtering and image enhancement. Image compression.

**Course:** SC60      **Prerequisites:** MAB318, MAB608

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ MAB979 STATISTICAL MODELLING & DATA ANALYSIS

Robust procedures and principles: influence function; robust estimation; simulation studies; M-estimation. Distribution theory of statistics based on ranks. Robust regression. EDA; graphics; model choice, assessment and fitting: distributional families used in data analysis, inference studies and simulations; transformations, including Box-Cox. Outliers.

**Courses:** MA34, SC60

**Prerequisites:** MAB601, MAB907

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ MAB980 STOCHASTIC PROCESSES & APPLICATIONS

Gaussian processes; Brownian motion; diffusions; stochastic equations; martingale; random walks; central limit theorems; epidemic models; queueing models; stochastic compartment models; extreme value theory for stochastic processes.

**Course:** SC60

**Prerequisites:** MAB970 or (MAB906, MAB929)

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ MAB981 APPLIED STATISTICAL INFERENCE & EXPERIMENTATION

Normal error models: multiple linear regression; diagnostics; prediction. Non-normal error models: likelihood theory; quasi likelihood; diagnostics. Modern data analysis techniques: smoothers.

**Course:** SC60

**Prerequisites:** MAB630, MAB907, MAB908

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ MAB984 ACTUARIAL STATISTICS

Distribution theory. Financial stochastic models and problem-solving with them. Credibility, utility and risk theory. Loss and ruin models.

**Course:** SC60

**Prerequisite:** MAB907

**Co-requisite:** MAB970

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ MAB985 NUMERICAL ANALYSIS

The diffusion equation, finite difference methods, DuFort-Frankel and Crank-Nicholson methods, alternating direction methods; stability considerations. Elliptic boundary value problems, finite difference methods. Hyperbolic type equations, use of finite differences, method of characteristics. Use of software packages.

**Course:** SC60

**Prerequisite:** MAB913

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ MAB986 MATHEMATICAL MODELLING OF INDUSTRIAL PROCESSES

Solution of the steady/unsteady heat conduction equation with: variable thermal conductivity, different types of boundary conditions, irregular boundaries, moving interfaces, eg. solidification, non-linear forms, eg. natural convection, point sources. Derivation and discussion of the viscous fluid flow equations: primitive form of equations, stream function and vorticity transport form, conservative and non-conservative forms, stability, solving the equations numerically, boundary conditions.

**Course:** SC60

**Co-requisite:** MAB985

**Prerequisites:** MAB973, MAB601, MAB913

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ MAB987 OPTIMISATION OF CONTROLLED PROCESSES

Calculus of variations, Lagrange formulation, Mayer formulation, Bolza formulation, constraints, corner conditions, transversal conditions. Pontryagin's maximum principle. Relationship of the above to dynamic programming. Practical applications of the above to: design of optimal control strategies, time optimal control, optimal continuous scheduling.

**Course:** SC60      **Prerequisites:** MAB601, MAB612

**Credit Points:** 12      **Contact Hours:** 4 per week

### ■ MAB989 PROJECT

Project and thesis component of Honours course (SC60).

**Course:** SC60

**Prerequisite:** Approved Honours program.

**Credit Points:** 36

### ■ MAN009 EXPERIMENTAL DESIGN & STATISTICAL ANALYSIS FOR RESEARCH

See MAN007.

**Course:** HL88

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ MAN012 ADVANCED STUDIES

Advanced studies in quality management concepts and techniques with emphasis on the application of statistics.

Course: SC60

Prerequisite: Permission of the Head of School

Credit Points: 12      Contact Hours: 4 per week

### ■ MAN120 QUANTITATIVE SYSTEMS ANALYSIS

The use of quantitative models in the solution of problems for quality systems; model formulation, inventory systems, production planning and scheduling and simulation.

Course: BS86

Credit Points: 6      Contact Hours: 3 per week

### ■ MAN210 DESIGNED EXPERIMENTS FOR QUALITY IMPROVEMENTS

The principles underlying the design of experiments; a practical approach explains the procedures used, with emphasis on the use of robust techniques for industrial experimentation and explanatory studies.

Course: BS86

Credit Points: 6      Contact Hours: 3 per week

### ■ MAP001 READING COURSE 1

Provides the candidate with appropriate background at an advanced level necessary for the completion of a research program.

Course: SC80

Credit Points: 8

### ■ MAP002 READING COURSE 2

See MAP001.

Course: SC80

Credit Points: 12

### ■ MAP111 STATISTICAL METHODS IN QUALITY

Describing variation; boxplot, histogram, estimation of process parameters, misuse of measures. Normal distribution; application to quality phenomena, probability paper. Important distributions for describing quality-related phenomena by attribute; hypergeometric, binomial, Poisson, approximations. Sampling distributions; interval estimation for normal and binomial, test of hypothesis, consumer and supplier risks, tests for binomial parameter and process mean, tests for comparing process means, paired data and independent samples.

Course: BS77

Credit Points: 6      Contact Hours: 3 per week

### ■ MAP120 QUANTITATIVE SYSTEMS ANALYSIS

Prepares students to use quantitative models in the solution of problems for quality systems. Models include inventory systems, production planning and scheduling, networks and optimal decision theory.

Course: BS86

Credit Points: 6      Contact Hours: 3 per week

### ■ MAP121 STATISTICAL PROCESS CONTROL

Concepts and preliminary considerations. Control chart procedures for variables, S and R charts, pattern analysis and interpretation. Process capability study, natural tolerances, capability ratio, modified control charts. Attribute control charts, construction and interpretation of P, C and U charts. Cusum techniques for continuous data, scope and principles, procedure and interpretation, testing techniques - V mask, decision interval. Cusum applications to discrete data. SPC computer software.

Course: BS77

Credit Points: 6

Contact Hours: 3 per week

### ■ MAP211 SAMPLING PROCEDURES

Concepts and principles in sampling. Attribute batch sampling, sampling plans (single, double and multiple), OC curves. AS1199, terminology and definitions, choice of plan and switching rules. Attribute batch sampling with rectifying inspection, Dodge Romig procedure, use of tables. Attribute continuous sampling and the Dodge system (CSP-1, etc.). Sampling by variables, plans and procedures. AS2490, terminology, definitions, inspection rules.

Course: BS77

Credit Points: 6

Contact Hours: 3 per week

### ■ MAP212 STATISTICAL QUALITY CONTROL

Control chart concept; variable charts for location and dispersion, pattern analysis, interpretation. Process capability; natural tolerance, capability index. Modified control charts. Attribute charts; p, c and u charts. Cusum technique; variable data, procedures, v mask, decision interval, application to attribute data.

Course: BS77

Credit Points: 12

Contact Hours: 3 per week

### ■ MAP221 QUALITY PROBLEM SOLVING TECHNIQUES

Collection of data and use of check sheets. Histograms as a diagnostic tool. Pareto diagram, stratified data, use of weighted factors; Ishikawa chart, dispersion analysis and process classification type. Flow charts. Quality circles. Correlation analysis, scattergram and the Tukey corner test, independence and spurious correlation, regression equation and prediction. Design of experiments, principles and basic concepts, Latin Square design, factorial experiments.

Course: BS77

Credit Points: 8

Contact Hours: 2 per week

### ■ MAP222 QUALITY IMPROVEMENT

Flow charts; deployment, layout, detailed. Pareto analysis; stratified data, frequency v cost. Cause and effect diagram; dispersion analysis, process classification. Correlation analysis; scattergram, percentage variation explained, several predictors. Affinity relations and matrix diagrams.

Course: BS77

Credit Points: 12

Contact Hours: 3 per week

### ■ MAS090 MATHEMATICS

This intensive unit is aimed at providing an appropriate background for those who may wish to undertake a tertiary course in science, business or other areas which require competence in certain mathematical areas prior to entry. Topics include: algebra, analytical geometry, trigonometry, differential and integral calculus, matrices; applications from elementary statics, kinematics, dynamics and statistics. The treatment assumes some initial knowledge of basic algebra, such as manipulation of indices and factorisation, and elementary trigonometry at a level equivalent to Year 10 Advanced Mathematics.

Course: BN10

Contact Hours: 3 per week

Credit Points: 6 per semester

### ■ MDB231 MATHEMATICS EDUCATION 2

Greater insight into children's acquisition of mathematical competence with particular emphasis on the role of higher-order thinking skills in the learning process. Emphasis on the development of important mathematical skills such as decision making and

problem solving, critical analysis and reflection, and logical reasoning. Examination of curriculum topics from both a content perspective and a processing perspective. The topics to be addressed include the skills of problem solving, statistical analysis, elementary probability, measurement concepts and processes, visual imagery and spatial problem solving.

**Course:** ED41

**Prerequisite:** MDB222

**Credit Points:** 12

**Contact Hours:** 4 per week

### ■ MDB262 HISTORY OF MATHEMATICS

Philosophy and history of mathematical thinking: role of thinking in mathematics and vice versa, history of the thinking movement, and approaches to developing mathematical thinking skills. History of basic mathematical topics: numeration systems, algorithms, algebra, geometry and measurement. Conceptions of mathematics: role of intuition, logic, real world applications and formality. Applications to teaching.

**Course:** ED41

**Prerequisite:** MDB260

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ MDB263 APPLICATIONS IN MATHEMATICS

Modelling and mathematical applications: the role of modelling in applying mathematics to real world problems. Mathematical applications: discrete mathematics, statistical and computer applications, game and queuing theory. Modelling in mathematics instruction: extend and enrich teaching.

**Courses:** ED41, ED51

**Prerequisite:** MDB262

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ MDB264 SCIENCE & SURVIVAL

Foundations of organic and biological chemistry including hydrocarbons, synthetic polymers, carbohydrates, proteins, nuclear acid and lipids. Industrial chemistry: metals and mining; industrial processing of raw materials for industry; consumer chemistry. Energy and its production, radiation, aspects of atmospheric physics, fission, fusion and nuclear radiation. Computers and solid state devices.

**Course:** ED41

**Prerequisite:** MDB261

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ MDB265 BIOLOGY & TECHNOLOGY

The interaction of organisms and their physical environment; the human influence in the biosphere; how technology empowers communities to exploit and/or protect biological systems and the integrity of the earth as humanity experiences it today.

**Courses:** ED41, ED51

**Prerequisite:** MDB264

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ MDB270 COMPUTER EDUCATION

Exploration of uses of computer-based technology. Consideration of educational issues such as: curriculum planning and implementation considerations; criteria for evaluation of computer hardware and software; and policies for computer use in schools.

**Course:** ED41

**Credit Points:** 8

**Contact Hours:** 3 per week

### ■ MDB300 TEACHING IN THE INFORMATION AGE

This subject explores the impact of information technology on education. It examines the concept of an information society, it explores how what is defined as knowledge is contested and changed by information technology and it develops strategies for learning and teaching using information technology. Practical skills using computer hardware and software communication technology and multimedia will be

developed with a view to appropriate implementation within the curriculum.

**Courses:** ED37, ED51, ED52

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ MDB301 HISTORY OF MATHEMATICS

Different methods that have been used to record numbers; early view of number (fact and fantasy); numeration systems used today; early methods of calculation from ancient times, to Napier's logarithms to the modern computer; contributions of mathematicians including the Greeks, Fibonacci, Pascal, Euler, Gauss, Galois, Fermat, Turing; major historical developments in content areas of geometry, algebra, probability and applications involving measurement.

**Courses:** ED51, ED52

**Prerequisite:** First three semesters of the course

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ MDB302 MATHEMATICS FOUNDATIONS

The process of mathematics and the role of mathematics in society; mathematical competencies in a technological world; logic and sets and the various forms of mathematical thinking; basic mathematical structures and properties and how these can be seen within mathematics syllabuses.

**Courses:** ED51, ED52

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ MDB303 SCIENCE FOUNDATIONS

The development of understanding of significant concepts in science. Presenting a positive view of science through the examination of: the nature of science; the historical development of major concepts of science; development of scientific language; relationship of science to society. Links between the view of society and the ideas and knowledge which have been generated and applied to the solution of problems.

**Courses:** ED51, ED52

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ MDB325 BIOLOGY CURRICULUM STUDIES 1

This subject assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50

**Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ MDB326 BIOLOGY CURRICULUM STUDIES 2

This subject extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50

**Prerequisite:** MDB325

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ MDB327 CHEMISTRY CURRICULUM STUDIES 1

This subject assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribu-

tion as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50

**Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ **MDB328 CHEMISTRY CURRICULUM STUDIES 2**

This subject extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50

**Prerequisite:** MDB327

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ **MDB329 COMPUTING CURRICULUM STUDIES 1**

This subject assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50

**Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ **MDB330 COMPUTING CURRICULUM STUDIES 2**

This subject extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50

**Prerequisite:** MDB329

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ **MDB331 EARTH SCIENCE CURRICULUM STUDIES 1**

This subject assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50

**Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ **MDB332 EARTH SCIENCE CURRICULUM STUDIES 2**

This subject extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50

**Credit Points:** 12

**Prerequisite:** MDB331

**Contact Hours:** 3 per week

#### ■ **MDB333 MATHEMATICS CURRICULUM STUDIES 1**

This subject assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50

**Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ **MDB334 MATHEMATICS CURRICULUM STUDIES 2**

This subject extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50

**Prerequisite:** MDB333

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ **MDB335 PHYSICS CURRICULUM STUDIES 1**

This subject assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50

**Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ **MDB336 PHYSICS CURRICULUM STUDIES 2**

This subject extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50

**Prerequisite:** MDB335

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ **MDB337 SCIENCE CURRICULUM STUDIES 1**

This subject assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50

**Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.

**Credit Points:** 12

**Contact Hours:** 3 per week



**■ MDB338 SCIENCE CURRICULUM STUDIES 2**

This subject extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Course: ED50

Prerequisite: MDB329

Credit Points: 12

Contact Hours: 3 per week

**■ MDB339 MATHEMATICS EDUCATION**

Key concepts and skills in the domains of percents, rate, ratio, chance and data, prealgebra and geometry will be studied. Focus on developing appropriate teaching episodes within these domains. Special emphasis on the teacher as 'sense-maker'.

Course: ED51

Prerequisite: MDB302

Credit Points: 12

Contact Hours: 3 per week

**■ MDB340 MATHEMATICS & TECHNOLOGY EDUCATION**

This subject builds on the understandings developed in Mathematics Foundations and Mathematics Education. In particular, it explores issues concerned with the teaching of measurement and mathematical problem solving. This subject also investigates how information technology can be used to facilitate the development of high-level learning skills in mathematics and other areas in the primary school.

Course: ED51 Prerequisites: MDB302, MDB339

Credit Points: 12

Contact Hours: 3 per week

**■ MDB341 SCIENCE EDUCATION**

The role of particular psychological, developmental and sociological approaches which play a significant role in science curriculum and development. The process skills and manipulative skills associated with science. Comparison of existing approaches to teaching science. Science development associated with mathematics and language development. Resources for science education. Development and implementation of units of work.

Course: ED51

Prerequisite: MDB303

Credit Points: 12

Contact Hours: 3 per week

**■ MDB342 COMPUTERS IN THE SCHOOL CURRICULUM**

This subject is designed to provide teachers with a framework for investigating the present and future influence of computers on curriculum development in educational institutions.

Course: ED51

Credit Points: 12

Contact Hours: 3 per week

**■ MDB343 DIAGNOSIS & REMEDIATION IN MATHEMATICS**

Overview of numerical and conceptual learning difficulties in mathematics; learning experiences in various areas of mathematics, utility of mathematics in real life situations; examination of mathematics in other curriculum areas; learning experiences in the integration of mathematical topics; use of hand-held calculator and the computer as aids to conceptual development and as practical tools; error analysis and diagnostic inventories; remedial strategies.

Course: ED51

Credit Points: 12

Contact Hours: 3 per week

**■ MDB344 INITIATIVES IN SCIENCE**

In this subject students will have the opportunity to explore alternative practices in science education particularly through the development of research based

project work for children, the extended excursion or field trip and involvement in community sponsored and/or related science activities and events.

Course: ED51

Credit Points: 12

Contact Hours: 3 per week

**■ MDB345 SOFTWARE DEVELOPMENT FOR EDUCATIONAL CONTEXTS**

Algorithmic thinking and its implementation is a major component within the Information processing and Technology syllabus now implemented in secondary schools. Prospective teachers of courses such as these require a sound foundation in the design and development of software along with the use of modern abstract procedural, data and object handling representations. Furthermore, the design principles developed in this subject mirror general problem solving strategies that have been found to be particularly effective in many educational areas. Software design and development is closely bound to particular problems contexts. This subject is based on the design of educational software because this area is relevant to the students concerned and because there is a clear demand for such software. Students in this subject will employ a range of powerful programming techniques and structures in the development of educational computer software.

Course: ED50

Prerequisite: CSB860

Credit Points: 12

Contact Hours: 3 per week

**■ MDB347 EXCURSIONS IN NUMBER**

An invitation to explore some interesting byways off the high road of mathematics. Discover some intriguing diversions to add quality to your lessons.

Course: ED51

Credit Points: 12

Contact Hours: 3 per week

**■ MDB348 HISTORY OF MATHEMATICS**

Methods to record numbers; early view of number (fact and fantasy); numeration systems used today; early methods of calculation from ancient times, to Napier's logarithms to the modern computer; contributions of mathematicians including the Greeks, Fibonacci, Pascal, Euler, Gauss, Galois, Fermat, Turing; major historical developments in content areas of geometry, algebra, probability and modern day applications involving measurement.

Courses: ED51, ED52

Prerequisite: First three semesters of the course

Credit Points: 12

Contact Hours: 3 per week

**■ MDB349 MATHEMATICAL THINKING**

The concept of thinking and intelligence; the nature of mathematical thinking during the first half of this century; modern ideas on the nature of mathematical thinking; the thinking skills movement and programs designed to foster thinking; analysis of children's thinking in solving mathematical problems; analysis of students' 'everyday cognition' together with their thinking in mathematical situations.

Course: ED51

Credit Points: 12

Contact Hours: 3 per week

**■ MDB375 COMPUTING TOOLS FOR EDUCATORS**

Graduates of this course are expected to be able to use technology confidently and competently for personal and professional teaching tasks. This subject will allow students to gain technological skills and understandings while investigating applications of these technologies in a teaching context. Students will gain experience in a wide range of applications including the use of writing and publishing software, graphics design software, computer managed learning

development tools, numerical software tools, personal and project management tools, communications technologies and computer peripherals used in the production of computer generated materials.

Course: ED50

Credit Points: 12      Contact Hours: 3 per week

■ **MDB377 PROJECT PLANNING & IMPLEMENTATION FOR EDUCATIONAL PURPOSES**

The study of computing and its application in educational and other environments is very much associated with planned and sequenced implementation of tasks. A study and understanding of how tasks might be represented, sequenced and implemented is essential if technology is to be used effectively in education. The use of project work as a pedagogical technique is a popular strategy to promote independent learning and student autonomy. This subject provides students with a framework to evaluate this methodology.

Course: ED50

Prerequisite: MDB375

Credit Points: 12      Contact Hours: 3 per week

■ **MDB378 EARTH & SPACE**

This unit initiates the development of competence in pedagogical content knowledge in science for students. It examines scientific concepts in important areas of space, time and motion, the origin and history of earth and its environments. Scientific principles and techniques for observing space and earth phenomena are investigated. Strategies for incorporating this knowledge in teaching settings.

Course: ED51

Credit Points: 12      Contact Hours: 3 per week

■ **MDB379 SCIENCE & SURVIVAL**

This unit continues to develop competence in pedagogical content knowledge. It examines a range of scientific concepts in the area of matter and energy and how these concepts are applied in a technological context. On a broader horizon the scientific principles underlying major innovations, disasters and controversial issues are examined. Strategies for incorporating this knowledge in a teaching situation.

Course: ED51

Credit Points: 12      Contact Hours: 3 per week

■ **MDB380 TECHNOLOGY & LIFE SCIENCE**

The interaction of organisms and their physical environment; the human influence in the biosphere; how technology empowers communities to exploit and/or protect biological systems and the integrity of the earth as humanity experiences it today. This subject focuses on the use of instrumentation and technology in the area of science research in the life sciences and investigates how this technology can be adapted to practice in primary classrooms.

Course: ED51

Credit Points: 12      Contact Hours: 3 per week

■ **MDB410 COMPUTERS IN THE SCHOOL CURRICULUM**

The introduction of computers into the school environment and curriculum; methods for teaching computer studies; the use of computers for classroom management and support; computer technology and its impact on schools and society. Access to an appropriate microcomputer is required.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

■ **MDB411 EARLY CHILDHOOD MATHEMATICS CURRICULUM**

Theoretical background and research; logical sequence of mathematics and children's cognitive

development; content and learning experiences for early childhood; integration and application.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

■ **MDB412 PRIMARY MATHEMATICS CURRICULUM**

Influential factors on development and content of mathematics education; how students learn and apply mathematics; identification of effective curriculum models and teaching strategies for mathematics.

Course: ED26

Prerequisite: CUB410 (or equivalent)

Credit Points: 12      Contact Hours: 3 per week

■ **MDB413 SECONDARY MATHEMATICS CURRICULUM**

Current syllabus developments, teaching strategies and curriculum models for secondary mathematics; planning and evaluating sequences of learning activities for secondary school mathematics; designing and evaluating a variety of forms of assessment.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

■ **MDB440 COMPUTERS & EDUCATION**

An overview of microcomputer hardware and software with an emphasis on the usefulness of various components in schools; use of educationally valuable application software; critical examination of a variety of uses of computers in education; the impact of computers on society and education in particular.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

■ **MDB442 QUANTITATIVE LITERACY**

The importance of quantitative literacy in our society; its development through learning and teaching; its social context and the role of technology.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

■ **MDB443 PRACTICAL SCIENCE PROGRAMMING**

Novel and interesting ways of improving science teaching in a practical situation, the processes involved in developing school based science research projects; new technology and ways of improving teachers' own practical skills.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

■ **MDB444 SCIENCE CURRICULUM**

Review of direction for science education nationally and globally; critical evaluation of current practice and curricula; review of how students learn science with reference to current research; application of these principles to changes in curriculum and teaching strategies; design implementation and evaluation of curriculum change.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

■ **MDB445 TEACHING PROBLEM SOLVING & REASONING**

Problem solving in the curriculum, strategies, logic and reasoning, the planning and teaching of problem-centred curricula; the use of technology in problem solving.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

■ **MDB446 SCIENCE FOR EARLY CHILDHOOD**

Science for young children; theoretical background of science education; development of process and

manipulative skills; the role of the teacher in a child centred science curriculum.

Course: ED26

Credit Points: 12 Contact Hours: 3 per week

### ■ MDN615 CURRICULUM STUDIES IN MATHEMATICS, SCIENCE OR TECHNOLOGY EDUCATION

Curriculum theory; intended, developed and enacted curriculum; curriculum design; models for curriculum design; impact of information technology; curriculum implementation; vocational, discipline, individualised and school-based models; innovations; curriculum evaluation; historical factors affecting the curriculum in mathematics or science or technology education.

Courses: ED11, ED13, ED61

Credit Points: 12 Contact Hours: 3 per week

### ■ MDN616 TEACHING & LEARNING IN MATHEMATICS, SCIENCE OR TECHNOLOGY CLASSROOM

The role of the teacher: metaphors, perceptions, curriculum change; the effective teacher; classroom climate: cooperative versus competitive learning, student/teacher interactions; psychological and learning theories and their application to teaching of mathematics or science or technology education.

Courses: ED11, ED13, ED61

Credit Points: 12 Contact Hours: 3 per week

### ■ MDN617 CURRICULUM SPECIALISATION IN MATHEMATICS, SCIENCE OR TECHNOLOGY EDUCATION

Special topics in mathematics or science or technology curriculum; curriculum at specific year level; special needs of students; past and future trends in curriculum design and implementation. Content varies depending on the needs of the students in the unit.

Courses: ED11, ED13

Credit Points: 12 Contact Hours: 3 per week

### ■ MDN618 RESEARCH REVIEW IN MATHEMATICS, SCIENCE OR TECHNOLOGY EDUCATION

A critical review of research in mathematics, science and technology education to assist in decisions relating to the teaching-learning process in these curriculum areas; needs and research directions in the future.

Courses: ED11, ED13

Pre/Co-requisites: EDN600, MDN615, MDN616

Credit Points: 12 Contact Hours: 3 per week

### ■ MDN619 COMPUTER SUPPORTED LEARNING ENVIRONMENTS

The development of conceptual frameworks for computer based environments; the psychological basis of human-computer interaction; the design of physical computing environments; new social niches for software environments; an examination of computer tools in classroom and professional cultures.

Courses: ED11, ED13

Prerequisites: MDN615, MDN616

Credit Points: 12 Contact Hours: 3 per week

### ■ MDP401 JUNIOR SCIENCE CURRICULUM STUDIES 1

Development of basic proficiencies in teaching Junior Science. The unit is based upon current theories of learning and models of science education; laboratory safety and management.

Course: ED37

Credit Points: 12 Contact Hours: 3 per week

### ■ MDP402 JUNIOR SCIENCE CURRICULUM STUDIES 2

See MDP401. The opportunity to extend expertise with respect to a wide range of teaching strategies and learning contexts.

Course: ED37

Credit Points: 12 Prerequisite: MDP401  
Contact Hours: 3 per week

### ■ MDP403 MATHEMATICS CURRICULUM STUDIES 1

A foundation for the planning and implementation of mathematics instruction; learning theories; practical curriculum planning; school syllabuses and programs in mathematics are examined.

Course: ED37

Credit Points: 12 Contact Hours: 3 per week

### ■ MDP404 MATHEMATICS CURRICULUM STUDIES 2

See MDP403.

Course: ED37

Credit Points: 12 Prerequisite: MDP403  
Contact Hours: 3 per week

### ■ MDP405 COMPUTER EDUCATION CURRICULUM STUDIES 1

The broad issues of computer curricula; specific computer units in secondary schools, syllabus analysis, work program development. Management of computer studies and computer education in a school.

Course: ED37

Credit Points: 12 Contact Hours: 3 per week

### ■ MDP406 COMPUTER EDUCATION CURRICULUM STUDIES 2

Analysis of topics in computer studies programs, learning computer studies, assessment, teaching strategies, classroom management. Work unit development.

Course: ED37

Credit Points: 12 Prerequisite: MDP406  
Contact Hours: 3 per week

### ■ MDP407 SENIOR SCIENCE CURRICULUM STUDIES 1

The opportunity to develop basic proficiencies in teaching a senior science subject; teaching strategies which foster the development of complex reasoning and skill development.

Course: ED37

Credit Points: 12 Contact Hours: 3 per week

### ■ MDP408 SENIOR AGRICULTURE CURRICULUM STUDIES 2

Offers students the opportunity to extend expertise with respect to this particular discipline. Emphasis will be placed on current issues in the discipline and teaching strategies which allow these issues to be freely discussed in the classroom.

Course: ED37

Credit Points: 12 Prerequisite: MDP407  
Contact Hours: 3 per week

### ■ MDP409 SENIOR BIOLOGY CURRICULUM STUDIES 2

See MDP408.

Course: ED37

Credit Points: 12 Prerequisite: MDP407  
Contact Hours: 3 per week

### ■ MDP410 SENIOR CHEMISTRY CURRICULUM STUDIES 2

See MDP408.

Course: ED37

Credit Points: 12 Prerequisite: MDP407  
Contact Hours: 3 per week

### ■ MDP411 SENIOR EARTH SCIENCE CURRICULUM STUDIES 2

See MDP408.

Course: ED37

Credit Points: 12 Prerequisite: MDP407  
Contact Hours: 3 per week

**■ MDP412 SENIOR MARINE STUDIES CURRICULUM STUDIES 2**

See MDP408.

Course: ED37

Credit Points: 12

Prerequisite: MDP407

Contact Hours: 3 per week

**■ MDP413 SENIOR PHYSICS CURRICULUM STUDIES 2**

See MDP408.

Course: ED37

Credit Points: 12

Prerequisite: MDP407

Contact Hours: 3 per week

**■ MDP450 MATHEMATICS, SCIENCE & TECHNOLOGY 1**

The contexts of learning and processes by which effective mathematics/science learning takes place; the nature of mathematics/science and the rationale for mathematics/science education; theoretical constructs of curriculum development; approaches to teaching; key concepts and processes; technology in mathematics/science teaching.

Course: ED36

Credit Points: 12

Contact Hours: 4 per week

**■ MDP451 MATHEMATICS, SCIENCE & TECHNOLOGY 2**

Application of key concepts and processes in mathematics/science; concepts and processes studied in Semester 1 transferred to other mathematics/science topics; development of teaching episodes incorporating the concepts and processes. Assessment and evaluation; difference between assessment and evaluation; nature and types of assessment/evaluation. Child study: student selects child and mathematics/science topic to assess; develop instruments for assessment; analyse child's performance; develop individual program to cater for child's individual mathematical/scientific needs.

Course: ED36

Credit Points: 12

Prerequisite: MDP450

Contact Hours: 3 per week

**■ MDP503 INFORMATION SYSTEMS IN EDUCATION**

Explores some of the characteristics and applications of information systems in an educational context. It looks at how information is modelled, stores and retrieved using relational database techniques; the impact of society of the use of information systems; the pedagogies associated with teaching about and using information systems in schools are explored.

Courses: ED21, ED26

Credit Points: 12

Contact Hours: 3 per week

**■ MDP504 SCHOOL ADMINISTRATION USING INFORMATION TECHNOLOGY**

The use of information technologies in the administration of schools; explores a range of administrative packages; cost benefits and ethical implications.

Course: ED21

Prerequisite: MDP532 or MDP530

Credit Points: 12

Contact Hours: 3 per week

**■ MDP506 COMPUTER EDUCATION PROJECT**

Offers students the opportunity to extend expertise gained in other units in the Graduate Diploma in Education (Computer Education). Under supervision students select a problem relevant to computer education and implement a solution.

Course: ED21

Credit Points: 12

Contact Hours: 3 per week

**■ MDP507 TEACHING SECONDARY COMPUTER STUDIES**

Investigates and develops the pedagogy and management associated with computer studies courses currently implemented in Queensland Secondary schools. Emphasis is given to the Information Processing and Technology syllabus and the Practical Computer Methods syllabus.

Courses: ED21, ED26

Co-requisite: MDP537

Prerequisites: MDP503, MDP532

Credit Points: 12

Contact Hours: 3 per week

**■ MDP508 COMPUTER USE IN THE PRIMARY CURRICULUM**

Examines the extent to which computers may be used to teach problem solving in the primary classroom through a study of Logo, adventure games, simulations, and genuine problem solving software. In addition, the use of popular software tools as aids to teaching and learning is considered.

Courses: ED21, ED26, ED70

Prerequisite: MDP537 or MDP532 or MDP530

Credit Points: 12

Contact Hours: 3 per week

**■ MDP520 THINKING & LEARNING IN MATHEMATICS & SCIENCE**

Concepts of thinking, learning and intelligence; modern theories on mathematical and scientific thinking; methods to promote thinking; designing effective mathematics and science learning experiences.

Courses: ED22, ED62, ED74

Credit Points: 12

Contact Hours: 3 per week

**■ MDP529 ASSESSMENT & REMEDIATION IN MATHEMATICS**

Overview of numerical and conceptual learning difficulties in mathematics; learning experiences in various areas of mathematics; utility of mathematics in real life situations; examination of mathematics in other curriculum areas; learning experiences in the integration of mathematical topics; use of hand-held calculator and the computer as aids to conceptual development as practical tools; geometric and algebraic concepts across the curriculum; error analysis and diagnostic inventories; remedial strategies.

Courses: ED24, ED75

Credit Points: 12

Contact Hours: 3 per week

**■ MDP530 COMPUTER APPLICATIONS IN EDUCATION**

Allows students to gain technological skills and understanding while investigating applications of these technologies in the context of teaching and learning. A wide range of computer applications will be covered including writing, publishing, graphics, communications and project management tools.

Courses: ED21, ED70

Incompatible with: CO4046, MDP505

Credit Points: 12

Contact Hours: 3 per week

**■ MDP531 INVESTIGATIONS INTO COMPUTER AIDED LEARNING**

The use of interactive technology in the teaching/learning process; approaches to and uses of computer aided learning, hypermedia authoring systems such as Hypercard, Linkway sand Toolbook, and their applications in multimedia environments.

Course: ED21

Credit Points: 12

Contact Hours: 3 per week

**■ MDP532 COMPUTER SYSTEMS IN AN EDUCATIONAL CONTEXT**

An introduction to educational computer systems; it includes a study of problem solving using computers,

the architectures of computer systems, operating systems and an introduction to computer programming using appropriate educational languages.

**Courses:** ED21, ED26

**Incompatible with:** CO4035, MDP501

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MDP533 TEACHING INFORMATION SYSTEMS MODELLING

Designed for prospective teachers of information system modelling; explores the pedagogies and approaches appropriate for teaching students at a variety of levels including a secondary school environment; development and writing of specification documents for information system implementation within an educational context; tools such as relational languages and CASE used by students to implement small educational information systems.

**Course:** ED21

**Prerequisite:** MDP503

**Incompatible with:** CO4044, MDP509

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MDP534 EDUCATIONAL APPLICATIONS OF ARTIFICIAL INTELLIGENCE

Artificial Intelligence as a discipline impacting on education, philosophical issues, and methods used in AI; focuses particularly on AI applications which cross broad areas of the school curriculum; provides appropriate curriculum support for teachers of the AI topic within the Information Processing and Technology unit at a secondary school level.

**Course:** ED21

**Prerequisite:** MDP535

**Incompatible with:** CO4042, CSP842

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MDP535 EDUCATIONAL SOFTWARE DEVELOPMENT

Data, procedural and object-orientated abstractions used in conjunction with modular programming practices. These understandings are used to solve problems from a wide range of practical educational applications especially with respect to the development of educational software.

**Course:** ED21

**Prerequisite:** MDP532

**Incompatible with:** CO4037, CSP837

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MDP536 COMPUTER GRAPHICS IN TEACHING

The use of computer graphics to enhance teaching and learning in a school environment. A problem solving approach is employed and students are given the opportunity to apply what they are learning to their own curriculum areas.

**Courses:** ED21, ED70

**Prerequisite:** MDP532 or MDP530

**Incompatible with:** CO4034, CSP843

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MDP537 MAJOR ISSUES IN COMPUTER EDUCATION

The application and implication of the use of information technologies in an educational environment; the impact of teaching, learning and the curriculum.

**Courses:** ED21, ED70

**Incompatible with:** CO4036, MDP502

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MDP540 MATHEMATICS FOR SCHOOLS

Development of mathematical ideas and thinking over the school years; mathematical structure, functions, transformations, modelling and problem solving as they pertain to the school curriculum.

**Courses:** ED22, ED62

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MDP541 SCIENCE FOR SCHOOLS

The study of scientific themes and their application to the school classroom; unity and diversity, change, matter energy, interrelationships.

**Courses:** ED22, ED74

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MDP542 HISTORY OF MATHEMATICS & SCIENCE

Selected topics are studied in depth - number, systems, algebra, astronomy, energy and matter.

**Course:** ED22

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MDP543 CURRICULUM SPECIALISATION IN MATHS & SCIENCE

Recent trends in mathematics and/or science teaching and learning; development of teaching and learning experience for school students.

**Courses:** ED22, ED62, ED74

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MDP544 LEADERSHIP IN MATHS & SCIENCE EDUCATION

Current development in mathematics and/or science education, government reports; models of adult training; processes for formulating and evaluating programs and elements of management and supervision as they relate to curriculum development and in-service training.

**Course:** ED22

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MDP545 EXCEPTIONALITY IN MATHEMATICS & SCIENCE

The identification and assessment of exceptional children of both extremes in the context of a mathematics and science classroom; planning of appropriate intervention for learning disabled, physically disabled as well as for gifted and talented children in the regular classroom.

**Courses:** ED22, ED62, ED74

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MEB010 DYNAMICS 1

Modelling methods and analysis; motion of relevant machines and mechanisms; fluids, transmissions and methods of measurement.

**Course:** BN30

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ MEB012 DYNAMICS 2

Application of modelling techniques on machines and mechanisms; unbalanced forces in rotating bodies and gyroscopic effects; vibration; interaction of fluids and methods of measurement.

**Course:** BN30

**Prerequisite:** MEB010

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ MEB031 MATERIAL TECHNOLOGY

A structure property approach to orthotic materials; plastics; rubber; metals; composites; failure modes; strength; creep; fatigue; resilience; selection procedures.

**Course:** PU45

**Credit Points:** 8 **Contact Hours:** 2 per week

### ■ MEB035 SAFETY TECHNOLOGY 1

The importance and relevance of safety in the workplace; analysis of the accident process; hazards with machinery and materials failure.

**Course:** PU44

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ MEB101 DESIGN 1

Mechanical design: power transfer; V-belt drives; chain drives; gear drives; machine components.

**Courses:** IF53, ME35, ME45

**Prerequisites:** CEB184, MEB121

**Co-requisites:** CEB185, MEB111, MEB133

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ MEB111 DYNAMICS

The principles of dynamics; kinetics of particles and systems of particles in plane motion; coordinate systems; relative motion; various methods for the solution of mechanisms; freebody diagrams; work-energy equations; impulse; momentum and impact.

**Courses:** CE42, EE43, EE44, IF53, ME23, ME45, ME46

**Prerequisite:** MAB187

**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ MEB121 ENGINEERING GRAPHICS

Principles of geometric drawing; orthographic projection; auxiliary views; sectioning; component detailing; surface developments; assembly drawing; CAD.

**Courses:** CE42, EE43, EE44, IF53, ME45, ME46, PS47

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ MEB133 MATERIALS 1

Bonding; thermodynamics of solids; state and phase changes; defects; elasticity, plasticity and fracture; recovery diffusion; recrystallisation; hot and cold deformation; creep and fatigue mechanisms; heat treatment. Alloying and strengthening in metals, polymers and ceramics.

**Courses:** CE42, EE43, EE44, IF53, ME45, ME46

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ MEB171 INTRODUCTION TO MANUFACTURING

Manufacturing in the Australian economy; modern concepts in manufacturing systems design: the inter-relationship between design, materials selection, manufacturing processes, marketing and information processing of products; choice of manufacturing technologies in relation to product quantity and quality.

**Courses:** CE42, EE43, EE44, ME45

**Credit Points:** 2 **Contact Hours:** 1 per week

### ■ MEB173 MANUFACTURING PRACTICE

Manufacturing in world and Australian contexts; concept of manufacturing systems; conventional and non-traditional manufacturing technology; introduction to value analysis, product design and material selection; tolerancing and metrology; total quality control.

**Course:** IF53

**Credit Points:** 7 **Contact Hours:** 3 per week

### ■ MEB190 ENGINEERING IN THE MEDICAL ENVIRONMENT

Overview of health system in Australia; clinical disciplines within medicine; medical terminology; history of health technology; health technology from an engineering perspective; case studies.

**Course:** ME46

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ MEB191 UNIX & C

Unix operating system and its use as an engineering work station operating system; use of the editor; the C language: expressions, statements, input/output, functions, arrays and pointers and the use of storage classes, string functions and data forms; engineering problems using C.

**Course:** ME46

**Credit Points:** 4 **Prerequisite:** CSB191 **Contact Hours:** 2 per week

### ■ MEB200 INDUSTRIAL EXPERIENCE 1

Students should engage in at least five weeks employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form completed by both student and the employer.

**Course:** ME45

**Contact Hours:** 5 weeks

### ■ MEB221 ENGINEERING SCIENCE 1

Statics: forces in equilibrium; resolution of forces; friction; inertia and change of motion: application to connected bodies; dynamics of rotation; centripetal force; the hoist; periodic motion; balancing; work and energy; impulse and momentum; introduction to fluids at rest and in motion.

**Course:** PS47

**Prerequisite:** MAB188

**Co-requisite:** PHB172

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ MEB230 MATERIALS 2

Solidification of ingots and castings; segregation; defects; properties of cast iron; steel and non-ferrous alloys. Properties of welded materials; arc characteristics; metal transfer; thermal diffusivity; cooling rates and transformations; carbon equivalents; hot and cold cracking; residual stresses and dilution effects. Properties of wrought materials; strain hardening; anisotropy, preferred orientation; defects; toughness. Microstructures and properties of high strength low alloy steels. Important non-ferrous alloys.

**Courses:** IF53, ME35, ME45

**Prerequisite:** MEB133

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ MEB231 MATERIALS 3

The structure and properties of polymers; composites and modern engineering ceramics; stress transformations; fibre and matrix properties; fibre density and orientation; rule of mixtures; modern engineering polymers; properties and applications; fracture toughness of polymers, ceramics and metals; linear elastic fracture mechanics; application to static and dynamic forces such as fatigue and stress corrosion cracking.

**Courses:** IF53, ME45, ME46

**Prerequisite:** MEB133

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ MEB250 THERMODYNAMICS 1

Basics of engineering thermodynamics; reversibility; first and second laws of thermodynamics; applications to heat engines; compressors; engine testing; emphasis on single phase systems; field visit.

**Courses:** IF53, ME45, ME46

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ MEB251 THERMODYNAMICS 2

Steam plant; impulse and reaction turbines; gas turbines; refrigeration; field visit.

**Courses:** IF53, ME35, ME45,

**Prerequisite:** MEB250

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ MEB270 INDUSTRIAL EXPERIENCE 1

Students should engage in at least five weeks employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form completed by both the student and the employer.

**Course:** IF53

**Contact Hours:** 5 weeks

### ■ MEB300 INDUSTRIAL EXPERIENCE 2

See MEB270.

**Course:** ME45

**Contact Hours:** 5 weeks

**MEB313 MECHANICS 1**

Kinematic and dynamic analysis of linkages and mechanisms; linkage synthesis applied to spatial mechanisms and robotics; the design and synthesis of cams; kinematic analysis of gears.

**Courses:** IF53, ME35, ME45, ME46

**Prerequisites:** CEB184, CEB185, MAB183 or MAB187, MEB111

**Credit Points:** 6 **Contact Hours:** 3 per week

**MEB333 BIOMATERIALS**

Characterisation of materials; metallic, ceramic, polymeric implant materials; composites as biomaterials; structure-property relationships of biomaterials; tissue response to implants; soft tissue replacements; hard tissue replacements; transplants.

**Course:** ME46 **Prerequisite:** MEB133

**Credit Points:** 8 **Contact Hours:** 3 per week

**MEB361 FLUIDS 1**

Fluid mechanics; forces in a fluid at rest and its action on submerged and floating bodies; manometry; pressure distribution in a liquid subjected to acceleration; different types of flow; momentum and energy equations; flow through orifices and vortex flow.

**Courses:** IF53, ME45, ME46

**Prerequisites:** MAB193, MEB111, PHB132

**Credit Points:** 6 **Contact Hours:** 3 per week

**MEB362 THERMO-FLUIDS**

Fluid properties; forces on fluids at rest; definition and applications of the continuity equation, the momentum equation and the energy equation; isentropic compressible flow including boundary layer effects; first and second laws of thermodynamics.

**Course:** EE43

**Credit Points:** 7 **Contact Hours:** 3 per week

**MEB370 MANUFACTURING SYSTEMS 1**

Practical machining principles; mechanics of chip formation; speeds and feeds selection; practical applications in metrology; numerical control and parts programming; processing of plastics.

**Courses:** ME45, ME46 **Prerequisite:** MEB171

**Credit Points:** 6 **Contact Hours:** 3 per week

**MEB381 DESIGN 2**

Methodology for mechanical design; design of machine elements; design for strength and fatigue; computer aided design.

**Courses:** IF53, ME45 **Co-requisite:** MEB313

**Prerequisites:** CEB184, CEB185, MEB101, MEB121,

**Credit Points:** 6 **Contact Hours:** 3 per week

**MEB402 INDUSTRIAL EXPERIENCE 3**

Students should engage in at least five weeks employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form completed by both the student and the employer.

**Course:** ME45 **Contact Hours:** 5 weeks

**MEB408 PROJECT 1**

Investigate and present a formal report on a mechanical engineering problem; project may be industry based or arise from applied research.

**Course:** ME45

**Prerequisite:** MEB502 **Co-requisite:** MEB489

**Credit Points:** 14 **Contact Hours:** 6 per week

**MEB409 PROJECT 2**

Investigate and present a formal report on a mechanical engineering problem; project may be industry based or arise from applied research.

**Course:** ME45

**Prerequisite:** MEB502 **Co-requisite:** MEB489

**Credit Points:** 7

**Contact Hours:** 3 per week

**MEB411 THEORY OF MACHINES**

Balancing of mechanisms and rotors; gyroscopic effects in mechanisms, rotors and vehicles; gear trains, simple and epicyclic; friction and centrifugal devices such as clutches and governors.

**Course:** ME45

**Prerequisites:** CEB184, CEB185, MEB111

**Credit Points:** 7 **Contact Hours:** 3 per week

**MEB450 AIR CONDITIONING**

Psychrometry; cooling load calculations; air conditioning systems; vapour compression refrigeration cycle analysis; multipressure systems; absorption refrigeration; field visit.

**Courses:** ME35, ME45, ME46

**Co-requisite:** MEB550

**Prerequisites:** MEB251, MEB462

**Credit Points:** 7 **Contact Hours:** 3 per week

**MEB454 AERODYNAMICS 1**

Incompressible airflow around bluff bodies and aerofoils and in a tube of varying cross-sections; stalling of aerofoils; variations with angle of attack of lift, pressure, pitching moment and drag coefficients; the influence of Reynold's Number including the effect of boundary layers, turbulent and laminar; high lift devices and fuselage effect; planform effects; aircraft layouts such as canards and delta wings.

**Course:** EE43

**Credit Points:** 6 **Contact Hours:** 3 per week

**MEB462 FLUIDS 2**

Fluid flow in closed conduits; rotodynamic machines; hydraulic transmissions; water hammer in pipes; dimensional analysis and dynamic similarity.

**Courses:** IF53, ME35, ME45

**Prerequisite:** MAB193

**Co-requisites:** MEB361, MAB493

**Credit Points:** 6 **Contact Hours:** 3 per week

**MEB463 TRIBOLOGY**

The fundamentals of tribology; specification and measurement of surface roughness; lubrication modes; lubricants; wear modes; bearing design; lubrication of machine elements; seals.

**Courses:** IF53, ME35, ME45, ME46

**Credit Points:** 6 **Contact Hours:** 3 per week

**MEB464 FLUIDS 3**

Boundary layer theory; viscous flow via the Navier-Stokes and Reynold's equations; isentropic compressible flow; normal and oblique shock waves.

**Course:** ME45 **Prerequisites:** MAB893, MEB462

**Credit Points:** 7 **Contact Hours:** 3 per week

**MEB465 BIOFLUIDS**

Continuity of flow; viscosity and its measurement; Newton's law of measurement; non-Newtonian fluids; Navier-Stokes equations of motion; Eulerian and Lagrangian descriptions of flow; boundary layer theory; dimensional similarity; rheology and rheological models; rheology of biofluids; hemodynamics; artificial pumps, valves and pacers for biofluid systems; anaesthesia machines; blood flow meters; heart-lung by-pass machines.

**Course:** ME46

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ MEB470 INDUSTRIAL EXPERIENCE 2

Students should engage in at least five weeks employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form completed by both the student and the employer.

Course: IF53 Contact Hours: 5 weeks

### ■ MEB471 MANUFACTURING ENGINEERING 1

Practical machining principles and mechanics of chip formation; economics of machining; practical applications in metrology; NC part programming.

Course: IF53 Credit Points: 6 Contact Hours: 3 per week

### ■ MEB472 MANUFACTURING SYSTEMS 2

Fundamentals and applications of plasticity theory in the deformation of metals and plastics; concepts and applications of non-traditional machining and forming processes; introduction to automation and advanced manufacturing techniques.

Courses: ME35, ME45, ME46  
Prerequisite: MEB370  
Credit Points: 6 Contact Hours: 3 per week

### ■ MEB483 DESIGN 3

Design of mechanisms; welded structures; flexible components; journal bearings; computer aided design.

Courses: IF53, ME45  
Prerequisites: CEB102, CSB191, MEB111, MEB133, MEB381  
Co-requisites: MEB231, MEB313, MEB411  
Credit Points: 7 Contact Hours: 3 per week

### ■ MEB484 BIOENGINEERING DESIGN 1

Introduction to design methodology and problem solving; risk and safety factors in design; types of bearing and bearing selection; design of beams and shafts; type and choice of gear mechanisms; human factors engineering; psychological factors in design of displays; bioengineering applications of design theory.

Course: ME46 Prerequisites: CEB185, MEB121  
Credit Points: 8 Contact Hours: 3 per week

### ■ MEB489 MECHANICAL DESIGN PROJECT

A team approach to design: projects from University or industry; application of theoretical and practical design principles; design, draw and supervise manufacture of project; presentation of formal report.

Course: ME45 Co-requisites: MEB772, MEB911  
Prerequisites: MEB483, MEB511, MEB610, MEB773  
Credit Points: 14 Contact Hours: 3 per week

### ■ MEB490 PROJECT

Investigation and analysis of technological or managerial problem in medical engineering and presentation of a written report.

Course: ME46  
Credit Points: 16 Contact Hours: 3 per week

### ■ MEB500 SPECIAL TOPIC 1

A series of lectures and tutorials in unit areas which are of special professional relevance to the student's intended career path, or which may be available on occasions from visiting scholars.

Courses: IF53, ME45  
Prerequisites: Students to have achieved an appropriate level of preparation in topic area concerned.  
Co-requisites: Depend on the syllabus of the particular special topic offered.  
Credit Points: 7 Contact Hours: 3 per week

### ■ MEB501 PROJECT

A survey of relevant literature and organised experimental work resulting in conclusions presented in a formal report.

Course: ME35  
Credit Points: 16 Contact Hours: 3 per week

### ■ MEB502 RESEARCH METHODS

The project exposes students to self-regulated, supervised research on a specified topic associated with materials or manufacturing engineering. Survey of relevant literature and organised experimental work resulting in conclusions presented in a formal report.

Course: ME45 Prerequisites: MEB230, MEB231  
Credit Points: 8 Contact Hours: 4 per week

### ■ MEB510 NOISE & VIBRATIONS

Introduction to noise and vibration measurements and instruments; free and forced vibration; normal mode vibration; Holzer's method; Mykelstad's method; noise levels; A-weighting; leg; SEL; noise dose and standards; sound power; absorption; the behaviour of sound relating to rooms, enclosures and partitions.

Courses: IF53, ME45 Co-requisite: MAB893  
Prerequisites: MAB493, PHB132  
Credit Points: 7 Contact Hours: 3 per week

### ■ MEB511 STRESS ANALYSIS

Analysis of strain and stress; strain-displacement relations; stress and strain transformation; two-dimensional problems including curved bars, thick-walled cylinders and rotating discs; tension of prismatic bars and thin-walled sections; failure criteria and their applications; experimental strain measurement.

Courses: ME45, ME46  
Credit Points: 7 Contact Hours: 3 per week

### ■ MEB531 ADVANCED MATERIALS

Properties and applications for modern advanced composites; fibre reinforcements of ceramic, metal and polymer materials. Coatings of metals and ceramics by vapour deposition; plasma and advanced techniques. Surface treatments for frictional and wear performance. Properties of ultra high strength steels.

Courses: IF53, ME45, ME46  
Prerequisites: MEB230, MEB231  
Credit Points: 7 Contact Hours: 3 per week

### ■ MEB550 HEAT TRANSFER

Conduction: steady-state, one and two-dimensions, unsteady-state; convection: boundary layers, forced, natural and radiation black and grey bodies, shape factors.

Courses: ME35, ME45, ME46  
Credit Points: 6 Contact Hours: 3 per week

### ■ MEB551 PROPULSION & ENGINES

Piston engines; super chargers and carburetors; actuator disc theory of propellers and rotary wing aircraft; gas turbine engines; compressors; turbines; ignition systems; fuel control systems and after-burners; rocket motors; fuels and thrust calculations.

Course: EE43 Prerequisite: MEB362  
Credit Points: 5 Contact Hours: 3 per week

### ■ MEB553 AERODYNAMICS 2

Transonic and supersonic flows; critical Mach numbers; quasi one-dimensional stationary current equations; shock waves, compressional and expansional; linear flow around aerofoil sections; convergent divergent nozzles; qualitative study of flow around differing wing areas and shape; climb, cruise, descent, take off and landing calculations.

Course: EE43 Prerequisite: MEB454  
Credit Points: 6 Contact Hours: 3 per week



**■ MEB571 MANUFACTURING ENGINEERING 2**

Fundamentals and applications of plasticity theory in the deformation of metals and plastics; forming machine performance and selection of machine tools.  
Course: IF53

Credit Points: 6      Contact Hours: 3 per week

**■ MEB580 BIOENGINEERING DESIGN 2**

Effect of manufacturing processes on material properties and product design; manufacturing tolerances; computer-aided design and solid modelling; effect of computer-aided manufacturing on component design; rapid prototyping techniques; use of prototypes in manufacturing; reverse engineering by non-invasive techniques; design/testing/prototyping/production cycle; application of design for manufacturing of bioengineering devices.

Course: ME46

Prerequisite: MEB484

Credit Points: 8      Contact Hours: 3 per week

**■ MEB600 INDUSTRIAL EXPERIENCE 3**

Students should engage in at least five weeks employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form completed by both the student and the employer.

Course: IF53

Contact Hours: 5 weeks

**■ MEB601 SPECIAL TOPIC 2**

A series of lectures and tutorials in unit areas which are of special professional relevance to the student's intended career path, or which may be available on occasions from visiting scholars.

Courses: IF53, ME45, ME46

Prerequisites: Students require an appropriate level of preparation in the topic area concerned.

Co-requisites: Depend on the syllabus of the particular special topic offered.

Credit Points: 7      Contact Hours: 3 per week

**■ MEB610 MECHANICS 2**

Introduction to mechanical frames and methods of analysis; investigation of the effects of static and dynamic loading upon frames and frame members.

Course: ME45

Co-requisite: MEB511

Prerequisites: MAB493, MEB411, MEB510

Credit Points: 6      Contact Hours: 3 per week

**■ MEB611 STABILITY & CONTROL OF AIRCRAFT**

Equations of motion; longitudinal, lateral and directional stick fixed and stick free control and stability; manoeuvring flight; use of aerodynamic coefficients without derivation; control system modelling.

Course: EE43

Prerequisite: MEB553

Credit Points: 5      Contact Hours: 3 per week

**■ MEB612 MECHANICAL MEASUREMENTS**

Stress and strain; force, torque and power measurements; vibration measurements; pressure and sound measurements; flow measurements; data transmission and recording.

Course: ME35

Credit Points: 8      Contact Hours: 3 per week

**■ MEB640 AUTOMATION 1**

Mathematical models of mechanical systems: system response to given inputs; modification of system parameters to obtain a more desirable response in closed loop.

Courses: IF53, ME45, ME46

Prerequisites: MAB493, MEB111

Co-requisite: MEB660

Credit Points: 7

Contact Hours: 3 per week

**■ MEB650 THERMODYNAMICS 3**

Properties and testing methods of solid, liquid and gaseous fuels; combustion calculations; flue gas analysis; energy tariffs and audits; major applications of energy management, eg. buildings, process plant, compressed air systems, vehicle fleets; economic evaluation of energy projects; introduction and management of energy-saving programs; field visit.

Course: ME45      Prerequisites: MEB215, MEB550

Credit Points: 6      Contact Hours: 3 per week

**■ MEB660 FLUID POWER**

Introduction to fluid power; graphical symbols; simple circuits; cascade method; Boolean algebra; fluid logic; Karnaugh-Veitch method; hydraulic components; hydraulic system design; hydraulic circuits.

Courses: IF53, ME35, ME45

Prerequisite: MEB462

Credit Points: 6      Contact Hours: 3 per week

**■ MEB670 INDUSTRIAL ENGINEERING 1**

Project planning and control; plant location and layout; work study; design of experiments; linear programming applications.

Courses: IF53, ME45, ME46

Credit Points: 6      Contact Hours: 3 per week

**■ MEB673 MANUFACTURING ENGINEERING 3**

Machine tool vibration and chatter; water-jet, laser, EDM machining; introduction to CAD/CAM and CNC part programming; robotics and its industrial applications; use of laser interferometry.

Course: IF53      Prerequisites: MEB471, MEB571

Credit Points: 7      Contact Hours: 3 per week

**■ MEB674 INDUSTRIAL ENGINEERING**

Project planning and control; manufacturing resources planning; total quality management; principles of work study and materials handling systems.

Course: ME35

Credit Points: 8      Contact Hours: 3 per week

**■ MEB675 PLASTICS TECHNOLOGY**

Mechanical and physical properties of polymers; blow moulding, compression moulding, transfer and rotational moulding; extrusion and plastic injection moulding; tooling and product design for plastic components; machinery, process control and instrumentation in the plastics forming process.

Courses: IF53, ME35

Credit Points: 7      Contact Hours: 3 per week

**■ MEB680 ADVANCED MECHANICAL DESIGN**

The application of modern materials and analytical techniques to mechanical design: case studies; statistical analysis of failures; application of material science in design; fracture mechanics; computer aided optimisation techniques.

Courses: ME45, ME46

Prerequisites: MEB230, MEB231, MEB411, MEB483

Credit Points: 7      Contact Hours: 3 per week

**■ MEB681 BIOENGINEERING DESIGN 3**

Real-time data processing circuitry; operational amplifier design and application; filter selection and design; logic circuit design; electrical control circuits; design for safety and reliability; biomedical transducers and sensors; computer control and data

logging; use of stepper motors and gears; design of typical biomedical instruments.

**Course:** ME46

**Prerequisites:** EEB202, EEB371, PHB504

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ MEB690 AIRCRAFT SYSTEMS

Design criteria and techniques of hydraulic, pneumatic and electrical circuits to provide the services to operate a modern aircraft, eg. detailed analysis of undercarriage and flap systems; aircraft fuel systems; pressurisation systems; cockpit instrumentation and associated equipment; principles and operation of gyroscopes and accelerometers.

**Course:** EE43

**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ MEB701 SPECIAL TOPIC 3

See MEB601.

**Courses:** ME45, ME46

**Credit Points:** 7      **Contact Hours:** 3 per week

### ■ MEB710 AUTOMATION 2

Use of computer packages in control system design (eg. Matrix, 'X'); fundamentals of discrete time systems; instrumentation used in the acquisition and analysis of digital data (eg. Labtech); programmable logic controllers.

**Course:** ME45      **Prerequisites:** MEB640, MEB660

**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ MEB740 MAINTENANCE MANAGEMENT & TECHNOLOGY

Economic and environmental importance of maintenance; management including organisation; data systems; cost control; spares policy; design for reliability; planning of overhauls; maintenance of buildings; mechanical maintenance and failure analysis; electrical and electronic maintenance.

**Courses:** EE43, ME35

**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ MEB771 INDUSTRIAL ENGINEERING 2

Forecasting; manufacturing resources planning; scheduling; capacity planning; total quality control; modelling and simulation.

**Courses:** IF53, ME45

**Prerequisite:** MEB670

**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ MEB772 ENGINEERING PROJECT APPRAISAL

Rational economic analysis of engineering projects at product and project level; techniques needed to establish the cost of a project; techniques for determining design changes needed to reduce the manufacturing cost of a product; strategies for new product planning.

**Course:** ME45

**Prerequisites:** MEB502, MEB472, MEB483

**Co-requisites:** MEB670, MEB773

**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ MEB773 DESIGN FOR MANUFACTURING 1

Value analysis and principles related to product design; tolerance technology; design of jig and fixtures; cutting tools applicable for various machining operations including assembly.

**Courses:** IF53, ME35, ME45

**Prerequisite:** MEB171

**Credit Points:** 7      **Contact Hours:** 3 per week

### ■ MEB774 OPERATIONS MANAGEMENT

Method study and work measurements; job design, project planning and control; scheduling; capacity planning; resource planning; inventory control; total quality control.

**Course:** EE43

**Credit Points:** 7      **Contact Hours:** 3 per week

### ■ MEB780 REHABILITATION EQUIPMENT DESIGN & EVALUATION

Functional requirements of orthoses; orthotic biomechanics; design and construction of orthoses; biomechanics of artificial limbs; alignment techniques; amputee socket design and manufacture; wheelchair design requirements; clinical evaluation of rehabilitation equipment.

**Course:** ME46

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ MEB790 SPACECRAFT & SATELLITE DESIGN

Analysis techniques of space vehicle control including stabilisation and attitude control; monitoring and control of internal environment; albedo measurements; effects of solar eclipse; heat and radiation projection methods; design of on-board systems including power systems; attitude control; libration dampers; accelerometers and station keeping systems; requirements for satellite and ground-station equipment design and operation.

**Course:** EE43

**Credit Points:** 6      **Prerequisite:** EEB692  
**Contact Hours:** 3 per week

### ■ MEB800 SPECIAL TOPIC 4

See MEB701.

**Courses:** ME45, ME46

**Credit Points:** 7      **Contact Hours:** 3 per week

### ■ MEB810 INDUSTRIAL NOISE & VIBRATION

Vibration measurements; spectrum analysis; Kurtosis, Cepstrum and envelope analysis; averaging; gear, bearing and rotor vibration; whole body and arm vibration; noise measurements; noise power; industrial standards; attenuation methods.

**Courses:** IF53, ME45

**Credit Points:** 7      **Prerequisite:** MEB510  
**Contact Hours:** 3 per week

### ■ MEB891 HEALTH LEGISLATION & THE MEDICAL ENVIRONMENT

National and international legislative controlling bodies and codes; quality systems and good manufacturing practice; audit function and document trail; standards and compliance; law and medical products; hazard analysis and medical products; corrective actions and design charge; recall (hospital and production).

**Course:** ME46

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ MEB892 ROBOTICS IN HEALTH CARE

Components and terminology; dynamics of multi-linked systems; coordinate systems; mechanics and design of manipulators and end-effectors; servo system control theory; robotic sensors and location devices; computer programming of robots; anthropomorphic robots; applications of robots in surgery, rehabilitation and industry.

**Course:** ME46

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ MEB900 MANUFACTURING PROJECT

The student is required to investigate in depth and present a formal report on a problem area taken from the full range of manufacturing engineering practices. Project may arise through investigation in applied research programs or specific topics from industry.

**Course:** IF53

**Credit Points:** 24      **Contact Hours:** 3 per week

**■ MEB911 FINITE ELEMENT ANALYSIS**

General description of the finite element method; static and dynamic analysis of mechanical engineering problems; review of finite element packages.

Course: ME45

Prerequisites: MEB462, MEB511, MEB550, MEB610

Credit Points: 7 Contact Hours: 3 per week

**■ MEB950 PROCESS PLANT DESIGN**

Duct and industrial pipework system design; pressure vessel design methods; field visits.

Course: ME45 Prerequisites: MEB251, MEB462

Co-requisite: MEB511

Credit Points: 7 Contact Hours: 3 per week

**■ MEB960 FLUID SYSTEMS DESIGN**

Analysis of selected fluid systems; performance characteristics of components and systems.

Course: ME45 Co-requisite: MEB464

Credit Points: 7 Contact Hours: 3 per week

**■ MEB971 KNOWLEDGE BASED MANUFACTURING SYSTEMS**

Introduction to knowledge based systems (KBS); knowledge representation, inference methods and uncertainty; examples of KBS in process planning, production management, diagnostic systems; building a KBS.

Course: IF53

Prerequisite: MEB976

Credit Points: 7 Contact Hours: 3 per week

**■ MEB974 DESIGN FOR MANUFACTURING 2**

Design of press tools, dies for forming operations and joining processes; CAD in tool and die design.

Course: IF53

Prerequisite: MEB571

Credit Points: 7 Contact Hours: 3 per week

**■ MEB975 DESIGN OF MANUFACTURING SYSTEMS**

Modelling of manufacturing systems using techniques such as IDEF; strategic planning for CIM; planning and design of FMS including selection of work stations, fixtures, AGV and robots; introduction to simulation and the use of simulation as a design tool.

Courses: IF53, ME45

Prerequisite: MEB976

Credit Points: 7 Contact Hours: 3 per week

**■ MEB976 COMPUTER INTEGRATED MANUFACTURING**

Implementing CAD/CAM systems; component design using geometric modelling techniques; classification systems for part family formation and computer aided process planning; concepts and applications of flexible manufacturing systems (FMS).

Courses: IF53, ME35, ME45

Credit Points: 7 Contact Hours: 3 per week

**■ MEB977 COMPUTER CONTROL OF MANUFACTURING SYSTEMS**

Analysis of digital control systems; applications and control of programmable controllers; control of information systems in manufacturing; data base techniques; integration and interfacing of machine tools; application and control systems in robots; communications network.

Courses: IF53, ME45

Prerequisite: MEB976

Credit Points: 7 Contact Hours: 3 per week

**■ MEB979 MANUFACTURING RESOURCES PLANNING**

Manufacturing planning and control systems; recognising the various phases of planning in a manufacturing enterprise; lot size analysis and scheduling

techniques; design aids and specifications of MRP/II; measuring performances.

Course: IF53

Credit Points: 7 Contact Hours: 3 per week

**■ MEB980 DESIGN OF POWER TRANSMISSION SYSTEMS**

Design of systems for the transmission of mechanical power; solid elements: gears, clutches, belts, etc.; fluid elements: pneumatic and hydraulic.

Course: ME45

Prerequisites: EEB209, MEB313, MEB411, MEB483

Co-requisites: MEB510, MEB511

Credit Points: 7 Contact Hours: 3 per week

**■ MEB981 DESIGN OF MATERIALS HANDLING SYSTEMS**

Design of bulk material conveying and process plants, storage silos and bins, ground stockpiling systems, and the associated supporting structures.

Course: ME45

Prerequisites: CEB184, CEB185, MEB111, MEB411, MEB483, MEB511

Credit Points: 6 Contact Hours: 3 per week

**■ MEN140 RELIABILITY & MAINTENANCE OPTIMISATION**

Development of reliable designs; bathtub curve, FMECA; series, active and standby reliability and availability; matrix methods; system productiveness; fault trees; distribution forms; Weibull analysis; renewal theory, age renewal; block renewal, bad-as-old renewal; overhaul and renewal; Hastings' repair limit; inspect or monitor; physics of failure.

Course: ME76

Credit Points: 12 Contact Hours: 3 per week

**■ MEN170 SYSTEMS MODELLING & SIMULATION**

The concept of a model and model building; techniques for the solution of the models; simulation as a decision making tool; modelling for simulation and practical exercises in simulation using computer simulation packages in the areas of manufacturing systems and maintenance.

Courses: BS81, ME76

Credit Points: 12 Contact Hours: 3 per week

**■ MEN171 ADVANCED MANUFACTURING TECHNOLOGIES**

Overview of manufacturing systems engineering and applications of advanced computer aided drafting and design; implementation of CAD/CAM systems using three-dimensional modelling techniques; classification systems for part family formation for production and tooling; benefits of computer aided process planning; introduction and installation of flexible manufacturing cells and systems including robotics, automated guiding vehicles, on-line computer aided inspection, automation integration, support technologies and planning for CIM.

Course: ME76

Credit Points: 12 Contact Hours: 3 per week

**■ MEN180 PROJECT MANAGEMENT**

Covers aspects of project management, including project planning feasibility assessments and financial evaluation, scheduling and resource control, controlling the project with respect to time, cost and equality.

Course: BS86

Credit Points: 6 Contact Hours: 3 per week

■ **MEN181 LOSS CONTROL MANAGEMENT**  
Teaches students the principles of loss prevention and how to apply them to the reduction of accidents, property loss and quality improvements.

Course: BS86

Credit Points: 6      Contact Hours: 3 per week

■ **MEN190 PROJECT**

Substantial piece of work relevant to the course and carried out by each student on an individual basis; report will be examined and marked by academic supervisor in consultation with industrial supervisor.

Course: ME76

Credit Points: 24      Contact Hours: 3 per week

■ **MEN240 MAINTENANCE MANAGEMENT & TECHNOLOGY**

Economic and environmental importance of maintenance; management of the maintenance function including organisation, data systems, cost control, spares policy, design for reliability, planning of overhauls; the maintenance of buildings; mechanical maintenance and failure analysis; electrical and electronic maintenance.

Course: ME76

Credit Points: 12      Contact Hours: 3 per week

■ **MEN270 MANUFACTURING RESOURCE PLANNING**

Functions and inter-relationships between the three major components – production planning, operations planning and operations control – of a manufacturing requirements planning (MRP) system; practical exercises to provide hands on experience with a MRP system such as FACT.

Course: ME76

Credit Points: 12      Contact Hours: 3 per week

■ **MEN271 METROLOGY**

The theory and practice of metrology which relates overall quality system requirements, methods of specifying products and components, calibration requirements, the theory of errors and uncertainties and some specialist measurements into a meaningful interpretation of metrology as part of a quality system.

Course: BS86

Credit Points: 6      Contact Hours: 3 per week

■ **MEN280 ENGINEERING PROJECT MANAGEMENT**

Definition of project management; organisational structures for project management; planning the project; feasibility analysis; organising the project; legal aspects; project control; quality control.

Course: ME76

Credit Points: 12      Contact Hours: 3 per week

■ **MEP173 QUALITY PLANNING**

Quality terminology; SQC and the Deming philosophy; quality costs; the business plan; total quality management; the place of QA; quality improvement techniques; quality assurance, the essential requirements; quality manual, program and plan; setting up and developing an appropriate QA program; organisation for quality; procedures; activities, action and QA role for design, procurement and manufacturing, audit and corrective action.

Course: BS77

Credit Points: 6      Contact Hours: 3 per week

■ **MEP201 SAFETY TECHNOLOGY & PRACTICE 1**

Overview of models of the accident phenomenon; technological background of potential hazards with

electrical power; construction site mechanical equipment hazards and failure; failure modes of engineering materials; mechanical properties of engineering materials and their effect on failure mode.

Courses: HL88, PU65

Credit Points: 12      Contact Hours: 3 per week

■ **MEP273 QUALITY MEASUREMENT & TESTING**

Measurement basics; measurement and standards; measurement errors; reliability of measurements; application of statistics; the cumulative distribution function; weights and errors; statistical interpretation of test results; the hypergeometric distribution; the binomial distribution; the poisson distribution; the pascal distribution; the normal distribution; the central limit theorem. Quality assurance in the laboratory; calibration in the laboratory; uncertainty of measurements; the laboratory quality manual; assignments and laboratory audits.

Course: BS77

Credit Points: 6      Contact Hours: 3 per week

■ **MEP274 QUALITY SYSTEMS IMPLEMENTATION & MAINTENANCE**

Expectations of quality systems in relation to the AS3900 series of standards and AS2990/AS3905.2; system implementation principles; complexities and solutions; State purchasing policy; auditing objectives, philosophy, methodology and standards.

Course: BS77

Credit Points: 12      Contact Hours: 3 per week

■ **MEP301 SAFETY TECHNOLOGY & PRACTICE 2**

The psychology of industrial accidents; the technology of electrical power plant mechanical equipment and materials failure pertaining to accident prevention; accident prevention and hazard recognition; risk management and control; design and maintenance of personal protection equipment; safe habits and the effective use of personal protection equipment.

Course: PU65

Credit Points: 12      Contact Hours: 3 per week

■ **MEP371 RELIABILITY & MAINTAINABILITY**

Reliability and maintainability; relationship between reliability and quality; designer, manufacturer and operator; means of achieving high reliability and maintainability; fundamental theory of reliability; reliability data analysis; practical applications of Weibull's distribution to reliability and maintainability; modelling; computerised maintenance systems, economics and systems availability.

Course: BS77

Credit Points: 6      Contact Hours: 3 per week

■ **MEP372 MEASUREMENT TESTING & RELIABILITY**

Measurement basics; reliability of measurements; application of statistics; statistical interpretation of test results; quality (product) from reliability (process); designer, manufacturer and operators role in achieving reliability.

Course: BS77

Credit Points: 12      Contact Hours: 3 per week

■ **MET120 ENGINEERING DRAWING 1**

Lettering and linework; principles of third angle projection; orthographic projection; pictorial drawing; assembly drawing; sectional views; CAD.

Course: CE21

Credit Points: 7      Contact Hours: 3 per week

**■ MET140 ENGINEERING MATERIALS I**

General properties of materials; materials selection; service requirements and properties of ferrous and non-ferrous metals and alloys; corrosion types and prevention; testing procedures; plastics, ceramics and other materials.

Course: CE21

Credit Points: 8 Contact Hours: 3 per week

**■ MET250 THERMODYNAMICS**

Basic engineering thermodynamics concepts; systems; reversibility; first and second laws; working fluids; IC engine cycles and simple performance evaluations.

Course: ME23

Credit Points: 6 Contact Hours: 3 per week

**■ MET320 ENGINEERING DRAWING 3**

Geometric tolerancing; structural drafting; simplified dimensioning techniques; CAD.

Course: ME23 Prerequisites: MET120, MET220

Credit Points: 6 Contact Hours: 3 per week

**■ MET350 PROCESS ENGINEERING**

Steam plant; positive displacement compressors; refrigeration plant; positive expanders; reciprocating engines; gas turbines.

Course: ME23

Prerequisite: MET250

Credit Points: 7 Contact Hours: 3 per week

**■ MET352 AIR CONDITIONING & REFRIGERATION**

Ideal and actual refrigeration cycles including variation of operating conditions; performance of refrigeration equipment; psychrometry; cooling load estimation; air supply systems.

Course: ME23

Prerequisite: MET250

Credit Points: 7 Contact Hours: 3 per week

**■ MET511 NOISE, STRESS & VIBRATION PRACTICE**

Instrumentation used to measure vibrations, noise and stress; fundamental principles and equations related to such measurement; vibration isolation; noise standards; stress/strain transformations.

Course: ME23 Co-requisites: MET210, MET310

Credit Points: 6 Contact Hours: 3 per week

**■ MET572 PRODUCTION PLANNING & CONTROL**

Overview of production management; introduction to quality control; types of production; plant layout; scheduling and inventory control.

Course: ME23

Prerequisite: MET171

Credit Points: 6 Contact Hours: 3 per week

**■ MET573 CAD/CAM TECHNOLOGY**

Introduction to the fundamentals of CAD/CAM and geometrical modelling; automated process planning; practical applications in CNC programming and economics of machine tools; the use of robots and principles of integrated manufacturing systems.

Course: ME23

Credit Points: 7 Contact Hours: 3 per week

**■ MET580 MACHINE ELEMENTS 1**

Practical application of shear force and bending moment diagrams; selection of components from BHP manual; use of handbooks, codes and rolled steel section tables; bolted and welded connections; application of standard rolled steel sections; shafts.

Course: ME23

Prerequisites: MET120, MET220, MET210

Credit Points: 6 Contact Hours: 3 per week

**■ MET600 MATERIALS FOR ELECTRICAL ENGINEERS**

Properties of materials; materials selection; service requirements and properties of ferrous and non-ferrous metals and alloys; corrosion types and prevention; testing procedures; plastics, ceramics, etc.

Course: EE22

Credit Points: 4 Contact Hours: 1.5 per week

**■ MET601 MECHANICAL PLANT**

Manufacturing processes and workshop practices; power station equipment (turbines and boilers); mining machinery; air conditioning equipment; fans and pumps; hoists, compressors; cranes; welding; heat transfer principles.

Course: EE22

Credit Points: 3 Contact Hours: 1.5 per week

**■ MET680 MACHINE ELEMENTS 2**

Selection and application of shafts and couplings; selection of spur, helical and worm reduction unit; determination of gear forces; selection of springs and brakes; curved beams.

Course: ME23

Prerequisite: MET580

Credit Points: 7 Contact Hours: 3 per week

**■ MET733 INDUSTRIAL METALLURGY**

Techniques in casting; metallurgical advances in materials and their evaluation.

Course: ME23

Prerequisite: MET433

Credit Points: 6 Contact Hours: 3 per week

**■ MET782 JIG & TOOL DESIGN**

Design of jig and fixtures for various machine operations and assembly; principles in design of blanking and forming dies; special forming techniques; dies used in blow and injection moulding; simple press capacity calculation.

Course: ME23

Prerequisite: MET171

Credit Points: 6 Contact Hours: 3 per week

**■ MET850 ENERGY MANAGEMENT**

Tariff framing and objectives; energy and power losses in electrical and mechanical plant; equipment and buildings; identification of losses; energy audits; load forecasting and control.

Course: ME23

Co-requisites: EET500, MET250

Credit Points: 6 Contact Hours: 3 per week

**■ MET920 COMPUTER AIDED DESIGN & DRAFTING**

Computer based drafting: two-dimensional drafting; design and solid modelling.

Course: ME23

Prerequisites: MET120, MET220

Credit Points: 6 Contact Hours: 3 per week

**■ MET933 INDUSTRIAL TRIBOLOGY**

Maintenance and maintenance systems; types and mechanisms of wear; bearings and seals; friction; lubricants; oils, greases, solid lubricants; gas as a lubricant; application of lubricants.

Course: ME23

Credit Points: 6 Contact Hours: 3 per week

**■ MET960 FLUID POWER**

Introduction to fluid power; compressed air systems; graphical symbols; cascade method of pneumatic system design; hydraulic components; hydraulic circuits.

Course: ME23

Prerequisites: MET120, MET220

Credit Points: 7 Contact Hours: 3 per week

**■ MET961 FLUID MECHANICS**

Characteristics of pumps; turbines; compressors and fans; fluid couplings and torque converters. Friction losses in pipes and fittings. Pumping systems.

Course: ME23

Prerequisite: MET560

Credit Points: 7 Contact Hours: 3 per week

#### ■ MET971 INDUSTRIAL PRACTICE

Human resource management; work study; aspects of communication; leadership and teamwork; practical applications in planning and control; basic engineering metrology.

Course: ME23

Credit Points: 7 Contact Hours: 3 per week

#### ■ MJB100 MEDIA PRODUCTION

Focus on the still image and still images in juxtaposition in terms of the technical processes of producing images and the cultural and artistic processes of creating meaning with images; the processes of skills of photography; thematic presentation of images in sequence eg. slide shows; application of computers and other electronic technologies in media production and presentation including: basic applications, communications, graphics, animation, interactive videodisc, multimedia and computer-based education. Elementary computer skills are developed including the use of Microsoft Works.

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

#### ■ MJB102 TEXT ANALYSIS

Theoretical strategies applied to a range of texts from print media, film, and television; film language and concepts in the semiotic analysis of film and television texts; questions of intertextuality, media interfaces, and media and society.

Course: BS50

Prerequisite: COB113

Credit Points: 12 Contact Hours: 3 per week

#### ■ MJB103 NEWS PRODUCTION

What is a media organisation?; media industries and media firms; social responsibilities; managing deadlines; planning and decision-making in the newsroom; leadership and motivation; news practice: radio, television, newspapers; case studies.

Course: BS50

Prerequisites: MJB122, MJB138, (none for MBA students)

Credit Points: 12 Contact Hours: 3 per week

#### ■ MJB104 MEDIA INDUSTRIES & ISSUES

An introduction to the study of the mass media, with particular emphasis on Australian media industries: television, radio, the press, advertising; film, video and music, from social, historical and industrial perspectives; current issues facing these industries.

Course: BS50

Credit Points: 12 Contact Hours: 3 per week

#### ■ MJB105 FILM & SOCIETY

The Great Depression era, Roosevelt's new deal; the ways 1930s genre films refracted these problems; post-war reconstruction and the re-affirmation of the family unit in 1940s films; the period of the House Committee on un-American activities and associated films; the films of the 1960s and various radical movements; the treatment of a range of social issues in American films of the 1970s and 1980s.

Courses: BS50, ED50

Prerequisite: MJB130 (or AAB052 or COB113)

Credit Points: 12 Contact Hours: 3 per week

#### ■ MJB106 SCREEN ADAPTATION

The process of adaptation of literary texts into feature films. Selective thematic and textual analysis of modern literature and film enables students to appreciate both forms as a expression of society. These analyses are related to the broader questions of representation and rhetoric of fiction in film. (Note: this is not a script-writing unit.)

Courses: BS50, ED50

Credit Points: 12 Contact Hours: 3 per week

#### ■ MJB107 GENDER & THE MEDIA

Cultural gender representation of masculinity and femininity in a range of media texts; historical, sociological and economic contexts of gender ideology and cultural discourses such as motherhood, romance, the new woman; violence; women as creators of visual art and media texts; women as audience; gender and popular cultures.

Courses: BS50, ED50

Credit Points: 12 Contact Hours: 3 per week

#### ■ MJB108 CREATIVE SOUND & IMAGE

Creation and manipulation of sound and image in the communication context; fundamentals of sound and sound recording; dynamic range, distortion, bias, equalisation, multitracking and mixing; fundamentals of light and colour; additive and subtractive colour, animation, pixilation, computer graphics.

Course: BS50

Contact Hours: 3 per week Note: Workshops may involve a further 3 hours per week.

Credit Points: 12

#### ■ MJB109 AUSTRALIAN TELEVISION

Australian cultural identity before television; key myths in Australia: the Anzacs; crime and corruption as part of the Australian way of life; political and social crisis in Australia; the Vietnam experience; the search for an independent national identity; the relationship with Britain, USA and Japan.

Courses: BS50, ED50

Prerequisite: AAB052 or COB113 or MJB130

Credit Points: 12 Contact Hours: 3 per week

#### ■ MJB110 ASIAN & LATIN AMERICAN CINEMA

A concentrated study of two of the following national cinemas: China, Japan, Brazil and Cuba. Chinese cinema from the perspective of the new cinema which emerged from the film makers Chen Kaige, Wu Tianming, Zhang Yimou and Tian Zhuangzhuang. Japanese cinema in relation to the dominance of a small number of film companies in the 1930s, the impact of World War II, and the output of film makers such as Mizoguchi, Ozu, Kurosawa, Ichikawa, Oshima and Itami. Cuban cinema within the context of the Cuban revolution. Brazilian cinema and the various phases of Cinema Novo, the influence of the Tropicalist movement, parody, the carnivalesque and the function of Embrafilme.

Courses: BS50, ED50

Credit Points: 12 Contact Hours: 3 per week

#### ■ MJB113 FILM DRAMA PRODUCTION

Analysis of the process and effects of mediated communication; budgeting and production management; effective presentation methods; innovation and special media events; advanced production techniques. Students are required to work in crews to produce a significant film production.

Course: BS50

Prerequisite: MJB126 Contact Hours: 3 per week Note: Workshops may involve a further 3 hours per week.

Credit Points: 12

#### ■ MJB114 FILM & VIDEO BUSINESS

The role of the producer and executive producer in the packaging and financing of film and television production: corporate, training and documentary, grant films, features and mini-series; achieving balance in above-the-line, below-the-line and market-

ing costs. Sources of finance: corporate sponsors, corporate clients, investors, pre-sales, government grants, Film Finance Corporation; obtaining finance, insurance, completion guarantees, legal and accounting requirements; social and ethical issues; script breakdowns, budgeting and production management. **Course:** BS50

**Prerequisite:** MJB113 or 144 credit points in a degree program.

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJB115 SUPERVISED PROJECT FILM & TV

The completion of a significant film or video production. Seminar presentation and discussion of each stage of production throughout the semester with progress reports made each week including the viewing of rushes and cut material.

**Course:** BS50

**Prerequisite:** MJB114 and either MJB134 or MJB113

**Contact Hours:** 3 per week **Note:** Workshops may involve a further 3 hours per week.

**Credit Points:** 12

### ■ MJB118 FUNDAMENTALS OF PHOTOGRAPHY

Historical development of the photographic arts, the photographer's role in society, visual perception and design, photography as both art and craft; display photography, news photography, photo layout and design; the still camera, developing, printing and enlarging; creative use of camera and darkroom.

**Courses:** BS50, IF52, IT20

**Contact Hours:** 3 per week **Note:** Workshops may involve a further 3 hours per week.

**Credit Points:** 12

### ■ MJB120 NEWSWRITING

Students learn to think like journalists, to evaluate events for their potential news value, to interview and perform other reporting tasks and to write news stories; the evolution and theories of reporting.

**Course:** BS50

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJB121 REPORTING PRINCIPLES

The philosophical rationale behind the free flow of information and its use studied from practical and theoretical perspectives. The journalist's role in society defined and explored through the use of advanced research techniques involving Freedom of Information, property and company searches and the use of newspaper databases.

**Course:** BS50

**Prerequisite:** MJB120

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJB122 SUB-EDITING & LAYOUT

Introduction to the basic copy editing and design principles for newspapers. These skills are incorporated with the latest desktop publishing technology with specific reference to newspapers. Students use wire stories from Australian Associated Press, Reuters, Associated Press and Agence France Presse in news and feature page design exercises.

**Courses:** BS50, BS72

**Prerequisite:** MJB132 or MJP100

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJB124 FEATURE WRITING

Students use the principles of reporting to produce newspaper and magazine articles that profile personalities, or that treat things, processes, events and places to exploit their human-interest news value.

**Courses:** BS50, BS72

**Prerequisites:** MJB120, MJB121 or MJP100

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJB126 VIDEO PRODUCTION

The theory and practise of communication through video; criteria used in selection of the appropriate mediated form; principles of production; realising the intention of program, conversion of script to mediated form, roles and responsibilities, budgeting and production management; future directions in video; principles and practice of editing; pictorial composition, lighting, recording; use of special effects.

**Courses:** BS50, BS72, ED50, IS43, IT20

**Contact Hours:** 3 per week **Note:** Workshops may involve a further 3 hours per week.

**Credit Points:** 12

### ■ MJB127 NARRATIVE CONCEPTS

The inter-relationship between improved means: lenses, editing techniques, cameras and sound and how they increase the scope of film makers. Elements of the graphic arts, the novel, dramatic forms and social phenomena in the various national groupings; designed to assist students in choosing effective narrative styles for short films and especially dramas and dramatised documentaries by providing historical analysis of stylistic and technical developments of narrative film making.

**Courses:** BS50, BS72

**Contact Hours:** 3 per week **Note:** Workshops may involve a further 3 hours per week.

**Credit Points:** 12

### ■ MJB129 FILM & TELEVISION SCRIPTWRITING

Writing through analysis of features, documentaries and drama; indepth approach to writing through analysis of audiences and the industry; the writer's commitment to social responsibility; use of film in television and public relations; analysis of scripts and script requirements in contemporary markets.

**Courses:** BS50, BS72

**Prerequisite:** MJB127 or 96 credit points in a degree program.

**Contact Hours:** 3 per week **Note:** Workshops may involve a further 3 hours per week.

**Credit Points:** 12

### ■ MJB130 MEDIA TEXT ANALYSIS

The strategies applied in the analysis of texts are drawn from the following areas: new criticism and the traditional legacy; semiotics and structuralism/post-structuralism; marxism and contextual/historical approaches; feminism. The media texts chosen include films, television programs, newspaper articles and cartoons, photographs and advertisements. Some examples are also drawn from literature.

**Course:** ED50

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJB131 TELEVISION STUDIO/POST PRODUCTION

Television studio production and post production of news/current affairs, corporate, documentary and drama; the roles of producer, director, art director, camera and audio operator, vision mixer, floor manager, technical director, production assistant and on-line editor.

**Course:** BS50

**Prerequisites:** MJB126 and MJB129

**Contact Hours:** 3 per week **Note:** Workshops may involve a further 3 hours per week.

**Credit Points:** 12

### ■ MJB132 RADIO & TELEVISION JOURNALISM 1

The practical and theoretical aspects of radio and television media are studied through the examination of interviewing techniques. Students learn radio style and usage and the evaluation of television news bulletins through seminar workshops. Strong emphasis is placed on current affairs knowledge.

**Courses:** BS50, BS72

**Prerequisites:** MJB121, MJB126

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ MJB134 VIDEO DOCUMENTARY PRODUCTION

Orientation to the history and development of documentary film and video and of the role of editing in the production; affective elements, the scope and limitations of creative editing, evolution of an editing plan, correlation of image, sound, music, pace, and tone in the total design; editing practice in workshops throughout the semester using materials provided on tape; production of a documentary or corporate video.

**Courses:** BS50, BS72

**Prerequisites:** MJB126 and MJP100 or MJB129 or MJB124

**Contact Hours:** 3 per week **Note:** Workshops may involve a further 3 hours per week.

**Credit Points:** 12

### ■ MJB135 PROFESSIONAL MEDIA PRACTICE

An opportunity to observe, and gain insight into, the applications of theory to practice. The student is placed with an approved employer. The lecturer in charge of the unit obtains reports from the student at regular intervals. The student is required to complete a progressive assessment program. The student's result is determined on the basis of reports, continuous assessment and the employer's report.

**Course:** BS50

**Prerequisite:** MJB122 or MJB138 for BBus (JNL) majors; MJB113 or MJB134 for BBus (FTV) majors.

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ MJB137 PUBLIC AFFAIRS REPORTING

The role of the reporter in covering local, state, national and international politics, and major political issues are examined in depth. Topics include: the public's right to know, defamation restrictions, the constitution, federalism, defence, immigration and multiculturalism, health, welfare and education, the environment, science and industrial issues, economics and finance reporting.

**Course:** BS50

**Prerequisite:** MJB124

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ MJB138 RADIO & TELEVISION JOURNALISM 2

Philosophy and formulation of radio and television current affairs, anchor techniques, radio and television news production using computers.

**Courses:** BS50, BS72

**Prerequisite:** MJB132

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ MJB139 JOURNALISTIC ETHICS & ISSUES

The Australian Journalists' Association code of ethics is examined against the background of Australia's multicultural and pluralistic democracy; the evolution of the code, its philosophical underpinnings, how it compares to other national and international media codes and the general value of codes of ethics. Students will be placed in ethical dilemmas and asked to make decisions and justify their choices; the value of

deathknocks, privacy, defining off-the-record, handling leads and women in the media.

**Course:** BS50

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ MJB140 THE MEDIA & SOCIETY

A range of theoretical positions on mass media study; the political economy of the media; the role and meaning of advertising, the function of news; audience theory; media representation of different societal groups: gender, race, ethnicity, class, age; public access media; media ownership and control; the treatment of social issues in the media; textual and discourse analysis; popular culture of the media.

**Courses:** BS50, ED50

**Prerequisite:** MJB130 (or AAB052 or COB113)

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ MJB141 FILM LANGUAGE

The processes by which meaning is constructed in film; the question of form in film, how films, both narrative and non-narrative, may be structured; the production of meaning through a detailed examination of mise en scene: movement and placement of actors, setting, lighting, and costume, cinematography: including camera angle, distance, movement, animation, and special effects, editing, and sound.

**Courses:** BS50, ED50

**Prerequisite:** MJB130 (or AAB052 or COB113)

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ MJB143 AUSTRALIAN FILM

The trend towards period films and the construction of a national identity in the 1970s compared with earlier periods; the representation of women and its relationship with the growth of the women's movement; the depiction of Aborigines in recent films compared with earlier portrayals; images of masculinity; low budget features and independent film makers; images of adolescence in recent films.

**Course:** BS50

**Prerequisite:** MJB130 (or AAB052 or COB113)

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ MJB144 EUROPEAN CINEMA

The cinema of two of the following countries: Italy, Germany, France. Italy: the epic films of the silent period, Fascist films, neo-realism, and the work of Antonioni, Visconti, Rossellini, De Sica, Fellini, Olmi and Bertolucci. Germany: expressionism, Nazi cinema, the influence of the war on film content and production, and the New German cinema, including the work of Herzog, Fassbinder, Wenders, Scholondorf and Kluge. France: the work of Bresson, Resnais, Tati, Demy and Deville, the avant-garde movements of the 1920s, poetic realism, the New Wave, and post 1968 cinema.

**Courses:** BS50, ED50

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ MJB147 FILM GENRES

Genre conventions: the narrative patterns, styles, and iconographies which govern the production and reading of genre films; the evolution of genres in relation to social change; the relationship with the Hollywood studio system including economic and ideological constraints; the conventions of specific genres such as the western, the musical, horror and science fiction films, film noir, and the family melodrama. Three genres are selected for special study.

**Courses:** BS50, ED50

**Credit Points:** 12      **Contact Hours:** 3 per week



### ■ MJB149 FILM HISTORY

The development of the Hollywood classical continuity style; notions of realism and their relation to French poetic realism of the 1930s, neo-realism in post war Italy, and the kitchen-sink films of Britain in the 1960s; modernism; expressionism and film noir; the impact of wide-screen formats; the various 'new waves' of the 1950s and 1960s; and the impact of new technologies and information systems on film.

**Courses:** BS50, ED50

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJN100 ADVANCED MEDIA THEORY

This is the first unit of the media studies strand of the Master of Business (Communication). As a preliminary to undertaking research in media studies, students study contemporary media theory in detail, extending the overview of communication and media theory offered in Communication Theory 2. Topics include: contemporary political economy of the media, feminist cultural theory, textual and audience studies in media and cultural studies, post-modernism, and cross-cultural communication. These studies will find preliminary application in some relevant research areas.

**Course:** BS84

**Prerequisite:** MJP101 or equivalent

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJN101 ADVANCED MEDIA ANALYSIS

The theoretical strategies discussed in MJN100 are here given practical application in regard to textual practice. The more important theories of textual analysis: semiotics, structuralism, psychoanalysis, marxism and feminism are applied to a range of texts drawn from print media, including newspapers and magazines; film; television; and popular fiction.

**Course:** BS84

**Prerequisite or Co-requisite:** MJN100

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJN103 AUSTRALIAN MEDIA CONTEXTS

Analyses specific aspects of the interaction between mass media and the Australian cultural context; approaches this relationship through cultural studies methodologies: discourse analysis, semiotics, structuralism and theories of cultural production; explores at an advanced level the histories and contemporary configurations of Australian media industries; telecommunications, television, film, radio, advertising and the print media.

**Course:** BS84

**Prerequisite or Co-requisite:** MJN100

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJN105 COMPARATIVE JOURNALISM

Theoretical basis of different media systems throughout the world; debate over the dominance of world media by western, particularly anglo-american, countries and perceived need for a new world information and communication order; practical problems of foreign correspondents in different societies.

**Course:** BS84

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJN106 JOURNALISTIC FREEDOM & RESPONSIBILITY

Provides opportunities for in-depth studies of the historical, philosophical and theoretical foundations of journalism, the law of journalism and journalistic responsibilities. Students learn historiography and how to research the law. They present to the class

papers that might later become part of their theses on a historical issue on a legal issue or on an ethical issue.

**Course:** BS84

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJN107 NEWS MEDIA & INTERNATIONAL CONFLICT

Covers social contract and ethical theory in order to establish the rights and obligations of the citizen and government in Western liberal democracies; role of the media and free press in time of war or limited conflict; the wider ethical and theoretical issues behind reporting conflict, defence and defence theory to meet the military on equal terms, and the practicalities of international defence and war reporting.

**Course:** BS84

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJP100 JOURNALISTIC WRITING

Learning to think like journalists; to evaluate events for their potential news value; to interview and perform other reporting tasks and to write news stories. News values; reporting techniques; and journalistic writing; style and convention.

**Courses:** BS72, BS78

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJP101 COMMUNICATION THEORY 2

A systematic introduction to the critical and quantitative traditions of communication theory and research, with special emphasis on critical media theory. Applications to mass media, including television, film, radio, advertising, print, music.

**Courses:** BS61, BS72, BS84

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJP102 COMMUNICATION POLICY ENVIRONMENT

The public policy environment associated with communication practice and processes; current issues; the participating and critical views. A study of the public policy process in selected countries with special emphasis on Australian communication policy. Social, legal, political and technical environments; current and major issues, and the differing approaches to communication policy.

**Courses:** BS61, BS84

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MJP108 THE LITERATURE OF JOURNALISM

The body of 'classical' literature pertaining to the theories of journalism; identification of individual research interests.

**Course:** BS84

**Credit Points:** 12 **Contact Hours:** 3

### ■ MKB104 ADVANCED MARKETING RESEARCH TECHNIQUES

A market research project utilising concepts and techniques gained from market research.

**Course:** BS50

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKB105 PROFESSIONAL PUBLIC RELATIONS PRACTICE

Final year students work in public relations oriented organisations under supervision for 4 weeks. Students arrange for their own placements, with approval from lecturer responsible for the unit. Acceptance into this unit is subject to the approval of the Head of School, and/or major coordinator.

**Course:** BS50

**Prerequisites:** MKB123, MKB120. Students must have completed 5 semesters full-time or equivalent.

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ MKB106 PROFESSIONAL ADVERTISING PRACTICE

Final year students work in advertising oriented organisations under supervision for 4 weeks. Undergraduates arrange their own placements, which must be approved by lecturer responsible for the unit. Acceptance into this unit is subject to the approval of the Head of School, and/or major coordinator.

Course: BS50

Prerequisite: MKB126 and students must have completed 5 semesters full-time or equivalent.

Credit Points: 12 Contact Hours: 3 per week

#### ■ MKB107 MARKETING DECISION SUPPORT SYSTEMS

Advanced treatment of the theory and application of marketing decisions; the evaluation of marketing policy and strategy; consumer and organisational buying behaviour; market segmentation, demand assessment; product, price, promotion and distribution.

Course: BS50

Prerequisites: MKB141 and EPB109

Credit Points: 12 Contact Hours: 3 per week

#### ■ MKB112 RESEARCH METHODS

Traditions and methods in research, primary and secondary, qualitative and quantitative research.

Course: BS50

Credit Points: 12 Contact Hours: 3 per week

#### ■ MKB116 PRINCIPLES OF ADVERTISING

History of advertising; structure of the industry; functions and objectives; campaign planning; budgeting; elementary media planning; creative functions; elementary copywriting; principles of advertising.

Courses: BS50, BS72

Prerequisite: MKB140 (may be a co-requisite)

Credit Points: 12 Contact Hours: 3 per week

#### ■ MKB117 PUBLIC RELATIONS CAMPAIGNS

This is a specialist public relations unit examining strategies to relate an institution or individual to the community through comprehensive public relations programs; these may include fundraising, special events, and corporate sponsorships; designed to increase intellectual depth of understanding and give students practical experience in problem solving and the implementation of actual community relations programs for various organisations.

Course: BS50

Prerequisites: MKB120 and MKB133

Credit Points: 12 Contact Hours: 3 per week

#### ■ MKB118 ADVERTISING COPYWRITING

Target audience definition; copywriters and their functions, copy platforms; copy rationales; positioning; creative thought processes; advertising writing theories and styles; layout principles; newspaper, magazine and direct mail; outdoor copywriting; basic print production.

Courses: BS50, BS72

Prerequisites: MKB116, MKB112 or MKB151

Credit Points: 12 Contact Hours: 3 per week

#### ■ MKB119 ADVERTISING COPYWRITING - ELECTRONIC

Development of copy platforms and positioning; introduction to electronic media copy and storyboard; electronic copywriting; graphic production; production of radio and TV commercials; campaign development and presentation of campaigns.

Courses: BS50, BS72

Prerequisites: MKB118 and MJB126 (may be a co-requisite)

Credit Points: 12 Contact Hours: 3 per week

#### ■ MKB120 PUBLIC RELATIONS WRITING & EDITING

The function of media other than mass media. Public relations practitioners work in government, institutional and corporate environments which deal with internal and external audiences through a wide range of written materials as well as speechmaking. Writing and editing newsletters are covered through workshops. The role of the editor is emphasised to give an understanding of the importance of communication to achieve corporate objectives. Of equal importance is an understanding of techniques to write, edit and present speeches effectively.

Course: BS50

Prerequisite: MKB123

Credit Points: 12 Contact Hours: 3 per week

#### ■ MKB121 RETAIL ADVERTISING

Retail advertising; motivational techniques; national advertising; imagery and typography; advertising departments versus agencies; handbills, inserts, direct mail and catalogues; audience differentiation; measuring results; planning, copywriting and presentation of retail campaigns.

Courses: BS50, BS72

Prerequisite: MKB118 or MKB145 (may be a co-requisite)

Credit Points: 12 Contact Hours: 3 per week

#### ■ MKB122 ADVERTISING REGULATION & ETHICS

The various laws, codes and regulations which apply to advertising in Australia; the codes of ethics of the different institutions of advertising; recent and current examples of contentious advertisements; application of the principles and ethical standards covered.

Courses: BS50, BS72

Prerequisite: MKB116

Credit Points: 12 Contact Hours: 3 per week

#### ■ MKB123 PUBLICATION MANAGEMENT

The requirements for communicating in print and managing this process. It analyses the steps involved in design and production, focusing on management and liaison skills. The unit offers students desktop publishing skills which are required for assignments, and the scope to produce a brochure for a client.

Courses: BS50, BS72

Prerequisite: MKB129

Contact Hours: 3 per week Note: Students are required to undertake an additional 20 hours of desktop publishing training during the semester.

Credit Points: 12

#### ■ MKB124 PUBLIC RELATIONS PRINCIPLES

The concepts and practice of public relations; the role and functions of public relations, its history, career paths, professional/ethical responsibilities, corporate public relations, public relations consultancies, the process of public relations, concepts of public opinion, persuasion and communication strategies. This unit offers a theoretical foundation for students to equip them to better understand and practise the public relations skills emphasised in later units.

Courses: AA21, BS50, BS72, IS43

Credit Points: 12 Contact Hours: 3 per week

#### ■ MKB125 MEDIA PLANNING

Costing and scheduling media, qualitative and quantitative factors affecting media selection and use, market targeting, researching the media plan, planning media strategy, coordination, media options, concepts of media decision making, comparisons, trends, media and the computer.

Courses: BS50, BS72

Prerequisite: MKB116

Credit Points: 12 Contact Hours: 3 per week

**■ MKB126 ADVERTISING MANAGEMENT**

Theories of mass communication, psychology, empirical research and market planning in the context of the advertising management function.

**Courses:** BS50, BS72, IF52

**Prerequisites:** MKB118, MKB122 and MKB125 or MKB116 and 4 marketing units.

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ MKB127 ADVANCED ADVERTISING**

Expansion and addition of theoretical perspectives and skills gained in the prerequisite unit. There is heavy emphasis on application of these perspectives to solving advanced advertising problems and the use of both basic and advanced skills in these solutions.

**Course:** BS50

**Prerequisite:** MKB118 or MKB125

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ MKB128 DIRECT RESPONSE ADVERTISING**

Principles and practice of direct response advertising in its various forms; ethical considerations against a background of Australian societal norms.

**Courses:** BS50, BS72

**Prerequisite:** MKB126 or MKB157

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ MKB129 PUBLICITY & PROMOTION – PRINT**

This unit focuses on communication with the print media. Students are given the background, techniques and skills needed to work with newspapers, magazines and trade press. Producing and evaluating communication materials such as news releases, features, and media kits form the core of the unit. Guest lecturers join the class to discuss aspects of media relations, writing style and publicity planning.

**Courses:** BS50, BS72

**Prerequisites:** MJB120, MKB124

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ MKB130 PUBLICITY & PROMOTION – ELECTRONIC**

Production skills in video as they apply to public relations in organisations. Students produce a complex video news magazine for a client organisation. This includes scripting, presenting, studio management, special effects, graphics, field operation of video equipment and video editing, techniques for producing community service announcements.

**Course:** BS50

**Prerequisites:** MJB126, MKB129

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ MKB131 ADVERTISING CAMPAIGNS**

Students draw together and apply all of the professional knowledge and skills gained throughout their degree studies. Application of this to problems or cases set by lecturers and practitioners. The accent is on development and application.

**Course:** BS50

**Prerequisite:** MKB126

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ MKB132 GOVERNMENT & FINANCIAL RELATIONS**

Standards of social responsibility and public accountability in organisations and society. Through the presentation of case studies in financial and government relations, students develop an understanding of problem definition, the planning and implementing of public relations programs, and the communication strategies designed to solve specific problems.

**Courses:** BS50, BS72

**Prerequisites:** EPB124, MKB123

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ MKB133 PUBLIC RELATIONS CONSULTING & MANAGEMENT**

The management of public relations practice including research, budgets, consultancies and people. It is tailored for students who have completed most of the public relations strand and is designed as advanced level preparation for employment in the field. The unit offers input from specialist guest lecturers who are practitioners/specialists in a particular area.

**Course:** BS50

**Prerequisite:** MKB123

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ MKB134 BUSINESS FORECASTING**

The theory and application of quantitative forecasting models including smoothing techniques, CDA and auto-projective; causal models in sales and advertising; qualitative models including Delphi.

**Course:** BS50

**Prerequisites:** EPB109 and MKB108

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ MKB136 MARKETING LOGISTICS**

Distribution strategies and techniques and the activities that facilitate product flow: distribution and level strategies; inventory costs and control; efficient raw product mix and the application of linear programming; transshipment models; allocation efficiency; customer queuing.

**Course:** BS50

**Prerequisites:** MKB140, EPB109 or MKN106

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ MKB137 COMPUTER APPLICATIONS IN MARKETING**

Techniques in market research; univariate and bivariate analysis; nonparametric statistics; ANOVA; the multivariate techniques common to marketing research; dependence methods such as multiple regression, MANOVA, multiple discriminant analysis and conjoint measurement; interdependence methods including factor analysis, cluster analysis and multidimensional scaling.

**Course:** BS50

**Co-requisite:** MKB151

**Prerequisites:** EPB109 and MKB140

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ MKB140 PRINCIPLES OF MARKETING**

The role of marketing and its importance in contemporary organisations. Introduction to marketing decision areas: the marketing concept; understanding consumer behaviour and preferences, marketing research and marketing information systems; market segmentation and planning, strategy and control; the components of the marketing mix, viz. product planning, management and development; pricing methods and strategies; promotion including personal selling, advertising, publicity, sales promotion, distribution.

**Courses:** BS50, BS72, ED23, IF52, IF53, IS43, IT20

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ MKB141 MARKETING MANAGEMENT**

Contemporary marketing concepts linked to strategic applications; market segmentation, product positioning, product portfolio analysis, marketing strategies in key areas such as product development, promotion, distribution and pricing.

**Courses:** BS50, IF53

**Prerequisite:** MKB140 or MKN106

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ MKB142 CONSUMER BEHAVIOUR

Internal and external influences on the individual consumer including motivation, perception, learning, attitudes and social class, culture, reference groups, communicating and market segmentation, and the consumer decision process.

**Courses:** BS50, IF53

**Co-requisite:** MKB140

**Prerequisite:** MKB140 or MKN106

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKB143 EXPORT MANAGEMENT

The role of government including need to export; export incentives; methods of exporting, including agents and merchants, consultants and overseas organisations; bases for export sales, including terminology and exporter's responsibilities; export documentation; finance of export trade, including methods of payment, finance for export transactions and foreign exchange transactions; export finance insurance corporation; modes of international transport; marine insurance; quoting for export, including pricing policies, export costs, marketing and packaging and quotations. A major case study is included as part of the study program.

**Courses:** BS50, IF53

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKB144 SALES MANAGEMENT

The range of analytical activities performed in the design and management of the selling function of the organisation. These activities include sales forecasting, sales force size, territory management, selling logistics, sales force motivation, sales negotiation, sale ethics.

**Course:** BS50

**Prerequisite:** MKB140 or MKN106

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKB145 RETAILING MANAGEMENT

Introduction to the techniques, concepts and analytical issues involved in retailing management. The dynamics of the retail system are examined from a strategic marketing viewpoint and include a basic appreciation of retail customer behaviour and retail information needs. The analysis of store location and the evaluation of retail trade areas are given detailed attention along with store layout and design. Elements of merchandising, franchising and promotion are also examined.

**Course:** BS50 **Prerequisite:** MKB140 or MKN106

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKB146 SERVICES MARKETING

The special characteristics of services and possible strategies to deal with those characteristics; the nature and classification of services; the differences between services and products and their implications for the marketing/customer mix and for marketing strategy; the relationship of the service organisation with its customers; the management of product support services; the concept of productivity for services, including the management of demand and supply; the search for service quality and consistency, including the issue of standardisation versus customisation.

**Courses:** BS50, IF53

**Prerequisite:** MKB140 or MKN106

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKB147 RETAIL MERCHANDISING

Development of a strong grounding in those retailing activities that comprise the merchandising function of the different types of retail stores including the distributors of durable consumer goods from the large

supermarket or department store to the smallest corner store. Topics associated with the merchandising of retail products: forecasting customer demand, planning, promotions, as well as the managerial control of buying and stocking merchandise.

**Course:** BS50 **Prerequisite:** MKB140 or MKN106

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKB148 MARKETING DECISION MAKING

Examines the kinds of decisions marketing practitioners have to deal with in their daily business activities. These areas include: sales forecasting, market analysis product planning, pricing, promotion distribution and other related areas. Decisions are viewed from a predominantly quantitative perspective with emphasis on computer models and spreadsheets as the vehicles for their application.

**Courses:** BS50, IF53

**Prerequisites:** MKB140, MKN106 or ISB892

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKB149 INTERNATIONAL MARKETING

Nature and practice of international marketing. Assumes a familiarity with general marketing management and builds on this to develop insight into and understanding of the peculiar nature of international marketing management and the problems of marketing within different national markets. The unit is managerial in the sense that it focuses on problems and decisions facing managers of international marketing in business enterprises.

**Courses:** BS50, IF53

**Prerequisite:** MKB140 or MKN106

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKB151 MARKETING RESEARCH

Problem formulation; research design and sources of information; data collection; analysis and interpretation of data; the marketing research report and presentation.

**Courses:** BS50, IF53

**Prerequisite:** MKB141 or MKN106

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKB152 PROMOTIONAL STRATEGY

The marketing promotional mix and its relationship with the marketing mix, the structure of marketing communications and their environmental framework of promotion practice; the media of marketing communications; the planning and control.

**Course:** BS50 **Prerequisite:** MKB140 or MKN106

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKB153 PROFESSIONAL MARKETING PRACTICE

With the approval of the lecturer, students undertake a preferred study program within the marketing framework, eg. some particular area of the marketing mix. This requires students to undertake a project or internship with a suitable company, where they actively work on a part-time basis. The program is aligned as closely as possible to the preferred area of study. Students are required to submit a number of reports reflecting the theoretical concepts learned and the application to their job experience.

**Courses:** BS50, IF53

**Prerequisite:** MKB151

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKB155 STRATEGIC MARKETING

The capstone of the marketing course; it reviews the state of the art in marketing strategy and current thoughts and concepts in marketing strategy formulation and focuses on the formulation of marketing

strategy, a task undertaken in most companies at the strategic business unit level.

**Courses:** BS50, IF53

**Prerequisite:** MKB141 or MKN106

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKB157 PRINCIPLES OF DIRECT MARKETING

The underlying principles, standards and practice of direct marketing; customer requirements; acquisition and servicing; strategic and tactical planning; database marketing; list procurement and use; cost and profit considerations; product delivery.

**Courses:** BS50, BS72

**Prerequisite:** MKB140 (may be a co-requisite)

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKB158 TELEMARKETING

As direct marketing is a growth area it is essential that students understand the fundamentals of effective telemarketing. There is heavy emphasis on practical work: how to set up a telemarketing centre and how to conduct a structured telemarketing campaign. Includes lectures by practitioners and field visits.

**Course:** BS50

**Prerequisite:** MKB157

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKB159 DIRECT MARKETING CAMPAIGNS

Students examine and analyse contemporary direct marketing and integrated marketing practice and present their findings in seminars. They plan and execute direct marketing campaigns as briefed by practitioners. Recommendations are presented to those practitioners for comment. Skills in appropriate areas are advanced to fully operative level.

**Course:** BS50

**Prerequisite:** MKB158

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKN100 SEMINARS IN MARKETING THEORY & RESEARCH METHODS

A grounding in recent developments in marketing theory and in research methods; topics covered include: marketing thought and theories, evaluating marketing theories, designing research studies and the thesis, research proposals.

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKN101 SEMINARS IN BUSINESS FORECASTING

Exponential and moving average techniques; decomposition models; seasonal regression models; stochastic models; stationary and non-stationary models; model identification and estimation; diagnostic checking; transfer functions.

**Courses:** BS61, BS85

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKN102 BUSINESS LOGISTICS

The integrated physical distribution management concept; customer service; inventory policy, analysis and decision making; distribution channels, design and strategy; transport systems and model choice; modelling the facility location, optimising size, siting and network; logistics and pricing; organisational implementation of marketing logistics concepts.

**Courses:** BS61, BS85

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKN103 SEMINARS IN MARKETING MODELLING

Introduction to advanced simulation work in market structures and the impact of influencing variables.

**Courses:** BS61, BS85

**Prerequisite:** MKN100

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKN105 DECISION SUPPORT SYSTEMS

Timely and accurate information is a management resource, and computers can process much of this information to augment and extend a manager's capacity; provides an understanding of the importance, variety and value of both quantitative and qualitative decision support systems, including a significant emphasis on computer-based information systems such as data bases and expert systems from the point of view of systems users rather than of specialist system analysis.

**Course:** BS81

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKN106 MARKETING METHODS & PRACTICES

The role of marketing and how marketing fits into the strategic processes of firms and institutions; key marketing decision areas including the marketing concept, marketing research, consumer behaviour, marketing segmentation and positioning, product policy, pricing, promotion and distribution.

**Courses:** BS70, BS78, BS81

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKN107 SEMINARS IN MARKETING MANAGEMENT

An advanced study of marketing, marketing systems and market management decision processes within the contemporary structure of social, cultural, political, economic, business and organisational environments. Advanced marketing theory from both strategic and tactical perspectives with emphasis on the relationship between marketing and corporate policy as well as both the internal and external social and behavioural and motivational factors. Marketing issues associated with both profit and non-profit organisations and the relevance of marketing theory to these institutions, including the developing area of international marketing.

**Courses:** BS61, BS83

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKN108 SEMINARS IN CONSUMER BEHAVIOUR

Consumer behaviour models and the influences of psychological and behavioural variables.

**Course:** BS85

**Prerequisite:** MKB142

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKN109 PRODUCT INNOVATION & DEVELOPMENT

Formal innovation techniques and the development process through to new product initiation.

**Courses:** BS61, BS85

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKN110 SEMINARS IN STRATEGIC MARKETING

Students examine the theoretical concepts in strategy formulation and develop applied models. The development of strategic marketing plans for organisations.

**Course:** BS85

**Prerequisite:** MKN107

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ MKN111 MARKETING FOR QUALITY MANAGEMENT

Introduction to advanced marketing theories and practice and the need for a focus on marketing and quality management.

**Courses:** BS85, BS86

**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ MKN112/1-4 THESIS

Synthesis and applications of studies in the course. Topic may be taken from any aspect of marketing. Formulation of thesis undertaken in conjunction with supervisor and other academic staff.

**Courses:** BS61, BS84

**Credit Points:** 48

#### ■ MKN113/1-8 THESIS

Same as for MKN112/1-4. This unit forms the final two thirds of the masters thesis.

**Course:** BS85

**Prerequisite:** MKN112/1-4

**Credit Points:** 96

#### ■ MKP100 FUNDRAISING PRINCIPLES

Fundamentals of fundraising; preparation of the case statement; planning methods; the various techniques of fundraising. Introductory segments on public relations, advertising, marketing and management. Topics include: philosophy of fundraising, its role in society, budget, fundraising, gift and capital campaigns, planned giving, researching and establishing prospect bases, procedures of solicitation, team building of boards and volunteers, role of foundations.

**Courses:** BS72, BS78

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKP101 FUNDRAISING CAMPAIGNS

Practical experience in planning and implementing a fundraising campaign: planning a complete fundraising program; defining relevant constituencies and pinpointing appropriate vehicles for linking to these target markets; budgeting and managing campaign elements; working successfully with boards and volunteers where appropriate; evaluating fundraising efforts. Students undertake a group project in the form of the analysis of a fundraising program. Topics include: strategic planning, management, financial issues, ethics and evaluation techniques.

**Courses:** BS72, BS78

**Prerequisite:** MKP100

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKP102 ENTREPRENEURSHIP

This unit is a capstone to the course for Business Administration students. It encompasses the use of entrepreneurial management styles and creative business planning as a strategic management tool. Students will be required to develop and write a business plan based on an entrepreneurial idea, incorporating a hands on practical approach.

**Courses:** BS73, ED23

**Prerequisite:** Four postgraduate business units

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKP107 MARKETING FOR ARTS ADMINISTRATORS

This unit provides students of arts administration with an understanding of the principles of promotion, sponsorship, advertising, communication and marketing in the arts environment and the skills to develop marketing plans and campaigns for arts organisations.

**Course:** BS73 **Prerequisite:** MKP108 or MKN106

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKP108 ARTS ADMINISTRATION & SOCIETY

Arts administration in the context of the national and international community; social, political, cultural and economic influences; government arts policies and funding processes; organisational structures and strategic planning in the arts; community, multicultural and regional arts; current research and practices in arts administration.

**Course:** BS73

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ MKP109 THE ARTS INDUSTRY

The framework of the arts as an industry; operational procedures; financial management; arts and the law; industrial relations in the arts; the use of the media; computer applications; business and volunteer support; work secondment case study.

**Course:** BS73

**Prerequisite:** MKP108

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ NSB114 CLINICAL PRACTICE 1A

The acquisition of skills which are fundamental to nursing practice; communication skills, health assessment skills and selected technical skills in both University (on-campus) and clinical (off-campus) laboratories. Clinical laboratory experiences take place in a variety of settings which include various types of health care facilities, community facilities, domiciliary nursing services, occupational health services, disability services and outpatients clinics.

**Course:** NS40

**Co-requisite:** NSB151

**Credit Points:** 8

**Contact Hours:** 3 per week

#### ■ NSB115 CLINICAL PRACTICE 1B

Provides students with the opportunity to consolidate the skills they have acquired during the preceding clinical unit, and aims at achievement of a specific level of clinical competence. Learning experiences are conducted in the clinical (off-campus) laboratory, and settings are as previously described.

**Course:** NS40

**Co-requisite:** NSB114

**Contact Hours:** 60 per 2 week block following semester

**Credit Points:** 8

#### ■ NSB150 NURSING MANAGEMENT

This unit provides nurses with the opportunity to examine theory and processes that are relevant to the management of nursing care. Students will study selected management and leadership theories from a variety of perspectives. Management processes: planning, organising, staffing, directing, controlling.

**Course:** NS48

**Credit Points:** 8

**Contact Hours:** 3 per week

#### ■ NSB151 FOUNDATIONS OF NURSING PRACTICE 1

An introduction to the major concepts which are fundamental to nursing practice. Topics include: the nature of individuals, families and communities, the impact of the environment on health, the concept of health, and the relationship between nursing and health care. The significance of a conceptual approach to nursing practice is explored.

**Course:** NS40

**Credit Points:** 8

**Contact Hours:** 3 per week

#### ■ NSB152 FOUNDATIONS OF NURSING PRACTICE 2

Further development of the concepts of people, environment, health and nursing in order to facilitate an understanding of the theoretical basis of nursing practice. Topics include: human needs from a holistic perspective, human resources which can be utilised in the attainment of health, the roles of the nurse as a clinician, patterns of nursing care delivery, health care in Australia, and the concept of the multidisciplinary health care team.

**Course:** NS40

**Prerequisite:** NSB151

**Credit Points:** 8

**Contact Hours:** 3 per week

#### ■ NSB201 PRINCIPLES OF PATIENT CARE

Emphasises the ethical, legal and clinical accountability of the radiographer for safe patient care; aims to develop in radiography students an awareness of

their responsibilities in protecting patients and promoting their well-being.

Course: PH38

Credit Points: 4 Contact Hours: 2 per week

### ■ NSB207 NURSING & THE INDIVIDUAL

Designed to deepen and broaden the clinical decision making skill base of students who already have a foundation in nursing and related sciences from previous studies; explores the significance of conceptual models for clinical decision-making, provides physical and psychosocial assessment skill practice, explores the concept of nursing diagnosis and associated core planning, and highlights the use of research in support of clinical decisions.

Course: NS48

Credit Points: 8 Contact Hours: 3 per week

### ■ NSB214 CLINICAL PRACTICE 2A

Provides students with the opportunity to continue the development of skills which are fundamental to nursing practice. Students practise applied communication skills, nursing diagnosis and care planning skills, and further selected technical skills in both University (on-campus) and clinical (off-campus) laboratories. The clinical laboratory experiences in this unit take place in a variety of settings which include hospitals, nursing homes and palliative care facilities.

Course: NS40

Co-requisites: NSB114, NSB115, NSB151, NSB152

Credit Points: 8 Contact Hours: 3 per week

### ■ NSB215 CLINICAL PRACTICE 2B

Provides students with the opportunity to consolidate the skills which they have acquired during the preceding units; aims at the achievement of an increasing level of competence in clinical situations. The learning experiences are conducted in the clinical (off-campus) laboratory and the settings are as described for the preceding clinical practice unit.

Course: NS40

Co-requisites: NSB114, NSB115, NSB214

Contact Hours: 60 per 2 week block following semester

Credit Points: 8

### ■ NSB301 NURSING & BIOPHYSICAL HEALTH 1

Effects of selected pathophysiologic processes on meeting human needs; topics include: assessment and nursing diagnosis of gas exchange, circulation, hydration, physical comfort and safety problems; and independent and collaborative strategies designed to promote, maintain and/or restore health.

Course: NS40 Prerequisites: NSB151, NSB152

Credit Points: 8 Contact Hours: 3 per week

### ■ NSB302 NURSING & MENTAL HEALTH 1

Theories, concepts and models which provide the basis for understanding the individual and their mental health needs, and aims to provide a framework for nursing care which acknowledges the importance of promoting, maintaining and restoring mental health. It addresses contemporary concepts of mental health and mental illness; biological and sociocultural factors which can influence mental health and mental health problems; mental health assessment; and strategies for mental health promotion.

Course: NS40 Prerequisites: NSB151, NSB152

Credit Points: 8 Contact Hours: 3 per week

### ■ NSB304 NURSING & CULTURE

Socio-structural, behavioural, lifestyle and genetic factors play a large part in the determination of health

status in contemporary Australia; aims to develop an understanding, acceptance and appreciation of culture such that students are better able to provide people-centred care within a multicultural health care context. Topics include: nature of culture and behavioural practices of societies, fundamental aspects of socio-anthropological and epidemiological methodology, cultural nature of contemporary Australian society, health policy and ethnic sub-cultural diversity, and cultural beliefs, activities, values and behaviour regarding selected health-related practices.

Courses: NS40, NS48

Credit Points: 8 Contact Hours: 3 per week

### ■ NSB308 NURSING & MENTAL DISORDER

Mental disorder is common and extensive across Australia, and affects all age and social groupings. This unit provides a framework for addressing the important issues and principles associated with the understanding of the interrelatedness of individual, family, community and environment in the development, maintenance and resolution of mental disorders. Topics which include the psychodynamics of normal and abnormal behaviour, diagnosis and presentation of common mental disorders, psychobiology, psychopharmacology, nursing intervention and research in the aetiology and treatment of mental disorders and mental health legislation.

Courses: NS40, NS48

Credit Points: 8 Contact Hours: 3 per week

### ■ NSB349 COUNSELLING & CRISIS MANAGEMENT

This unit will provide an awareness of the basic theories and principles of crisis intervention methodology, and will focus on the role of nurses in counselling clients who are experiencing difficulties in their ability to deal with situations in which they find themselves. Topics to be addressed include major theoretical and conceptual perspectives of counselling; the process of change; counselling in a group context; typology of crises; and crisis management.

Course: NS48

Credit Points: 8 Contact Hours: 3 per week

### ■ NSB350 HEALTH EDUCATION IN NURSING

This unit is designed as a foundation for the exploration of the theoretical bases of education, including concepts and issues within educational research. Topics to be explored include historical perspectives of educational developments; educational research; educational theories, their utilisation; and client education in a health care context.

Course: NS48

Credit Points: 8 Contact Hours: 3 per week

### ■ NSB360 CLINICAL PRACTICE 3A/BH

### ■ NSB370 CLINICAL PRACTICE 3A/MH

Students develop a range of skills which are associated with the nursing care of people experiencing biophysical or mental health dysfunction. Students practise the application of problem solving skills, selected technical and process skills and organising skills in both University (on-campus) and clinical (off-campus) laboratories. The clinical laboratory experiences in this unit are undertaken in settings which include hospitals and palliative care facilities or psychiatric-mental health facilities.

Course: NS40

Co-requisites: NSB214, NSB301, NSB215, or NSB302

Credit Points: 8 Contact Hours: 3 per week

■ **NSB361 CLINICAL PRACTICE 3B/BH**

■ **NSB371 CLINICAL PRACTICE 3B/MH**

See NSB215.

**Course:** NSB40    **Co-requisite:** NSB360 or NSB370  
**Contact Hours:** 60 per 2 week block following semester

**Credit Points:** 8

■ **NSB401 NURSING & BIOPHYSICAL HEALTH 2**

Further develops an appreciation of the effects of selected pathophysiological processes on the meeting of human needs. Topics addressed include the assessment and nursing diagnosis of elimination, mobility, nutrition, skin integrity and sleep/rest problems along with independent and collaborative strategies designed to promote, maintain and/or restore health.

**Course:** NS40

**Credit Points:** 8    **Contact Hours:** 3 per week

■ **NSB402 NURSING & MENTAL HEALTH 2**

Expansion of the application of nursing knowledge and research about mental health to the provision of nursing care to clients with mental health problems. It provides, at an advancing level, a theoretical foundation for mental health nursing practice with a focus on diagnostic reasoning and intervention strategies to promote mental health and wellbeing. Topics include: theories of stress and adaptation; assessment, diagnosis and intervention in situations of developmental disorder, selected organic and non-organic mental syndromes and crisis intervention.

**Course:** NS40    **Prerequisites:** NSB151, NSB152  
**Credit Points:** 8    **Contact Hours:** 3 per week

■ **NSB406 NURSING & THE FAMILY**

Family nursing practice recognises the substantial impact families can have on the health of individuals within the family unit, and upon society as a whole. An introduction to the knowledge base which underpins family nursing practice, and facilitates the development of decision-making skills in this area. Topics include: nature of the family unit; family development; models of the family; and families with particular situational or developmental needs.

**Courses:** NS40, NS48

**Credit Points:** 8    **Contact Hours:** 3 per week

■ **NSB407 NURSING & THE COMMUNITY**

Community health is an important focus for nursing practice; provides an introduction to fundamentals of community nursing practice and facilitates development of decision-making skills in this area. Topics include: models of community; community development; perspectives of community health; application of epidemiological principles to community health; community groups with particular health needs; strategies for promotion of community health.

**Courses:** NS40, NS48

**Credit Points:** 8    **Contact Hours:** 3 per week

■ **NSB450 READINGS IN NURSING**

This unit reflects the specialised expertise of staff and the interests of students. It includes the preparation of a summative review of relevant, current literature relating to a selected area of scholarship or research, including reports, monographs and journal articles.

**Course:** NS48

**Credit Points:** 8    **Contact Hours:** 3 per week

■ **NSB460 CLINICAL PRACTICE 4A/BH**

■ **NSB470 CLINICAL PRACTICE 4A/MH**

Provides further opportunity for students to develop skills which are associated with the nursing care of

people experiencing biophysical or mental health dysfunction. Students practise the application of problem-solving skills, technical skills and health teaching skills in both the University (on-campus) and clinical (off-campus) laboratories. The clinical laboratory experiences take place in settings which include hospitals, palliative care facilities, and disability services or psychiatric-mental health facilities.

**Course:** NS40

**Co-requisites:** NSB214, NSB401, NSB215 or NSB402

**Credit Points:** 8    **Contact Hours:** 3 per week

■ **NSB461 CLINICAL PRACTICE 4B/BH**

■ **NSB471 CLINICAL PRACTICE 4B/MH**

See NSB215.

**Course:** NS40    **Co-requisite:** NSB460 or NSB470

**Contact Hours:** 60 per 2 week block following semester

**Credit Points:** 8

■ **NSB504 PROFESSIONAL ISSUES IN NURSING 1**

Nursing as a profession and the implications for nursing practice. Topics include: the nature of professions; the development of standards; quality assurance strategies; the significance of continuing education; nursing authorities and organisations; influences on the development of nursing as a profession; the future of professional nursing.

**Courses:** NS40, NS48

**Credit Points:** 8    **Contact Hours:** 3 per week

■ **NSB505 PROFESSIONAL ISSUES IN NURSING 2**

The contemporary development of nursing as a profession is closely linked with an increasing focus on theory and theory development in nursing. This unit is designed to facilitate an understanding of the role that nursing theory plays within the discipline. Topics include: nature of nursing theory; the development of theory in nursing, and factors which have been influential in this process; and an overview of nursing theories and models including selected applications to practice.

**Courses:** NS40, NS48

**Credit Points:** 8    **Contact Hours:** 3 per week

■ **NSB560 CLINICAL PRACTICE 5A/BH**

■ **NSB570 CLINICAL PRACTICE 5A/MH**

Provides the opportunity for students to develop a range of clinical skills associated with the Health Strand which was not chosen for study during the second year of the program. Students practise the application of problem-solving skills; selected technical skills; organising, health education, client advocacy skills in both the University (on-campus) and clinical (off-campus) laboratories. The clinical laboratory experiences in this unit are undertaken in settings which include hospitals and palliative care facilities or psychiatric-mental health facilities.

**Course:** NS40    **Co-requisites:** NSB214, NSB215

**Credit Points:** 8    **Contact Hours:** 3 per week

■ **NSB561 CLINICAL PRACTICE 5B/BH**

■ **NSB571 CLINICAL PRACTICE 5B/MH**

Provides students with the opportunity to consolidate skills which they have acquired in previous units, particularly NSB560/NSB570. It aims at the achievement of an increasing level of competence in clinical situations. The learning experiences are conducted in



clinical (off-campus) laboratories, and the settings are as described for the preceding clinical practice units.  
**Course:** NS40 **Co-requisite:** NSB560 or NSB570  
**Contact Hours:** 60 per 2 week block following semester  
**Credit Points:** 8

#### ■ NSB601 RESEARCH IN NURSING PRACTICE

An understanding of components of the research process is essential in the development of an informed approach to contemporary nursing practice; topics include: significance of research in nursing; process of research; and appraisal of research reports.

**Courses:** NS40, NS48

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ NSB660 CLINICAL PRACTICE 6A/BH

#### ■ NSB661 CLINICAL PRACTICE 6B/BH

#### ■ NSB670 CLINICAL PRACTICE 6A/MH

Provides students with the opportunity to develop further clinical skills associated with the Health Strand studied in the third year of the program. Students practise the application of problem-solving skills; selected technical skills; and organising, health education, advocacy and counselling skills in both the University (on-campus) and clinical (off-campus) laboratories. The clinical laboratory experiences in this unit are undertaken in settings which include hospitals, palliative care facilities and/or psychiatric – mental health facilities.

**Course:** NS40 **Co-requisites:** NSB214, NSB215  
**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ NSB671 CLINICAL PRACTICE 6B/MH

See NSB215.

**Course:** NS40

**Co-requisite:** NSB614

**Contact Hours:** 60 per 2 week block following semester

**Credit Points:** 8

#### ■ NSN102 CONCEPTS FOR ADVANCED CLINICAL NURSING

In recent years there has been significant development in the role of the professional nurse as an advanced-level planner and provider of care. At this level, it is expected that nurses show a high degree of competence with an independent problem-solving approach to client care and are able to interact widely on intra-, inter- and extra-professional levels. Therefore, this unit is designed to enhance knowledge and skills involved in the selection, provision and communication of contemporary nursing care.

**Course:** NS62

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ NSN103 RESEARCH METHODS IN NURSING

Students develop skills in research design and data collection processes related to clinical phenomena. The data analysis component emphasises statistical techniques applicable to nursing research design.

**Courses:** NS62, NS85

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ NSN104 PROFESSIONAL ISSUES IN NURSING

Students expand their concept of the social significance of nursing as well as analyse the profession's accountability and responsibility to health care at local, national and international levels. Major topics include: theoretical and ideological perspectives of professional regulation; nursing's ap-

proach to professionalisation and the involvement of national and international nursing organisations in health policy formulation. Students are given the opportunity to consider the influence of other disciplines and the historical environment on the development of ideas in nursing theory.

**Course:** NS62

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ NSN105 MEDICAL/SURGICAL NURSING 1

Advanced specialisation in medical-surgical nursing requires the ability to deal critically and effectively with particular clinical phenomena so that the health of the individual, family or community is promoted; focuses on the individual as client, provides opportunities for students to enhance previous clinical knowledge and skills so that excellence in nursing care may be realised.

**Courses:** NS62, NS85

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ NSN106 MEDICAL/SURGICAL NURSING 2

Advanced specialisation in medical-surgical nursing requires the ability to deal critically and effectively with particular clinical phenomena so that the health of the individual, family or community is promoted; adds a family focus to that of the individual. It provides opportunities for students to enhance previous clinical knowledge and skills so that excellence in nursing care may be realised.

**Courses:** NS62, NS85

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ NSN108 PRIMARY HEALTH CARE NURSING 1

Advanced specialisation in primary health care nursing requires the ability to critically analyse issues and trends affecting the health and lifestyle of individuals, families and communities; focuses on the individual as client and provides the foundation for the primary health care nursing stream by exploring a broad range of factors which together define the parameters of primary health care practice.

**Courses:** NS62, NS85

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ NSN109 PRIMARY HEALTH CARE NURSING 2

Advanced specialisation in primary health care nursing requires the ability to critically analyse issues and trends affecting health and lifestyle of individuals, families and communities; focuses on family as client and provides opportunities to enhance previous clinical knowledge and skills through application and evaluation of appropriate health education strategies.

**Courses:** NS62, NS85

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ NSN111 PSYCHIATRIC/MENTAL HEALTH NURSING 1

Advanced clinical practice in psychiatric-mental health nursing requires the ability to deal critically and effectively with interpersonal processes and strategic therapeutic use of self to restore, maintain, promote and prevent mental and psychiatric disability. Particular attention is given to interpersonal dynamics and behaviour as basic processes by which nursing assessment and intervention occur; focuses on the individual as client, provides opportunities to enhance clinical knowledge and skills through the application and testing of interpersonal theory and therapeutics.

**Courses:** NS62, NS85

**Credit Points:** 12 **Contact Hours:** 3 per week

**■ NSN112 PSYCHIATRIC/MENTAL HEALTH NURSING 2**

Particular attention is given to family dynamics and behaviour as basic processes by which nursing assessment and intervention occur. By focusing on the family as client, students enhance previous clinical knowledge and skills through the application and testing of family theory and therapeutics.

**Courses:** NS62, NS85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ NSN114 MIDWIFERY 1**

Philosophies of advanced midwifery practice; the role of the midwife; formal and informal structures that influence the practice of midwifery; strategies that facilitate the role of the midwife; family theory and concepts related to the community.

**Courses:** NS62, NS85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ NSN115 MIDWIFERY 2**

The individual and family during child-bearing processes; the human and social sciences that form the basis of normal child-bearing processes; theoretical framework for health promotion and maintenance; the relationship between psycho-physiological phenomena, its effect on individual and family functioning; advanced midwifery practice.

**Courses:** NS62, NS85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ NSN117 GERONTOLOGICAL NURSING 1**

The individual and particularly the biological issues of ageing, both normal and abnormal; the clinical component emphasises the delivery of individualised nursing care which maximises the control and independence of the elderly person; genetic and non-genetic biological theories of ageing; epidemiological issues of age; selected acute or chronic health deviations common to ageing; nursing assessment, care planning and care delivery with the elderly client and approaches and technologies for maximising the independence of elderly people.

**Courses:** NS62, NS85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ NSN118 GERONTOLOGICAL NURSING 2**

The family and the roles and relationships within families with elderly members; the psychological theories of later life; theories of adjustment to ageing; roles and relationships of families with elderly members; role of carers in families with a highly dependent older member and the assessment and selection of nursing interventions to be used with elderly clients and their families.

**Courses:** NS62, NS85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ NSN120 CHILD & ADOLESCENT NURSING 1**

The role of the nurse who practises with children, adolescents and child rearing families within various health care systems, the factors that impinge on or facilitate the provision of care. Theoretical frameworks are utilised and a philosophy of advanced nursing practice is formulated.

**Courses:** NS62, NS85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ NSN121 CHILD & ADOLESCENT NURSING 2**

Primary prevention strategies for health of children, adolescents and child rearing families; theoretical framework for health promotion and maintenance.

**Courses:** NS62, NS85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ NSN206 INDEPENDENT STUDY**

Increases flexibility and provides opportunity for in-depth study in approved area of interest to meet the diverse needs and interests of practising registered nurses. Students may work within the School of Nursing or with acknowledged external experts.

**Courses:** NS62, NS85

**Credit Points:** 12

**■ NSN301 ADVANCED NURSING EDUCATION 1**

Designed to increase students' knowledge of the theoretical bases of teaching and learning in order to promote and facilitate learning. Students from various disciplines on campus can be accommodated within this unit. Students of nursing focus on the professional practice of that discipline.

**Courses:** NS62, NS85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ NSN302 ADVANCED NURSING EDUCATION 2**

Provides opportunities for students to view measurement and evaluation as essential components of sound educational decision making. Students from various disciplines on campus are able to be accommodated within this unit. Students of nursing focus on the professional practice of that discipline.

**Course:** NS85

**Credit Points:** 12      **Prerequisite:** NSN301  
**Contact Hours:** 3 per week

**■ NSN304 ADVANCED NURSING MANAGEMENT 1**

Provides opportunities for students to examine the organisation context of nursing and health care from a number of theoretical perspectives and to enable them to contribute effectively to debate on the nature of nursing and health care organisation.

**Courses:** NS62, NS85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ NSN305 ADVANCED NURSING MANAGEMENT 2**

Provides an opportunity for students to examine management processes of nursing divisions within health care organisations enabling them to have creative input into the nursing environment.

**Course:** NS85

**Credit Points:** 12      **Prerequisite:** NSN301  
**Contact Hours:** 3 per week

**■ NSN405 QUALITATIVE RESEARCH**

Addresses qualitative methodologies and methods pertinent to research in the health sciences.

**Courses:** HL88, NS62, NS85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ NSN406 DISSERTATION**

This study represents an independent piece of research completed with the guidance of a supervisor. The dissertation provides an opportunity for coursework conducted in the area of specialisation to be applied in a practical manner reflecting the student's specific interest in nursing. The third of three step-locked dissertation units in the Master of Nursing.

**Course:** NS85

**Credit Points:** 24      **Contact Hours:** 3 per week

**■ NSN411 RESEARCH SEMINAR**

This unit has been developed as the first of three step-locked dissertation units. It provides the student with the opportunity to produce a well researched and

indepth literature review in the area of the dissertation topic.

Course: NS85

Credit Points: 12 Contact Hours: 3 per week

### ■ NSN412 RESEARCH PROJECT

Students design and implement research and gather and analyse data. The second of three step-locked dissertation units in the Master of Nursing.

Course: NS85

Credit Points: 12 Contact Hours: 3 per week

### ■ OPB210 OPTOMETRY 2

Development of optometry and optometric education; legal standing and scope of service; role of health care services; professionalism and ethical behaviour; professional bodies and relationships with other professions; future of optometry.

Course: OP42

Credit Points: 4 Contact Hours: 2 per week

### ■ OPB232 OPHTHALMIC OPTICS 2

Optical concepts, refraction and notation; neutralisation, transportation, prismatic effects, multifocals; frame and lens materials, quality, dimensions; ver-tometers, ordering, prescription writing; protection against radiation and mechanical hazards; special lens types.

Course: OP42

Prerequisite: OPB132

Credit Points: 12 Contact Hours: 4 per week

### ■ OPB312 VISUAL SCIENCE 3

The performance of the eye as an optical system is considered in the context of ocular aberrations, refractive errors and image formation and quality. An introduction to visual performance characteristics includes absolute and relative thresholds, dark and light adaptation and relative luminous efficiency curves.

Course: OP42

Prerequisite: PHB240 Co-requisite: PHB340

Credit Points: 14 Contact Hours: 5 per week

### ■ OPB401 OCULAR & REGIONAL ANATOMY

The gross anatomy of the head and neck region with particular reference to the central nervous system. The macroscopic and microscopic anatomy of the orbit, extraocular muscles, eyelids, lacrimal apparatus, cornea, conjunctiva, sclera, uveal tract, lens, retina, optic nerve, aqueous, vitreous and the neural pathways and vascular circulation. Ocular embryology.

Course: OP42

Prerequisite: LSB351

Co-requisites: LSB451, OPB412  
Credit Points: 8 Contact Hours: 3 per week

### ■ OPB412 VISUAL SCIENCE 4

Visual performance is examined with respect to its spatial and temporal characteristics. Perceptual aspects of vision as well as binocular and colour vision performance characteristics.

Course: OP42 Prerequisites: OPB312, PHB340

Co-requisite: OPB401

Credit Points: 14 Contact Hours: 5 per week

### ■ OPB504 OPHTHALMIC OPTICS 5

A continuation of OPB132, emphasising problems with spectacle lenses. Practical application of theory to ophthalmic dispensing in the laboratory.

Course: OP42

Prerequisites: OPB132, PHB340

Credit Points: 6 Contact Hours: 4 per week

### ■ OPB505 CLINICAL OPTOMETRY 5

The clinical application of techniques learnt in OPB509 (studied concurrently) in the management of patients presenting for eye examinations.

Course: OP42

Prerequisite: OPB412

Co-requisites: OPB509, OPB508, OPB527

Credit Points: 8 Contact Hours: 4 per week

### ■ OPB508 OCULAR PHYSIOLOGY

All aspects of ocular physiology including the vegetative physiology of various ocular structures, visual neurophysiology and an introduction to electrophysiological techniques.

Course: OP42

Prerequisites: OPB412, OPB401

Co-requisites: OPB509, OPB505, OPB527

Credit Points: 8 Contact Hours: 4 per week

### ■ OPB509 OPTOMETRY 5

The theory and practice of clinical procedures which are used in eye examinations.

Course: OP42

Prerequisites: OPB412, OPB401

Co-requisites: OPB508, OPB505, OPB527

Credit Points: 18 Contact Hours: 9 per week

### ■ OPB527 DISEASES OF THE EYE 5

The detection, diagnosis, referral and management of ocular disease. General pathological considerations. The writing of reports, referral letters and referral procedures. The nature, aetiology and management of congenital, developmental, dystrophic and degenerative anomalies of the external and internal ocular structures and ocular adnexae. The ocular manifestation of systemic disease including cardiovascular, metabolic, endocrine, central nervous system and malnutritional disorders.

Course: OP42

Prerequisites: LSB491, OPB401, LSB451

Co-requisites: OPB505, OPB508, OPB509

Credit Points: 8 Contact Hours: 3 per week

### ■ OPB605 CLINICAL OPTOMETRY 6

The continuation of OPB505. The clinical application of techniques learnt in OPB509 and OPB609 (studied concurrently) in the management of patients presenting for eye examinations.

Course: OP42

Prerequisite: OPB505

Co-requisites: OPB608, OPB609, OPB627

Credit Points: 8 Contact Hours: 4 per week

### ■ OPB608 OCULAR PHARMACOLOGY

General pharmacological principles are presented as background to a study of pharmacological profiles of ophthalmic preparations; both diagnostic and topical therapeutic agents are considered. Particular emphasis is placed on those ophthalmic drugs used to facilitate an eye examination.

Course: OP42

Prerequisites: OPB508, OPB509

Co-requisites: OPB605, OPB609, OPB627, OPB617

Credit Points: 6 Contact Hours: 3 per week

### ■ OPB609 OPTOMETRY 6

This unit is a continuation of the theory and practice of routine and advanced clinical procedures which are used when conducting a complete eye examination. Areas include the management of binocular vision anomalies, methods of examining the visual fields and the measurement of intra-ocular pressure.

Course: OP42

Prerequisites: OPB508, OPB509

Co-requisites: OPB608, OPB605, OPB627, OPB617

Credit Points: 16 Contact Hours: 8 per week

### ■ OPB617 CONTACT LENS STUDIES 6

An introduction to the basic concepts of contact lens fitting. Areas covered include contact lens instrumentation, contact lens materials and designs, fitting and

consultation techniques. The practical component of the unit focuses upon the fitting of contact lenses.

**Course:** OP42

**Prerequisites:** OPB509, OPB505, OPB527

**Co-requisites:** OPB609, OPB605, OPB627, OPB608

**Credit Points:** 6 **Contact Hours:** 2 per week

### ■ OPB627 DISEASES OF THE EYE 6

A continuation of OPB527. The anatomical, physiological and pathological aspects of glaucoma. Its symptomatology, methods of detection and diagnosis, management and prognosis. Inflammatory diseases, trauma and tumours of the external and internal ocular structures and ocular adnexae.

**Course:** OP42

**Prerequisite:** OPB527

**Co-requisites:** OPB605, OPB608, OPB609, OPB617

**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ OPB705 CLINICAL OPTOMETRY 7

This is the clinical application of the procedures studied in OPB609 and OPB709, and includes the management of patients in the clinical situation.

**Course:** OP42

**Prerequisite:** OPB605

**Co-requisites:** OPB709, OPB717, OPB750

**Credit Points:** 24 **Contact Hours:** 13 per week

### ■ OPB709 OPTOMETRY 7

This unit is a continuation of OPB609 and provides knowledge and understanding of the theory and clinical procedures involved in paediatric optometry, low vision, colour vision and aniseikonia.

**Course:** OP42

**Prerequisites:** OPB609, OPB750

**Co-requisites:** OPB705, OPB717

**Credit Points:** 10 **Contact Hours:** 5 per week

### ■ OPB717 CONTACT LENS STUDIES 7

A series of lectures and practical sessions in advanced aspects of contact lens practice. The unit includes topics such as the physiological consequences of contact lens wear, management of contact lens patients, and fitting of lenses for keratoconus, extended wear and presbyopia. Practical sessions provide training in advanced diagnostic and fitting techniques.

**Course:** OP42

**Prerequisite:** OPB617

**Co-requisites:** OPB705, OPB709, OPB750

**Credit Points:** 6 **Contact Hours:** 2 per week

### ■ OPB750 PROJECT

Students are required to undertake project work in Year 4, Semesters 1 and 2 working in groups of up to three on projects of their own choosing or on a topic chosen from a suggested list. Topics must be original. Students conduct a literature search (including a computer-based search in conjunction with a reference librarian) decide on the experimental hypotheses, plan and execute the experiment, analyse the results and write a report in manuscript form which it is hoped will be suitable for publication in the open literature. Oral presentations are given by each group to their peers, third year students and staff, as part of a formal Year 4, Semester 2 colloquium.

**Course:** OP42

**Co-requisites:** OPB709, MAB258, OPB705, OPB717

**Credit Points:** 10 **Contact Hours:** 2 per week

### ■ OPB803 OCCUPATIONAL/PUBLIC HEALTH OPTOMETRY

A course of study to introduce the basic concepts of eye safety and visual ergonomics. Content includes eye safety programs, occupational vision screening, legal aspects of eye safety, eye hazards: traumatic, radiation and chemical, eye protection, visual ergonomics and illumination engineering.

**Course:** OP42

**Prerequisite:** OPB709

**Co-requisites:** OPB805, OPB750

**Credit Points:** 6 **Contact Hours:** 2 per week

### ■ OPB805 CLINICAL OPTOMETRY 8

A continuation of OPB705. This unit places emphasis on the students' decision-making skills in the evaluation, care and treatment of patients who may have a wide range of visual disorders.

**Course:** OP42 **Co-requisites:** OPB750, OPB803

**Prerequisites:** OPB705, OPB717, OPB709

**Credit Points:** 32 **Contact Hours:** 17 per week

### ■ OPB807 PRACTICE MANAGEMENT

Optometry's role in health care; professional and ethical behaviour; relevant State and Federal Acts; professional associations; types of practice; optometric practice and the law.

**Course:** OP42

**Credit Points:** 4

**Contact Hours:** 2 per week

### ■ OPN601 ADVANCED CONTACT LENS STUDIES

This unit contains instruction in specialised fitting techniques, including keratoconus, scleral lenses and prosthetics. There is also an emphasis on the design, manufacture and modification of lenses. The physiology and pathology associated with contact lens wear is also covered in detail.

**Course:** HL88

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ OPN602 ADVANCED CLINICAL METHODS

This unit explores techniques for the examination of the eye and visual function. Topics include: visual fields; static automated perimetry; screening versus threshold methods and their interpretation, modelling and trend analysis of visual field data; the visual field in glaucoma; contrast sensitivity function; alternative tests and their interpretation; clinical applications of contrast sensitivity function testing; colour vision; current research in congenital and acquired disorders; clinical tests, their application and interpretation; the design of colour vision screening procedures; entoptic phenomena and their application as diagnostic tools; advanced slit lamp biomicroscopy, gonioscopy, photography and fundus examination; other advanced methods of examination such as ultrasonography, dark adaptation, motion sensitivity, eye movement studies and electro-physiology.

**Course:** HL88

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ OPN603 ADVANCED OCULAR PHARMACOLOGY

This unit explores the use of drugs for the treatment of eye diseases. The unit does not seek to qualify optometrists to use these drugs, nor to impart the clinical skills or procedures necessary for such a scope of practice; instead, it will supply the background knowledge and understanding of current theoretical and practical research concepts in therapeutics so essential to complement this evolution in health care. Topics include: the anatomy, physiology and pathology of tissue changes in relevant eye diseases; neurohumoral transmission - current concepts in receptor dynamics; the actions of systemic drugs; including antihypertensive, antiarthritic, asthma, antidepressant and anti-anxiety drugs; the actions and uses of drugs for the treatment of eye disease such as infections, inflammation, allergy and glaucoma; current research into treatment strategies for eye disease; optometry and therapeutic care.

**Course:** HL88

**Credit Points:** 12

**Contact Hours:** 3 per week

**■ OPN604 PAEDIATRIC OPTOMETRY**

Early child development, normal and abnormal visual development; epidemiology of visual handicap in childhood; effect of visual impairment on the family; support services; advanced examination techniques for the paediatric patient; multidisciplinary approach to management of the learning disabled child. Assessment is by research project.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

**■ PHB001 INTRODUCTORY PHYSICS**

Gives students without Senior Physics a basic grounding. Topics include: kinematics, mechanics, electricity and magnetism.

Course: SC30

Incompatible with: Sound Achievement or better in Senior Physics.

Credit Points: 6 Contact Hours: 3 per week

**■ PHB111 PHYSICS 1B**

A course of lectures and laboratory work on AC and DC circuit theory, electronics, vibrations and waves, sound, geometrical optics.

Course: PH38

Prerequisite: Sound Achievement - Senior Physics.  
Co-requisite: PHB001 unless Senior Physics has been undertaken.

Credit Points: 8 Contact Hours: 3 per week

**■ PHB122 PHYSICS 1**

A course of lectures and laboratory work on data analysis, kinematics and mechanics, DC and AC circuit theory, electronics, vibrations and waves, sound, geometrical optics and physical optics.

Courses: CH32, ED50, OP42, SC30

Prerequisite: Sound Achievement - Senior Physics  
Co-requisite: PHB001 or Sound Achievement - Senior Physics

Credit Points: 12 Contact Hours: 5 per week

**■ PHB132 ENGINEERING PHYSICS 1A**

A basic unit in the physics of waves and optics; moving and stationary waves in various media, interference of waves, beats acoustics and shock waves and measurement of sound; geometrical and physical optics including reflection, refraction, dispersion, interference and diffraction, polarisation, optical instruments, design and resolution, and photometry.

Courses: CE42, EE43, EE44, IF23, IF53, ME23, ME45, ME46

Credit Points: 6 Contact Hours: 3 per week

**■ PHB144 APPLIED SCIENCE FOR DESIGNERS 1**

Physics for environmental design: light and colour; heat and energy transfer, solar energy physics, sound and acoustics, electricity, magnetism and electronics for the built environment.

Courses: BN30, PU49

Credit Points: 6 Contact Hours: 3 per week

**■ PHB150 PHYSICS 1H**

Basic physical measurements; mechanics; fluids; heat; vacuum physics; waves, acoustics, ultrasonics and optics, and the instrumentation used to measure biological parameters.

Courses: LS36, PU42, PU44, PU45, SC30

Credit Points: 12 Contact Hours: 6 per week

**■ PHB170 PHYSICS FOR SURVEYORS**

Mechanics; geometrical optics; physical optics; quantum optics; physics of materials; physics of the lower

atmosphere; sound; electromagnetic fields; electronics.

Courses: IF52, SV34

Credit Points: 12 Contact Hours: 6 per week

**■ PHB172 PHYSICS FOR SURVEYORS**

Mechanics; physics of materials; physics of the lower atmosphere; sound; electromagnetic fields; topics in electronics.

Courses: IF54, PS47

Credit Points: 6 Contact Hours: 3 per week

**■ PHB178 PRINCIPLES OF MEDICAL RADIATIONS**

Principles of medical imaging and methods of detection, diagnosis and treatment of cancer.

Course: PH38

Credit Points: 10 Contact Hours: 5 per week

**■ PHB222 PHYSICS 2**

A course of lectures and laboratory work on mechanical properties of matter, fluids, gravitational fields, electromagnetic fields, thermal physics and quantum radiation physics.

Courses: ED50, OP42, SC30

Prerequisite: Sound Achievement - Senior Physics

Co-requisite: PHB001 unless Sound Achievement - Senior Physics

Credit Points: 12 Contact Hours: 5 per week

**■ PHB232 ENGINEERING PHYSICS 2A**

The physics of heat and properties of matter; including the kinetic theory of gases, temperature scales and thermometers, heat and heat measurement, thermodynamics and the molecular properties of matter; gravitational fields; basic radiation physics.

Courses: CE42, EE43, EE44, IF23

Credit Points: 6 Contact Hours: 3 per week

**■ PHB240 OPTICS 2**

The principles of geometrical optics as they apply to rectilinear propagation, reflection and refraction for paraxial rays for monochromatic light for single surfaces, thin lenses, cylindrical, spherocylindrical and toric lenses, lens systems in air, the eye and a selection of optical instruments; study of the optics of monochromatic and chromatic aberrations and of photometry and colour.

Course: OP42

Prerequisite: PHB150

Co-requisite: OPB132

Credit Points: 12 Contact Hours: 7 per week

**■ PHB252 KINESIOLOGY & BIOMECHANICS**

Principles, methods and interpretation of measurement of human movement, particularly associated with the lower limb; principles of lower limb function (standing, walking and running).

Course: PU45

Credit Points: 8 Contact Hours: 2 per week

**■ PHB262 PHYSICS 2L**

Extension of PHB150 including a.c., d.c. circuit theory, with emphasis on electronic and instrumentation, fields, modern and nuclear physics.

Course: LS36

Credit Points: 8 Contact Hours: 4 per week

**■ PHB263 PHYSICS 2E**

Extension of PHB150 including AC, DC circuit theory, with emphasis on electronics and instrumentation, fields, modern and nuclear physics. Fluids.

Courses: PU42, PU44, PU45, SC30

Credit Points: 12 Contact Hours: 6 per week

**■ PHB272 RADIATION PHYSICS 1**

Electrostatics, electromagnetism, the production of X-rays and their interaction with matter.

Course: PH38

Credit Points: 12 Contact Hours: 5 per week

**■ PHB275 PROCESSING TECHNOLOGY**

A study of the processes involved in the production of a visible image in radiography, including: latent image formation, processing, techniques and equipment relevant to radiography.

Course: PH38

Credit Points: 4 Contact Hours: 2 per week

**■ PHB276 GENERAL RADIOGRAPHY 1**

A program of lectures and practical sessions relating to radiography of the skeletal system.

Course: PH38 Prerequisites: LSB141, PHB178

Co-requisite: LSB241

Credit Points: 14 Contact Hours: 7 per week

**■ PHB279 CLINICAL RADIOGRAPHY 1**

Practical programs carried out in approved clinical departments. Related to topics introduced in PHB276.

Course: PH38

Credit Points: 4 Contact Hours: 2 per week

**■ PHB286 TREATMENT PLANNING 1**

Introduction to the techniques of radiotherapy treatment planning.

Course: PH38

Credit Points: 12 Contact Hours: 6 per week

**■ PHB287 MEGAVOLTAGE THERAPY 1**

Introduction to the basic techniques of radiotherapy including beam direction and defining devices.

Course: PH38 Prerequisites: PHB125, PHB178

Credit Points: 6 Contact Hours: 3 per week

**■ PHB289 CLINICAL RADIOTHERAPY 1**

Practical programs carried out in approved clinical departments. Related to topics introduced in PHB287.

Course: PH38

Credit Points: 4 Contact Hours: 2 per week

**■ PHB313 RADIOGRAPHIC IMAGE INTERPRETATION**

Image formation in medical radiography, and the significance of diagnostic techniques and their image appearances in assessment of the lower extremity.

Course: PU45

Credit Points: 8 Contact Hours: 3 per week

**■ PHB322 PHYSICS 3A**

Laplace Transforms; SHM; damped harmonic motion; forced oscillations; coupled oscillations; wave transmission and reflection; wave systems; AC circuit analysis; power; network analysis; resonance; AC measurements.

Courses: ED50, SC30 Co-requisite: MAB432

Prerequisites: MAB222, PHB122, PHB222

Credit Points: 12 Contact Hours: 5 per week

**■ PHB332 PHYSICS 3B**

Covers any two of the following: optics, electronics, materials, experimental physics.

Courses: ED50, SC30

Prerequisites: PHB122, PHB222 and (MAB212 or MAB222)

Credit Points: 12 Contact Hours: 5 per week

**■ PHB340 OPTICS 3**

The application of geometrical optics to selected aspects of optometry including lens form and thickness, contact lenses, spectacle lens design and spheri-

cal surfaces; the wave nature of light with emphasis on interference, interferometry, diffraction and polarisation; the specialised topics of optical processing, lasers and the evaluation of optical systems.

Course: OP42 Prerequisites: PHB222, PHB240

Credit Points: 12 Contact Hours: 7 per week

**■ PHB342 PHYSICS 3C**

See PHB332.

Courses: ED50, SC30

Prerequisites: PHB122, PHB222 and (MAB212 or MAB222)

Credit Points: 12 Contact Hours: 5 per week

**■ PHB373 NUCLEAR MEDICINE IMAGING 1**

The principles, equipment and applications of nuclear medicine imaging.

Courses: PH38, PH90

Credit Points: 4 Contact Hours: 2 per week

**■ PHB374 RADIOGRAPHIC EQUIPMENT 1**

Discussion of design considerations of X-ray generators and equipment for control of beam direction.

Course: PH38

Credit Points: 6 Contact Hours: 3 per week

**■ PHB376 GENERAL RADIOGRAPHY 2**

An extension of topics introduced in PHB276 to include more advanced techniques of skeletal radiography, ward and operating theatre radiography, and examinations using contrast media.

Course: PH38

Prerequisites: LSB241, PHB276, PHB279

Credit Points: 12 Contact Hours: 5 per week

**■ PHB379 CLINICAL RADIOGRAPHY 2**

Clinical experiences in radiographic examinations introduced in PHB276 and PHB376. Experience is obtained in approved clinical departments.

Course: PH38

Prerequisites: LSB242, PHB276, PHB279

Credit Points: 10 Contact Hours: 5 per week

**■ PHB382 RADIOTHERAPY PHYSICS 1**

A study of the design, physical aspects and operating characteristics of megavoltage and telecurie units.

Course: PH38

Prerequisite: PHB272

Credit Points: 4 Contact Hours: 2 per week

**■ PHB386 TREATMENT PLANNING 2**

An extension of the study of treatment planning introduced in PHB286 to the planning of complex techniques of photon therapy and electron therapy.

Course: PH38

Credit Points: 8 Contact Hours: 4 per week

**■ PHB387 MEGAVOLTAGE THERAPY 2**

The principles and applications of megavoltage therapy including techniques for specific sites.

Course: PH38

Prerequisites: LSB241, PHB287

Credit Points: 10 Contact Hours: 5 per week

**■ PHB389 CLINICAL RADIOTHERAPY 2**

Practical exercises in megavoltage therapy related to topics introduced in PHB287 and PHB387. The programs are carried out in clinical departments.

Course: PH38

Prerequisites: LSB241, PHB289

Co-requisite: PHB387

Credit Points: 10 Contact Hours: 5 per week

**■ PHB404 SAFETY TECHNOLOGY 2**

Vibration and noise, electrical hazards, sources and hazards of ionising and non-ionising radiation.

Course: PU44

Prerequisite: PHB250 or PHB262

Credit Points: 12 Contact Hours: 6 per week

**■ PHB422 PHYSICS 4A**

Any two of the following: thermodynamics and statistics, mechanics, radiation physics, astronomy and astrophysics, relativity and fluids, electronics.

**Courses:** ED50, SC30

**Prerequisites:** PHB122, PHB222 and (MAB212 or MAB222)

**Credit Points:** 12      **Contact Hours:** 5 per week

**■ PHB432 PHYSICS 4B**

See PHB422.

**Courses:** ED50, SC30

**Prerequisites:** PHB122, PHB222 and (MAB212 or MAB222)

**Credit Points:** 12      **Contact Hours:** 5 per week

**■ PHB462 EXPERIMENTAL PHYSICS 4**

Experimental method and design; electronics; preparation and presentation of reports; group project.

**Course:** SC30

**Prerequisite:** At least two level 2 Physics units including electronics module

**Credit Points:** 12      **Contact Hours:** 5 per week

**■ PHB471 RADIATION PHYSICS 2**

A study of the philosophy and protocol of radiation protection. The question of protection is treated in a manner which brings into perspective the details of protection dealt with in other units of the course.

**Courses:** PH38, PH90

**Credit Points:** 4      **Contact Hours:** 2 per week

**■ PHB473 MEDICAL ULTRASOUND**

The physical principles and application of ultrasound.

**Courses:** PH38, PH90

**Credit Points:** 4      **Contact Hours:** 2 per week

**■ PHB474 RADIOGRAPHIC EQUIPMENT 2**

A study of the equipment used in specialised radiography; including mobiles, tomographic units, skull tables and mammography units.

**Course:** PH38

**Credit Points:** 4      **Contact Hours:** 2 per week

**■ PHB475 MEDICAL RADIATION COMPUTING 1**

An introduction to the capabilities of computer hardware and software, and image processing.

**Courses:** PH38, PH90

**Credit Points:** 8      **Contact Hours:** 3 per week

**■ PHB476 SPECIAL PROCEDURES**

Specialised techniques of radiography: the skull, obstetrics, gynaecology, CNS and paediatrics.

**Course:** PH38      **Prerequisites:** PHB376, PHB379

**Credit Points:** 8      **Contact Hours:** 3 per week

**■ PHB479 CLINICAL RADIOGRAPHY 3**

Clinical experience in approved departments in radiographic examinations discussed in PHB376.

**Course:** PH38      **Prerequisites:** PHB376, PHB379

**Credit Points:** 8      **Contact Hours:** 4 per week

**■ PHB481 DOSIMETRY**

A study of the measurement and dosimetry of external beam X-ray and gamma ray radiotherapy.

**Course:** PH38

**Credit Points:** 6      **Contact Hours:** 3 per week

**■ PHB482 RADIOTHERAPY PHYSICS 2**

A study of radioactivity including methods of radiation detection, radioactive equilibrium and production of radioisotopes, the principles of brachytherapy.

**Course:** PH38

**Credit Points:** 6      **Contact Hours:** 3 per week

**Prerequisite:** PHB382

**■ PHB484 PRINCIPLES OF TREATMENT 1**

The principles underlying the choice of treatment of cancer in specific sites including consideration of associated treatment.

**Course:** PH38

**Credit Points:** 6      **Contact Hours:** 3 per week

**■ PHB487 MEGAVOLTAGE THERAPY 3**

An extension of the topic introduced in PHB387 to include the full range of treatment by megavoltage therapy for cancer in specific sites. Consideration includes techniques, planning, patient positioning, outlines and measurements.

**Course:** PH38

**Prerequisites:** PHB387, PHB389

**Credit Points:** 10      **Contact Hours:** 4 per week

**■ PHB489 CLINICAL RADIOTHERAPY 3**

Clinical experiences in approved departments in techniques of megavoltage therapy.

**Course:** PH38

**Prerequisites:** PHB387, PHB389

**Co-requisite:** PHB487

**Credit Points:** 8      **Contact Hours:** 4 per week

**■ PHB504 INSTRUMENTATION**

Transducers; noise, guarding and shielding; signal conditioning; digital filters; intelligent instruments and standard buses.

**Course:** ME46

**Credit Points:** 8      **Contact Hours:** 3 per week

**■ PHB512 PROJECT**

Projects are undertaken in a wide range of topics normally submitted by staff. They are commonly related to School of Physics research activities in materials science, health and medical physics and instrumentation, and may involve an extension of existing knowledge and technique or an introductory investigation into a new procedure.

**Courses:** ED50, SC30

**Prerequisite:** At least 3 third level Physics units.

**Credit Points:** 12      **Contact Hours:** 5 per week

**■ PHB522 APPLIED QUANTUM MECHANICS**

Schrödinger equation, potential wells, hydrogen atom, angular momentum, perturbation theory, atomic and molecular spectra, Zeeman effects, line broadening phenomena, spectroscopy, lasers.

**Course:** SC30

**Prerequisites:** MAB432, MAB452, PHB322

**Credit Points:** 12      **Contact Hours:** 5 per week

**■ PHB532 ELECTROMAGNETIC FIELD THEORY**

Static field theory: electric and magnetic fields. Solution of problems by analytic and non-analytic methods. Dielectrics. Magnetic materials. Electromagnetic wave theory: time-varying fields, Maxwell's equation, displacement current, electromagnetic energy density. Wave equation and solutions, boundary conditions, reflection and refraction of waves. Wave guides and radiation theory.

**Course:** SC30

**Prerequisites:** PHB322, MAB452

**Credit Points:** 12      **Contact Hours:** 5 per week

**■ PHB542 APPLIED ACOUSTICS**

Environmental and occupational noise. Architectural and building acoustics. Generation and detection of ultrasound; applications in medicine and industry fields.

**Courses:** ED50, SC30

**Prerequisite:** Second level Acoustics

**Credit Points:** 12      **Contact Hours:** 5 per week

■ **PHB562 PHYSICAL METHODS OF ANALYSIS**

X-ray diffraction: qualitative and quantitative analysis, texture and stress analysis. X-ray fluorescence. Electron microscopy: transmission electron microscopy, scanning electron microscopy, electron probe microanalysis. Theory, instrumentation and application of atomic emission and absorption spectroscopy, mass spectrometry and gas chromatography, infra-red and Raman spectroscopy, nuclear magnetic resonance spectroscopy and surface analysis techniques (Auger electron spectroscopy, x-ray photoelectron spectroscopy, secondary ion mass spectrometry).

Courses: ED50, SC30 Prerequisite: PHB342  
Credit Points: 12 Contact Hours: 5 per week

■ **PHB570 ADVANCED RADIOGRAPHIC PRACTICE 1**

The content of this unit includes topics from a number of areas and is designed to complement the particular background of persons undertaking the conversion program.

Course: PH90  
Credit Points: 20

■ **PHB571 QUALITY ASSURANCE IN MEDICAL IMAGING**

The principles and techniques used in the quality assurance of medical imaging apparatus and ancillary equipment.

Course: PH90  
Credit Points: 6 Contact Hours: 3 per week

■ **PHB572 IMAGE RECORDING & EVALUATION**

Lectures and practical exercises on non-film image formation evaluation. Information theory.

Course: PH38  
Credit Points: 4 Contact Hours: 2 per week

■ **PHB573 DIGITAL IMAGING MODALITIES**

The principles, methods and applications of CT, digital radiography and MRI in medical imaging.

Courses: PH38, PH90  
Credit Points: 6 Contact Hours: 2 per week

■ **PHB574 QUALITY ASSURANCE IN MEDICAL IMAGING**

A study of the principles and techniques used in the quality assurance of medical imaging apparatus and ancillary equipment.

Course: PH38  
Credit Points: 6 Contact Hours: 3 per week

■ **PHB575 MEDICAL RADIATION COMPUTING 2**

Applications of computers in image processing and radiotherapy.

Course: PH38  
Credit Points: 8 Contact Hours: 3 per week

■ **PHB576 ADVANCED RADIOGRAPHIC TECHNIQUE 1**

A study of the principles and techniques used in advanced radiographic techniques including angiography, the salivary glands, arthrography, sinography, arteriography and venography.

Course: PH38 Prerequisites: PHB476, PHB479  
Co-requisite: PHB578  
Credit Points: 12 Contact Hours: 6 per week

■ **PHB578 IMAGE INTERPRETATION 1**

Lectures and practical exercises on image interpretation including technical and diagnostic quality.

Courses: PH38, PH90  
Credit Points: 4 Contact Hours: 2 per week

■ **PHB579 CLINICAL RADIOGRAPHY 4**

Clinical experience in special radiographic procedures as introduced in PHB476.

Course: PH38 Prerequisites: PHB476, PHB479  
Credit Points: 8 Contact Hours: 4 per week

■ **PHB583 COMPLEMENTARY & EVOLVING TECHNIQUES**

The principles, strengths and stage of development of techniques which are complementary to radiotherapy treatment of cancer including: hyperbaric O<sub>2</sub> therapy, neutron therapy, pi-meson therapy, chemotherapy, cryotherapy and hyperthermia.

Course: PH38  
Credit Points: 6 Contact Hours: 3 per week

■ **PHB584 PRINCIPLES OF TREATMENT 2**

A continuation of the detailed discussion started in PHB484 to include the principles of treatment of cancer in all sites, and benign diseases.

Course: PH38  
Credit Points: 4 Contact Hours: 2 per week

■ **PHB585 COMPUTER ASSISTED TREATMENT PLANNING 1**

A study of planning hardware and software to include two-dimensional planning. Development of concepts to an advanced level of understanding of computer-assisted optimisation of isodose distributions.

Courses: PH38, PH90  
Credit Points: 8 Contact Hours: 3 per week

■ **PHB587 ORTHOVOLTAGE & SUPERFICIAL THERAPY**

The specialised techniques of orthovoltage and superficial radiotherapy.

Course: PH38 Prerequisites: PHB487, PHB489  
Credit Points: 10 Contact Hours: 4 per week

■ **PHB589 CLINICAL RADIOTHERAPY 4**

Clinical experience in the techniques of radiotherapy employing orthovoltage and superficial therapy.

Course: PH38 Prerequisites: PHB487, PHB489  
Co-requisite: PHB587  
Credit Points: 12 Contact Hours: 6 per week

■ **PHB622 SOLID STATE PHYSICS**

Crystal structures and bonding, reciprocal lattice, Brillouin zones; mechanical and thermal properties of solids; free electron and band theory; semiconductors; magnetic properties of solids; dielectric properties of materials; amorphous materials.

Course: SC30  
Prerequisites: Second level Materials, PHB422, PHB522  
Credit Points: 12 Contact Hours: 5 per week

■ **PHB632 NUCLEAR & PARTICLE PHYSICS**

Nuclear reaction, nuclear model, particle physics, particle detectors and accelerators and applications.

Course: SC30 Prerequisites: PHB432, PHB522  
Credit Points: 12 Contact Hours: 5 per week

■ **PHB642 APPLIED RADIATION & HEALTH PHYSICS**

Lectures and laboratory work on the topics: properties of ionising and non-ionising radiation. Detection and measurement techniques. Radiobiological effects of ionising and non-ionising radiation and health physics. Medical and industrial applications of radiation. Environmental radiation and radioactivity.

Course: SC30 Prerequisite: PHB432  
Credit Points: 12 Contact Hours: 5 per week



**■ PHB662 TOPICS IN PHYSICS**

The content varies from year to year and is determined by current research advances and availability of staff. No more than four topics are included, so as to allow a reasonable cover of the material. Topics included in recent years: health and medical physics, optoelectronics, geophysics, environmental physics and astrophysics.

Courses: ED50, SC30

**Prerequisite:** At least 36 credit points in second level physics units

**Credit Points:** 12      **Contact Hours:** 5 per week

**■ PHB670 ADVANCED RADIOGRAPHIC PRACTICE 2**

See PHB570.

**Course:** PH90

**Credit Points:** 20

**■ PHB671 RADIATION BIOLOGY**

A study of the biological effects on ionising and non-ionising radiation.

Courses: PH38, PH90

**Credit Points:** 4      **Contact Hours:** 2 per week

**■ PHB672 PROJECT**

A supervised project involving either application of existing theoretical practical knowledge or a literature survey of a selected relevant topic.

Courses: PH38, PH90

**Credit Points:** 8      **Contact Hours:** 3 per week

**■ PHB676 ADVANCED RADIOGRAPHIC TECHNIQUE 2**

An extension of topics in advanced radiographic technique introduced in PHB576 to include mammography, techniques for examination of the lymphatic system, and emerging techniques.

**Course:** PH38      **Prerequisites:** PHB576, PHB579

**Co-requisite:** PHB678

**Credit Points:** 8      **Contact Hours:** 3 per week

**■ PHB679 CLINICAL RADIOGRAPHY 5**

Clinical experience in advanced radiographic techniques introduced in PHB576.

Courses: PH38, PH90

**Prerequisites:** PHB576, PHB579

**Credit Points:** 14      **Contact Hours:** 6 per week

**■ PHB680 NUCLEAR MEDICINE IMAGING 2**

Lectures, practical exercises and clinical experiences in nuclear medicine imaging. This unit expands on topics introduced in PHB373 and provides an indepth study of nuclear medicine imaging techniques.

Courses: PH38, PH90

**Prerequisite:** PHB373

**Credit Points:** 10      **Contact Hours:** 5 per week

**■ PHB681 COMPUTED TOMOGRAPHY IMAGING**

Lectures, practical exercises and clinical experiences in CT imaging; expands on topics introduced in PHB573; indepth study of CT imaging techniques.

Courses: PH38, PH90

**Prerequisite:** PHB573

**Credit Points:** 10      **Contact Hours:** 5 per week

**■ PHB683 ONCOLOGICAL IMAGING**

Principles and techniques of medical imaging used in the detection of cancer: CT, MRI, U/S and NM.

Courses: PH38, PH90

**Credit Points:** 6      **Contact Hours:** 3 per week

**■ PHB685 COMPUTER ASSISTED TREATMENT PLANNING 2**

The use of computers in the planning of non-standard and complex radiotherapy treatment including arc and

rotation techniques, irregular field techniques, three-dimensional plans.

Courses: PH38, PH90

**Credit Points:** 8      **Contact Hours:** 4 per week

**■ PHB687 SPECIALISED RADIOTHERAPY TECHNIQUE**

Specialised radiotherapy techniques including techniques applicable to the child patient and patients with communicable disease, theatre procedures, total body photon and electron therapy.

Courses: PH38, PH90

**Credit Points:** 10      **Contact Hours:** 4 per week

**■ PHB689 CLINICAL RADIOTHERAPY 5**

Clinical experience in specialised radiotherapy treatment techniques.

**Course:** PH38

**Prerequisite:** PHB589

**Credit Points:** 8      **Co-requisite:** PHB687

**Contact Hours:** 4 per week

**■ PHB705 PROJECT (PHYSICS MAJOR)**

A research project in which the student will initiate and undertake an investigation of some magnitude and originality. Topics will be related to research interests in the Centre for Medical and Health Physics.

**Course:** SC60

**Credit Points:** 48

**■ PHB706 QUANTUM MECHANICS**

Linear vector space and operators; the matrix in quantum mechanics; dynamic variables; equations of motion; approximation methods; potential scattering; angular momentum; applications.

**Course:** SC60

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ PHB707 ADVANCED MATERIALS**

Amorphous and nanocrystalline structures; ceramics; metastable interstitial nitrides; composites; superconducting ceramics; fabrication techniques; testing and analysis of advanced materials; shock processing.

**Course:** SC60

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ PHB708 ADVANCED TOPICS IN PHYSICS**

No more than three topics will be included. The content will be determined by current research advances, availability of appropriate staff, visiting academics etc and may vary from year to year.

**Course:** SC60

**Credit Points:** 12      **Contact Hours:** 4 per week

**■ PHB789 ADVANCED RADIOTHERAPEUTIC PRACTICE 1**

The content of this unit includes topics from a number of areas and is designed to complement the particular background of persons undertaking the conversion program.

**Course:** PH90

**Credit Points:** 20

**■ PHB889 ADVANCED RADIOTHERAPEUTIC PRACTICE 2**

See PHB789.

**Course:** PH90

**Credit Points:** 20

**■ PHN112 MEDICAL IMAGING SCIENCE**

Introduction to the 'C' programming language; programming techniques and algorithms; numerical analysis; data structures; interfacing techniques; sampling of analogue signals; Fourier analysis; design of digital filters. This unit is designed to give students an

understanding of the techniques pertaining to digital data processing and digital image processing.

Course: PH80

Credit Points: 12 Contact Hours: 4 per week

### ■ PHN113 RADIATION PHYSICS

Radioactivity and the interaction of ionising radiation with matter; applied radiation counting techniques; biological effects of ionising radiation.

Course: PH80

Credit Points: 12 Contact Hours: 4 per week

### ■ PHN114 MICROPROCESSORS & INSTRUMENTATION

The capabilities and limitations of a given instrument; design of interfaces between microcomputers and transducers and conditioning circuits for data acquisition.

Course: PH80

Credit Points: 12 Contact Hours: 4 per week

### ■ PHN155 ULTRASONIC EXAMINATION IN OBSTETRICS/GYNAECOLOGY

The normal and abnormal anatomy and functions related to gynaecology and obstetrics, the ultrasonic techniques used and the appearance of related images.

Course: PH80

Credit Points: 6 Contact Hours: 2 per week

### ■ PHN156 ULTRASONIC EXAMINATION OF THE ABDOMEN

A study of the techniques used in the ultrasonic examination of the abdomen including the appearance on the ultrasound image of normal abdominal anatomy and its alteration by pathological processes.

Course: PH80

Credit Points: 6 Contact Hours: 2 per week

### ■ PHN162 PRINCIPLES OF MEDICAL ULTRASOUND

Principles of diagnostic ultrasound; physics of ultrasound; ultrasound equipment design and performance; image production and artefacts; general principles of scanning; patient and equipment care; use of coupling materials and acoustic windows and transducer selection.

Course: PH80

Credit Points: 12

### ■ PHN171 ADVANCED ONCOLOGICAL IMAGING

Principles and applications of advanced imaging modalities applied to detect cancer; application of anatomical structures and tumour pathology to advanced imaging modalities; the principles and applications of portal imaging.

Course: PH80

Credit Points: 12 Contact Hours: 4 per week

### ■ PHN173 ADVANCED RADIOTHERAPY TECHNIQUE

Detailed study of brachytherapy equipment; technique and brachytherapy practice.

Course: PH80

Credit Points: 12 Contact Hours: 4 per week

### ■ PHN181 PRINCIPLES OF MEDICAL IMAGE PROCESSING

The principles of image data acquisition in digital imaging modalities including nuclear medicine; magnetic resonance; digital subtraction angiography and computed tomography. Convolution theorem; image enhancement techniques; image reconstruction; three dimensional image techniques.

Course: PH80

Credit Points: 6 Contact Hours: 2 per week

### ■ PHN182 COMPUTED TOMOGRAPHY

The principles of computed tomography including equipment and contrast media considerations; techniques of specific examination-head, neck, thorax, abdomen, pelvis, extremities, therapy considerations and new developments.

Course: PH80

Credit Points: 6 Contact Hours: 2 per week

### ■ PHN183 NUCLEAR MEDICINE

Preparation, dispensing and quality control of radiopharmaceuticals; legal requirements; structure and function of biochemicals; biorouting of radiopharmaceuticals; dose calculations; safety considerations.

Course: PH80

Credit Points: 12 Contact Hours: 4 per week

### ■ PHN184 BREAST IMAGING

Medical imaging of the breast; principles of mammographic and sonographic imaging; breast anatomy and physiology; pathological conditions affecting the breast and their mammographic and sonographic appearances; advanced mammographic techniques; mammographic and sonographic quality assurance.

Course: PH80

Credit Points: 12 Contact Hours: 4 per week

### ■ PHN197 CLINICAL ATTACHMENT 1

A supervised practical program carried out in an approved medical imaging department. Students are required to undertake specified clinical practice as applicable to their area of specialisation and meet minimum requirements of clinical hours and case scope and numbers.

Course: PH80

Credit Points: 12

### ■ PHN211 MEDICAL IMAGING

The physical principles involved in the production of the radiographic, ultrasonic and nuclear medicine images; quality control protocols.

Course: PH80

Credit Points: 12 Contact Hours: 4 per week

### ■ PHN212 RADIOTHERAPY

Overview of the application of physics to radiotherapy; theoretical and practical aspects of the major topics in radiotherapy physics.

Course: PH80

Credit Points: 12 Contact Hours: 4 per week

### ■ PHN213 BIOMECHANICS/PHYSIOLOGICAL MEASUREMENT

The basic concepts and principles of measurement in dynamic physiological systems; principles of design, construction and operation of transducers, electrodes and other instrumentation.

Course: PH80

Credit Points: 12 Contact Hours: 4 per week

### ■ PHN214 HEALTH & OCCUPATIONAL PHYSICS

The philosophy, protocols and practices of safety in the medical and industrial fields; minimisation of hazards associated with radiation, electrical, mechanical and biological techniques.

Credit Points: 12 Contact Hours: 4 per week

### ■ PHN216 MEDICAL & HEALTH TECHNOLOGY MANAGEMENT

The organisational culture and funding structures within the medical and health industry; basic manage-

ment skills, the interface between health and technology management.

Course: PH80

Credit Points: 6 Contact Hours: 2 per week

#### ■ PHN217 RESEARCH METHODOLOGY

Literature searches - manual and computer based; data collection; recording and analysis; introduction to medical statistics. Writing of research proposals, reports and scientific papers.

Course: PH80

Credit Points: 6 Contact Hours: 2 per week

#### ■ PHN271 PRINCIPLES OF ONCOLOGY

Detailed study of radiation biology; principles of cancer treatment.

Course: PH80

Credit Points: 12 Contact Hours: 4 per week

#### ■ PHN272 BRACHYTHERAPY

Continuation of PHN173. The application of brachytherapy techniques to specific malignant disease sites.

Course: PH80

Prerequisite: PHN173

Co-requisites: LSN159, PHN271

Credit Points: 6 Contact Hours: 2 per week

#### ■ PHN273 ADVANCED COMPUTER PLANNING

Continuation of PHN173.

Course: PH80

Prerequisite: PHN173

Co-requisites: PHN171, LSN159

Credit Points: 6 Contact Hours: 2 per week

#### ■ PHN281 MAGNETIC RESONANCE IMAGING

Magnetic resonance imaging as applied to medical imaging; the principles, instrumentation and imaging sequencing parameters of MRI; image production, manipulation and storage; clinical MRI applications and techniques.

Course: PH80

Credit Points: 12 Contact Hours: 4 per week

#### ■ PHN282 DIGITAL SUBTRACTION ANGIOGRAPHY

The principles, equipment and techniques used in digital subtraction angiography; use of contrast media; catheterization techniques and immobilization methods; specific examinations - cerebral, extra cerebral, cardiac, thoracic, abdominal, peripheral vessels.

Course: PH80

Credit Points: 6 Contact Hours: 2 per week

#### ■ PHN291 MEDICAL DIAGNOSIS

The complementary nature of medical diagnostic techniques; the role, strengths and weaknesses of advanced medical imaging techniques in medical diagnosis.

Course: PH80

Credit Points: 6 Contact Hours: 2 per week

#### ■ PHN297 CLINICAL ATTACHMENT 2

A period of additional supervised clinical practice designed to expand and refine skills acquired in PHN197.

Course: PH80

Credit Points: 12

#### ■ PHN351 ULTRASOUND EQUIPMENT 2

Lectures and practical exercises on the principles and techniques of quality assurance protocols used in ultrasonic imaging.

Course: PH80

Prerequisite: PHN153

Credit Points: 6 Contact Hours: 2 per week

#### ■ PHN352 ULTRASONIC EXAMINATION IN CARDIOLOGY

The techniques of ultrasound imaging used in investigating the cardiovascular system; techniques for demonstration of cardiac structures, cerebrovascular and peripheral vascular systems and peripheral venous systems.

Course: PH80

Credit Points: 6 Contact Hours: 2 per week

#### ■ PHN353 ULTRASOUND IN MEDICAL DIAGNOSIS

The role of ultrasound in medical imaging diagnosis.

Course: PH80

Credit Points: 6 Contact Hours: 2 per week

#### ■ PHN354 ULTRASONIC EXAMINATIONS OF THE HEAD, NECK & PERIPHERAL ORGANS

Ultrasound techniques used to examine the head, neck and peripheral organs and the ultrasonic appearance of normal and abnormal anatomy and pathology.

Course: PH80

Prerequisite: PHN257

Credit Points: 6 Contact Hours: 2 per week

#### ■ PHN355 CARDIOVASCULAR ULTRASOUND

The principles and equipment requirements of ultrasound applications in the cardiovascular system; the clinical techniques and diagnostic criteria of such applications in particular those of the peripheral arterial and venous systems and the heart.

Course: PH80

Credit Points: 12 Contact Hours: 4 per week

#### ■ PHN357 CLINICAL ULTRASOUND 3

A supervised practical program carried out in an approved clinical ultrasound department. Students must obtain experience of specified ultrasound examinations used in cardiology and in the examination of the head, neck and peripheral organs.

Course: PH80

Prerequisite: PHN257

Credit Points: 12

#### ■ PHN397 CLINICAL ATTACHMENT 3

A period of additional supervised clinical practice designed to expand and refine skills acquired in PHN197 and PHN297.

Course: PH80

Credit Points: 12

#### ■ PHN520 PROJECT

#### ■ PHN540 PROJECT

The project may take the form of research development, a design, a feasibility study, or the collation of scattered information on a given topic. The project can be undertaken externally under QUT supervision. Time spent on projects will be one year for full-time and two years for part-time students.

Course: PH80

Contact Hours: 18 (FT) and 9 (PT) per week

Credit Points: 48 (FT) and 24 (PT) per semester

#### ■ PHN715 ADVANCED TOPICS IN PHYSICS 1

This unit provides a focussed theoretical foundation for each student's research program and aims to develop a high level of theoretical understanding of the physical principles underpinning the research.

Course: SC30

Credit Points: 8

**■ PHN716 ADVANCED TOPICS IN PHYSICS 2**

See PHN715.  
Course: SC30  
Credit Points: 12

**■ PHS021 INTRODUCTORY PHYSICS**

Intended to give a grounding in basic physics topics selected from the following areas; mechanics, heat, electricity, and magnetism and light. **Note:** This unit is not compatible with Senior Physics.

Course: BN10  
Credit Points: 6      Contact Hours: 3 per week

**■ PSB010 INTRODUCTORY DESIGN 1**

See ARB140.  
Course: BN30  
Credit Points: 12      Contact Hours: 6 per week

**■ PSB011 INTRODUCTORY DESIGN 2**

Studio work; simple three dimensional design tasks at a variety of scales, and illustrating tasks associated with the relevant professions. Workshop and field work related to studio exercises. Techniques of oral and written presentation, report writing, use of English as applicable to the relevant professions.

Course: BN30      Prerequisite: PSB010  
Credit Points: 20      Contact Hours: 10 per week

**■ PSB012 PLANNING & LANDSCAPE DESIGN 1**

Site planning and problem solving theory; studio exercises developing the capacity to analyse the nature and use of spaces and to understand the role of creative expression in design; formal oral presentation techniques (informal and persuasive) including meetings, conferences, interviews and speeches.

Course: BN30  
Prerequisites: ARB140 or PSB010, ARB141 or PSB011, PSB050, PSB054, PSB056  
Credit Points: 21      Contact Hours: 9 per week

**■ PSB013 PLANNING & LANDSCAPE DESIGN 2**

Site planning techniques. The studio exercises link work commenced in site planning theory and site planning techniques; integrates issues covered in PSB012 with the technical and practical aspects of site planning and design.

Course: BN30  
Prerequisites: PSB012, PSB052  
Credit Points: 20      Contact Hours: 6 per week

**■ PSB014 PLANNING & LANDSCAPE DESIGN 3**

This unit aims to confirm the student's appreciation of the coherence of the design process by a single integrated semester long project. Secondly, the exercise focuses on interdisciplinary skills by undertaking joint work with the architecture students.

Course: BN30  
Prerequisites: PSB013, PSB072, PSB058  
Credit Points: 20      Contact Hours: 6 per week

**■ PSB015 PLANNING & LANDSCAPE DESIGN 4**

Expansion of students' planning and design skills by increasing the complexity and scale of projects and introducing problems requiring knowledge and skills drawn from the human environment, natural environment and technology study areas. The three projects for the semester focus on the development of a significant urban area.

Course: BN30

Prerequisites: PSB013, PSB058, PSB059, PSB072, PSB275

Credit Points: 20      Contact Hours: 6 per week

**■ PSB016 HISTORY OF THE BUILT ENVIRONMENT 1**

The development of man's artificial environment and its relationship to ideas, technology, and the fine arts from the earliest times to the seventeenth century.

Course: BN30  
Credit Points: 6      Contact Hours: 3 per week

**■ PSB017 HISTORY OF THE BUILT ENVIRONMENT 2**

See ARB241.  
Course: BN30  
Credit Points: 8      Contact Hours: 3 per week

**■ PSB018 LAND USE GENERATION**

The evolution of western cities. Order and diversity in the organisation of modern land uses. Values, activities and land uses. Characteristics of major human activities: shelter, work, movement, learning, recreation, exchange. Changing influences on contemporary settlements and emergent settlement forms.

Courses: BN30, PS47  
Credit Points: 4      Contact Hours: 2 per week

**■ PSB019 PLANTING DESIGN**

Design characteristics and criteria. Use of plants as structural and design elements within landscape principles to planting design; scale; design for change, growth, replacement and maintenance. Planting design in schemes such as streets, highways, parks, urban forecourts and interior landscapes, gardens and broadscale regeneration and stabilisation.

Course: BN30      Prerequisite: PSB057  
Credit Points: 3      Contact Hours: 1 per week

**■ PSB020 LAND USE POLICIES**

Review of the Government structure as applied to urban areas and regions. The levels of urban planning. How urban policies are made. Organisations as policy makers and policy implementors. Areas of conflict and their resolution. The various levels and types of land use planning. Major land uses and activities; work, housing, recreation, transport and welfare.

Course: BN30, PS47      Prerequisite: PSB018  
Credit Points: 4      Contact Hours: 2 per week

**■ PSB021 CONSERVATION THEORY**

Introduction to the concepts of conservation and preservation. The structure of conservation legislation and responsibility in Australia. ICOMOS and the Burra charter. The particular requirements of places, landscapes and precincts in mixed or public ownership. Application of conservation concepts and their use in the National Listings process.

Courses: BN30, PS47  
Credit Points: 2      Contact Hours: 1 per week

**■ PSB030 INTRODUCTION TO THE PROFESSIONS**

The concept of professionalism and contemporary social expectations of the environmental design professions. Current issues and controversies in environmental design and planning in Australia. Organisation and activities of the professional institutes. Powers, responsibilities and day-to-day activities of landscape architects and urban and regional planners.

Course: BN30  
Credit Points: 3      Contact Hours: 1 per week

**■ PSB032 ISSUES & ETHICS**

Case studies of successful solutions to environmental problems (eg. Oregon, London, South Australia). Implications of major environmental problems and environmental awareness for urban form and policies. Environmental impacts of technological change. Contrasting attitudes towards conservation of natural, rural and urban environments. Concept of stewardship.

**Course:** BN30, PS47

**Prerequisites:** Completion of years 1 and 2

**Credit Points:** 2 **Contact Hours:** 1 per week

**■ PSB040 GRAPHIC COMMUNICATION**

A practice-based program with specialised, formal lecture inputs related to the development of methodologies. The program concentrates on the achievement of a professional standard in basic techniques of production documentation.

**Course:** BN30 **Prerequisites:** ARB140, PSB011

**Credit Points:** 6 **Contact Hours:** 3 per week

**■ PSB041 REPORT PREPARATION**

Formal writing techniques, including reports, instructions, proposals, specifications, correspondence and essays. Report writing. Structure and content of reports. Summaries and subdivision of materials. Precise use of tables, charts, and illustrations in written presentation. Clarity and the selection of data.

**Course:** BN30 **Prerequisites:** COB163, PSB400

**Credit Points:** 2 **Contact Hours:** 1 per week

**■ PSB050 THE HUMAN ENVIRONMENT 1**

See ARB141.

**Course:** BN30

**Credit Points:** 4 **Contact Hours:** 2 per week

**■ PSB051 THE HUMAN ENVIRONMENT 2**

Basic research principles, perception, learning processes, motivation and problem solving. Communication, characteristics and dynamics of group and interpersonal interactions. Stress and anxiety management. The role of the self-concept and locus of control in transactions with the world in general.

**Course:** BN30

**Credit Points:** 6 **Contact Hours:** 2 per week

**■ PSB052 THE HUMAN ENVIRONMENT 3**

Role of social, cultural, and historical variables in human-environment interactions. Social and cultural development of Australian urban environments. Theory: privacy, personal space, territoriality, environmental meaning and cognition, cognitive maps and wayfinding, intercultural and intracultural differences.

**Course:** BN30

**Prerequisite:** PSB051

**Credit Points:** 6 **Contact Hours:** 3 per week

**■ PSB053 THE HUMAN ENVIRONMENT 4**

Directing society; the roles of government and private enterprise; theories of power in society. The Australian example; three tiers of government; Australian constitution; Parliamentary democracy. Queensland State administration; role of local government, quangos and statutory authorities; pressure groups and lobby groups and their influence in the built environment arena.

**Course:** BN30

**Prerequisite:** PSB052

**Credit Points:** 4 **Contact Hours:** 2 per week

**■ PSB054 ENVIRONMENTAL SCIENCE**

Atmospheric process including climate; air pollution and smog; water cycles. Sea level changes and water pollution as a global issue; carbon, nitrogen and phos-

phorous cycling. Introduction to human population and demographic trends. Distribution and trade in renewable and non-renewable resources; trends in the use of land; the city as an ecosystem; natural resource management and conservation.

**Courses:** BN30, PS47

**Credit Points:** 4

**Contact Hours:** 2 per week

**■ PSB056 APPLIED LAND SCIENCE FOR DESIGNERS**

This unit is concerned with establishing the foundations of a scientific understanding of the earth's surface. It includes earth science and climatology for environmental design; land forms and their origins; introduction to the physical properties and behaviour of soils and rocks in relation to the design professions.

**Course:** BN30

**Credit Points:** 4

**Contact Hours:** 1 per week

**■ PSB057 LANDSCAPE ECOLOGY 1**

Concepts of plant science and ecology which form the basic understanding necessary for design in dynamic biophysical environments; the biological world, at whatever scale of analysis we use - individual, species, population or community - is responsive in its form and function to the influences of the environment in which it lives. Through understanding the processes which regulate the impact of environment it is possible to interpret patterns in the landscape, predict change and design form and function.

**Course:** BN30

**Credit Points:** 8

**Contact Hours:** 4 per week

**■ PSB058 LANDSCAPE ECOLOGY 2**

The broad division of the earth in relation to climate and soils; the ecosystem concept and its development and application at various geographic scales; concept of community ecophysiology and growth equations; ecological biogeography of Australian vegetation; classification of landscape: concepts of biogeographic regions; landscape structure: patches and corridors and the ideas of matrix and network; analysis of landscape structure and function.

**Course:** BN30

**Credit Points:** 8

**Contact Hours:** 3 per week

**■ PSB059 POPULATION & URBAN STUDIES**

Topics include: aspects of urban structure including size/function relationships, concentric zone theory, Hoyt's settlement patterns and problems of rural settlements. The dynamics of urban areas: the relationships and requirements of urban activities (especially residential, work and leisure activities); theories of city form and change; the problems of the CBD; the CBD fringe, and the urban/rural fringe. Case studies of Australian settlements.

**Courses:** BN30, PS47, PS67

**Credit Points:** 6

**Contact Hours:** 2 per week

**■ PSB060 INTRODUCTION TO ECONOMICS**

Introduction to the basic economic problem of scarcity. Production possibilities are outlined together with various types of economic regimes. A simple macroeconomic circular flow model is introduced. The second part of the unit deals with microeconomic concepts. The market system and associated concepts of demand, supply and price equilibrium.

**Courses:** BN30, CN32

**Credit Points:** 2

**Contact Hours:** 1 per week

**■ PSB061 IMPACTS & ASSESSMENT**

Forms of impact assessment and analysis considering ecological, social and economic issues; various statutory systems. An analysis of the ecological

processes as a background to assessing impact of human activities: urbanisation, resource exploitation, mining and other forms of landscape change.

**Courses:** BN30, PS47

**Prerequisites:** PSB058, PSB059

**Credit Points:** 5      **Contact Hours:** 2 per week

#### ■ PSB062 ECONOMICS OF TOWN PLANNING

This unit is essentially microeconomic; introduces urban economics and the economic aspects of town planning issues; provides techniques for economic analysis suited to planning needs; illustrates interactions with employment, industry, population and urban studies at the economic interface.

**Course:** BN30

**Credit Points:** 5      **Contact Hours:** 2 per week

#### ■ PSB063 HOUSING & COMMUNITY SERVICES

Population change and households formation. Housing conditions and preference surveys; housing issues and policies. The economics of the building and land development industries. The physical place of educational institutions in communities. Shared use of facilities. Location and space standards. Social and welfare services and their role in the community.

**Courses:** BN30, PS47

**Credit Points:** 5      **Contact Hours:** 2 per week

#### ■ PSB070 MAP & AIR PHOTO INTERPRETATION

Types, sources, uses and availability of maps and air photos, map reading, understanding of contours, land form and use of sections; methods and techniques of map production; introduction to photogrammetry and use of stereoscopes; introduction to remote sensing.

**Course:** BN30

**Credit Points:** 2      **Contact Hours:** 1 per week

#### ■ PSB071 SITE MEASUREMENT

Introduction to basic equipment for site measurement: levels, staffs, chains and tapes, the prismatic compass, optical prism, clinometer, range poles and their use in horizontal and vertical measurement. Introduction to recording of field data and the preparation of measured site drawings from recorded data.

**Course:** BN30

**Credit Points:** 4      **Contact Hours:** 1 per week

#### ■ PSB072 DESIGN SCIENCE

The quantity and quality of light and daylight in buildings; macro and micro climatic conditions; students are given the opportunity to conduct experiments and test models.

**Course:** BN30

**Prerequisites:** ARB140, CHB204, PHB144,

PSB011, PSB056

**Credit Points:** 4      **Contact Hours:** 2 per week

#### ■ PSB073 COMPUTER TECHNIQUES

Development of understanding, awareness, and appreciation of computers as aids in data analysis and presentation, and of basic skills to input, manipulate, and analyse output; for statistical analysis of data in decision making; the range of information systems; as a tool in landscape architecture and planning.

**Course:** BN30      **Prerequisites:** MAB195, MAB196

**Credit Points:** 4      **Contact Hours:** 2 per week

#### ■ PSB074 LAND DEVELOPMENT

The political, economic and physical contexts of land development; environmental services and utilities at the broad scale; the necessary design criteria for these

services. Topics include: characteristics of land development projects; structure and operation of approval authorities; design considerations; impacts of electricity and gas systems on the natural environment; transport systems planning.

**Course:** BN30

**Credit Points:** 8      **Contact Hours:** 3 per week

#### ■ PSB077 TRANSPORT PLANNING

Studies include alternative modes of transport; to methods for predicting future urban transport patterns; and to techniques of transport planning and management. It covers movement and its alternative modes. The origin and destination approach to traffic management; interchange studies. Inter-urban traffic and regional transport planning. The relationship between land use and traffic generation.

**Courses:** BN30, PS67

**Credit Points:** 6      **Contact Hours:** 2 per week

#### ■ PSB078 URBAN LAND DEVELOPMENT

Continuation of PLB546. Land development projects, their financial, marketing and local authority requirements; the housing industry, firm and industry developments and current trends; the requirements of community, public and utility services.

**Courses:** BN30, PS67

**Prerequisite:** PSB074

**Credit Points:** 6      **Contact Hours:** 2 per week

#### ■ PSB190 ELECTIVE UNIT (PLANNING)

Any approved unit selected from the undergraduate programs of the Faculty of Built Environment and Engineering, normally one of the landscape architecture courses. In special circumstances the elective unit may be selected from courses offered by QUT's other faculties or by another approved university.

**Course:** BN30

**Prerequisites:** Completion of years 1 and 2

**Credit Points:** 3      **Contact Hours:** 2 per week

#### ■ PSB230 QUANTITIES & COSTS

Measurement and costing of time, resources, and materials for professional services, production of documents, and implementation of projects. The techniques and tools available for both preliminary and detailed measurement and costing and their control.

**Course:** BN30

**Credit Points:** 2      **Contact Hours:** 1 per week

#### ■ PSB244 LANDSCAPE GRAPHICS

Combined application of freehand, drafting and colour techniques. The selection of colour, theme and emphasis in graphic packages. Realism, abstraction and symbolism in landscape communication. Monochromatic graphics for simple reproduction. Integration of various graphic techniques and media. Efficient processes for production and reproduction.

**Course:** BN30

**Credit Points:** 6      **Contact Hours:** 2 per week

#### ■ PSB275 LANDSCAPE CONSTRUCTION 1

Materials and methods of construction; skills in detailing and preparation of documents. Topics include: the common building materials; foundation soils; site stormwater drainage, water and electrical services; applied systems, including paving, etc.

**Course:** BN30

**Prerequisite:** PSB071

**Credit Points:** 6      **Contact Hours:** 3 per week

#### ■ PSB276 LANDSCAPE CONSTRUCTION 2

Techniques of land surface manipulation including construction of platforms for building, carparks, sports ovals etc. and associated provision of surface drainage. Lectures are accompanied by skill develop-

ment exercises in a grading workbook concluding with the preparation of two set grading plans.

**Course:** BN30 **Prerequisite:** PSB071  
**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ PSB280 ELECTIVE UNIT (LANDSCAPE ARCHITECTURE)

Final year students are required to undertake a minimum of two hours of elective units. The elective unit may be taken in either semester or spread across both semesters depending on unit choice.

**Course:** BN30  
**Prerequisites:** Completion of years 1 and 2  
**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ PSB303 ANALYSIS OF SPATIAL MEASUREMENT 1

Surveying measurements and their assessment, propagation of variances, pre-analysis of survey tasks, least squares adjustment methods for various functional and stochastic models.

**Course:** PS47  
**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ PSB304 ANALYSIS OF SPATIAL MEASUREMENT 2

Generalised Least Squares, linearised observation equations approach to more extensive horizontal and 3-D networks including GPS data; reliability of solutions and design of networks; detection and treatment of systematic and gross errors.

**Course:** PS47  
**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ PSB306 CARTOGRAPHY 1

Freehand Drawing: field sketching; base materials: drawing instruments for survey drafting; 3-D representation: relief shading, contour interpolation; precision plotting: earth's co-ordinate system; construction of map projections both manual and computer assisted; the cadastre: an introduction to its history and implications for society if the cadastre is not maintained; specifications for cadastral plan preparation: cadastral plan registering authorities requirements, simple subdivision plans; plan reproduction techniques: electrostatic diazo.

**Course:** PS47  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ PSB307 CARTOGRAPHY 2

Preparation of cadastral plans for survey actions over multiple amalgamations; building units and group titles; background tenures, mining tenures; detail survey plans: long and cross sections for engineering projects; digital data acquisition: types of digitisers and scanners; raster/vector conversions; digitising techniques; scanning problems; output devices; printers, plotters, scanner plotters, image setters.

**Course:** PS47 **Prerequisite:** PSB306  
**Co-requisites:** PSB315, PSB327  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ PSB308 CARTOGRAPHY 3

Reprographics: graphic arts photography; film characteristics; emulsion properties; printing methods: off-set lithography; gravure letterpress; requirements of originals; type and typesetting layout design; paper technology: ink technology, colour separation techniques and procedures for map production; half-tone photography for relief shading; desktop publishing: software capability and limitations.

**Courses:** PS47, SV34 **Prerequisite:** PSB307  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ PSB309 CARTOGRAPHY 4

Map Design: map compilation, generalisation; compilation methods; data sources and evaluation; map design elements: composition; organisation; visual hierarchy; gestalt theory: thematic mapping; qualitative and quantitative pre-processing of spatial data; statistical methods; data classification; dot map; choropleth map isarithmic mapping cartograms; colour and visual perception; colour systems; Munsell, Ostwald, CIE, colour in cartographic design.

**Course:** PS47 **Prerequisites:** PSB308, PSB342  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ PSB310 GEODESY 1

Fundamentals of potential theory; the La Place operator and La Place equation; outline of spherical harmonics; the earth's gravity field, potential of the earth in spherical harmonics. Geometric and physical of lower degree harmonics; meaning of geopotential surfaces, geoid, undulations, deflection of vertical, level surfaces, normal, orthomorphic, dynamic heights; heighting systems and AHD; satellite geodesy, perturbed and unperturbed satellite motions; orbital elements; determination of orbits; satellite ephemerides; orbital characteristics for communication, remote sensing and position fixing satellites; the GPS system, configuration, availability, reliability, ephemerides, error sources and error budgets; GPS receivers and software; GPS applications in point positioning, differential and kinematic mode; non-geodetic applications.

**Course:** PS47 **Co-requisites:** PSB346, PSB329  
**Prerequisites:** PHB172, MEB221, PSB327, MAB498

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ PSB311 GEODESY 2

Further work on spherical and ellipsoidal harmonics; Gauss' and Green's formulae, Legendre's functions, Stokes' formula; determination of geoid and best fitting spheroids; satellite datum, transformation to geodetic datum; local and geocentric geodetic datum, mutual transformations; geodetic and satellite time systems; variations in gravity, gravity measurement, gravity and height anomalies; ocean and earth tides; other geodetic space techniques; VLB1, LLR, INS, Doppler; the incorporation of these data sets into classical terrestrial data sets; geophysical aspects of geodesy; rotation of the earth, length of day, polar motion, UT1 and UT2; work of the International Earth Rotation Service; the Conventional Terrestrial System.

**Course:** PS47 **Prerequisite:** PSB310  
**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ PSB315 LAND ADMINISTRATION 1

Introduction to the nature of politics, political concepts and culture, and public policy; constitutional development in terms of its English origins, evolution of colonial self-government, federalism, and the Australian Constitution with particular reference to the effects on laws relating to land; the roles of parliament, executive government, the judiciary, the public service, local government; the exercise of political influence through pressure groups, political parties, the mass media, and issues of freedom of information; the purpose and aims of resource policy and the role of property rights in resource management.

**Courses:** PS47, SV34  
**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ PSB316 LAND ADMINISTRATION 2

An historical study of the development of land policy in Australia, highlighting the conflicts that have arisen from differing philosophies of land use and owner-

ship; introduction to the elements of the law; the sources of the law, legal systems, the judicial hierarchy, rules of precedents, law reports, where to find the law; the basic principles and objectives of the Torrens system of land titling; concepts of government guarantee and indefeasibility; concepts of Estate, Tenure, Interests; the operation of the Torrens system in Queensland; Certificates of Title, easements, caveats, mortgages, dealings, transfers, lease, etc.

**Course:** PS47

**Credit Points:** 8

**Contact Hours:** 3 per week

### ■ PSB317 LAND ADMINISTRATION 3

The legal aspects of re-instatement of boundaries; case law associated with re-instatement; statutory requirements which relate to the zoning and development of land; land and surveying requirements of the following Acts: The Dividing Fences Act, The Land Sales Act, The Soil Conservation Act, The Water Resources Act, The Beach Protection Act, The Integrated Resort Development Act, The Acquisition of Land Act, The Harbours Act, The Canals Act, etc.

**Course:** PS47

**Prerequisite:** PSB316

**Credit Points:** 8

**Contact Hours:** 3 per week

### ■ PSB318 LAND ADMINISTRATION 4

An introduction to rural and urban sociology; defining sociology, the ecological approach, urban social structure, social patterns in urban society, deviance and urban living, rural social patterns and problems. Social aspects of land administration, the impact of industrialisation land urbanisation on rural societies, the country/city dichotomy; social problems of new town and large scale suburban subdivision and urban redevelopment.

**Course:** PS47

**Prerequisites:** PSB319, PSB323

**Credit Points:** 6

**Contact Hours:** 3 per week

### ■ PSB319 LAND ADMINISTRATION 5

The role of organisation, learning as a function of time, tendencies towards specialisation, the concept of synergy, problems of co-ordinating activities, the organisation of information and the significance of rule governed behaviour; economic, psychological, administrative, political and sociological perspectives on organisation; systems and cybernetic approaches to organisation; the individual as a system, social systems, and adaptive systems; applications in personal psychology and development, the business firm, professional and industry organisations, government and social controls, legal institutions and public policy, land information systems.

**Course:** PS47

**Prerequisites:** PSB315, PSB323, PSB318

**Credit Points:** 6

**Contact Hours:** 3 per week

### ■ PSB320 LAND DEVELOPMENT PRACTICE 1

The history of land development, especially urban land development, in Australia and in Queensland. The effects of technology and social attitudes on urban land development; sustainable land development; the physical, economic and social determinants of land use; land development as an economic activity; economic and social benefits of land development controls; site analysis and assessment; opportunities and constraints, sieve mapping, GIS application; the site in its broader context; spatial models; models for levels of activity and location of activities, optimising models.

**Course:** PS47

**Prerequisites:** MAB498, PSB054, PSB324, PSB342

**Co-requisites:** CEB464, PSB317

**Credit Points:** 8

**Contact Hours:** 3 per week

### ■ PSB321 LAND DEVELOPMENT PRACTICE 2

Elements of traffic planning, road capacities, road hierarchies; geometric layout of rural and urban roads; storm water and sewerage drainage for urban subdivisions; subdivision design; lot geometry and orientation, road hierarchies and access; open space systems, radburn; provision and location of services; detailed treatment of development controls affecting subdivisions - negotiations, applications, appeals; preparations for Court, precedents.

**Course:** PS47

**Prerequisites:** CEB464, PSB317, PSB318, PSB320

**Co-requisite:** CEB564

**Credit Points:** 8

**Contact Hours:** 3 per week

### ■ PSB322 LAND DEVELOPMENT PRACTICE 3

Further work on conventional and innovative subdivision design, integration of road and lot design with engineering works, especially drainage; subdivision designs and procedures for canal estates, industrial estates, group title, building units and other strata titles; costing and cash flow analysis for subdivision projects; feasibility studies, designing to a budget; preparation of a complete application for a local authority approval.

**Course:** PS47

**Prerequisites:** CEB564, PSB321, PSB324

**Credit Points:** 16

**Contact Hours:** 6 per week

### ■ PSB323 LAND STUDIES 1

Introduction to the nature and scope of economics as a discipline; analysis of factors affecting supply and demand for goods and services; market structure, market failure and rationale for government intervention into the operation of markets; land and natural resources, conservation and the environment, and the role of property rights and obligations; problems of industry location and spatial aspects of economics; consideration of economic efficiency, productivity, technological change and economic growth.

**Course:** PS47

**Credit Points:** 6

**Contact Hours:** 3 per week

### ■ PSB324 LAND STUDIES 2

Concepts of value, purposes of valuation: general and statutory definitions; general principles of valuation: methods of valuation, preparation and presentation of valuation reports; valuation of improvements to land; valuation methods and techniques applicable to the valuation of residential, retail, commercial and industrial property; valuation of other rights in land, easements, licences, life interests, reversions, remainders and fractional interests; strata title; effect of statutory town planning schemes on land valuation; land valuation and land administration: legislation affecting land valuation practice including the Valuation of Land Acts, Valuers Registration Act, Auctioneer's Commission Agents Act, Sale of Land Act; Law reports on valuation cases; reports of recent Royal Commissions and Committees of Inquiry dealing with land valuation; duties and liabilities of a valuer.

**Course:** PS47

**Prerequisites:** PSB316, PSB323, PSB328

**Credit Points:** 6

**Contact Hours:** 3 per week

### ■ PSB325 LAND SURVEYING 1

General introduction to the profession and to position fixing methods ('absolute' and relative). Elementary treatment of errors - systematic and random; accuracy and precision. Working from 'whole to part'; horizontal and vertical control, PSMs, level datum(s), BMs,



MSL, AHD. Types and purposes of surveys; tapes and chains, formulae (sans derivations) for slope, temperature, sag and tension correction; chaining techniques; simple trigonometric and differential heighting; introductory principles and use of EDM; calcs; close and Bowditch adjustment; areas and volumes. Introduction to mapping; map numbering system used in Queensland; interpretation of cadastral and topo maps; elementary aerial photography; simple geometry and stereoscopic measurement; interpretation and orientation in maps and field positions; outline of GPS and GIS technologies - opportunities and pitfalls.

Course: PS47

Credit Points: 8 Contact Hours: 3 per week

### ■ PSB326 LAND SURVEYING 2

Calcs; missing element closes; horizontal curves (simple, compound, reverse); cutting off areas; 'Horner type' plane calcs; earth work estimation; errors; further work on random errors, measures of precision, errors and residuals; simple propagations; theory, tests and adjustments of optical theodolites; tachemetry, ODM, test and adjustments of tilting and automatic levels; reciprocal and precision levelling. Theory and practice of electronic theodolites and total stations; (Note: this requires co-ordination with Physics). Traversing and further non-Least Square adjustments; investigation and detail surveys. Longitude and cross-sections; theory and practice of barometric and hydrostatic levelling. Further work on contours and contouring.

Course: PS47

Prerequisite: PSB325 Co-requisite: PHB172  
Credit Points: 8 Contact Hours: 3 per week

### ■ PSB327 LAND SURVEYING 3

Position fixing and resection; contour and detail surveys, specifications, performance and assessment of DTMs; horizontal and vertical alignment for route surveys; areas, volumes and earthworks. Field astronomy theory.

Course: PS47

Credit Points: 10 Contact Hours: 3 hours

### ■ PSB328 LAND SURVEYING 4

Land Title Systems, Reinstatement; an explanation of the options of land title systems, with particular reference to Customary Land Tenure, Private Deeds registration, Public Deeds Registration, and Registration of Title; an analysis of the literature and case law relevant to the reinstatement of property boundaries as applicable to Queensland; an analysis of legislation, subordinate legislation and case law that impinges on the reinstatement process; a comparative rendering of spatial relationships. Field survey to reinstate the boundaries of a section in the Brisbane Metropolitan area.

Course: PS47

Co-requisite: PSB317  
Prerequisites: PSB316, PSB325  
Credit Points: 8 Contact Hours: 3 per week

### ■ PSB329 LAND SURVEYING 5

Reconnaissance for geodetic surveys; geodetic observations techniques and reduction of observations. The three classical methods of geodetic surveying, triangulation, trilateration and traversing. Precise levelling including the Princeton Test; satellite surveying using GPS technology; the undertaking of a geodetic survey in accordance with Surveyors Board requirements for Registration as a Surveyor.

Course: PS47

Prerequisite: PSB327  
Credit Points: 8 Contact Hours: 3 per week

### ■ PSB330 LAND SURVEYING 6

Field surveys for DTMs, as-constructed surveys, associated specifications and standards; more complex setting out, control and monitoring for structures; mining surveying for surface and below surface mining activities; hydrographic surveying for exploration and port management.

Course: PS47

Credit Points: 8 Contact Hours: 3 per week

### ■ PSB331 LAND SURVEYING 7

The need for control in the use of resources; property rights as a method of resource control. Creating and maintaining knowledge of property rights; including issues concerned with parcel identifiers, land tenure, land boundaries, land subdivision, land registration, changing rights through statutory changes, attitudes and responses of the public; evidence of property rights, evolution from customary land tenures to land registration systems; factors leading to breakdown of systems. Effects of technological change on land use, evolving property rights and obligations, and on information technology on land use controls; the Mabo case.

Course: PS47

Credit Points: 8 Contact Hours: 3 per week

### ■ PSB332 LAND SURVEYING 8

Procedures of the various departments including but not confined to the Department of Lands, Resources Industries; plan registration, road closure, resumption surveys, conversion of mining tenure to freehold, conversion of pastoral tenures to freehold, excision for and of reserves of various kinds. The undertaking of a cadastral survey of moderate complexity in accordance with Surveyors' Board's requirements for registration as a surveyor.

Course: PS47

Prerequisite: PSB328  
Credit Points: 8 Contact Hours: 3 per week

### ■ PSB333 MAP PROJECTIONS

Mapping terms and definitions; the mapping problem. Distortion, linear, angular and areal. Tissot's Indicatrix Ellipses. Scale, scale in particular directions. Conditions for orthogonality, conformality, equivalence and equidistance. Selection of suitable projections; spherical projections. Principles for deriving projections on tangent and secant plane, conic and cylindrical surfaces in skew, normal or transverse aspects. The use of skew graticules; spheroidal projection. The polar stereographic, Lambert's polar conformal, Mercator and Transverse Mercator projections. The UTM system. Computations on the AMG. Line scale factor and (t - T) for short and long lines. Mutual transformation of polar and AMG coordinates.

Course: PS47 Co-requisites: PSB306, PSB346  
Prerequisite: MAB497

Credit Points: 6 Contact Hours: 3 per week

### ■ PSB334 PHOTOGRAMMETRY 1

Foundations of photogrammetry: history, products, applications; elements of photogrammetric optics: lenses and filters; aerial cameras: aerial photography; factors affecting the photographic mission; acquisition of photography. Photographic materials and processing; photographic materials and their properties; the aerial photographic image; planning and executing the photogrammetric project. Field surveys for photogrammetry; introduction to basic mathematics of photogrammetry; geometry and use of a stereo model. Introduction to remote sensing: propagation of electromagnetic waves; general descrip-

tion of sensors; processing of image grey levels; classification; mapping with space borne imagery.

**Course:** PS47

**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ PSB335 PHOTOGRAMMETRY 2

Basic mathematics of photogrammetry: coordinate systems; elements of interior and exterior orientation; image forming equations of the central projection; fundamental rotation matrices. Space resection of a single photograph; formation of a stereo model: on a stereoplotter; numerically; aerotriangulation: introduction; historical development; methods; instrumentation. Block triangulation with independent models: three-dimensional transformation of unit models; separation of planimetric and height computations; corrections for image errors and instrumental errors: image deformation; physical effects; accuracy of block adjustment: planimetry; height.

**Course:** PS47      **Co-requisites:** PSB304, MAB795

**Prerequisites:** MAB497, MAB498, PSB334

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ PSB336 PHOTOGRAMMETRY 3

Principles of Plotting with a Stereoplotter: analogue plotters; analytical plotters. Rectification of photographs: perspective relationship between planes; differential rectification of photographs (orthophotos); data acquisition: digital elevation model; acquisition of height points; accuracy assessment; close range photogrammetry: introduction; overview; applications. Digital mapping and its relationship to geographic information systems and remote sensing: general process; attribute encoding of cartographic information; geographic information systems.

**Course:** PS47

**Prerequisites:** MAB497, MAB498, PSB303, PSB334, PSB335

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ PSB337 PHOTOGRAMMETRY 4

Introduction to digital photogrammetry: digital photogrammetry; digital image fundamentals; all digital photogrammetry and remote sensing; image sampling and resampling; digital image correlation: theory of digital correlation; computational methods in digital correlation; some strategies of computation in correlation; correlation by least squares; multi-point and feature-based matching. Digital geometric processing of images: projective transformation equations; effect of terrain undulations; digital differential rectification; processing of image grey levels: image transformation; image enhancement; image restoration.

**Course:** PS47

**Prerequisites:** MAB498, MAB795, PSB303, PSB304, PSB335, PSB336

**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ PSB338 PROFESSIONAL PRACTICE

Definitions and characteristics of a profession: principles of ethical behaviour, codes of ethics, the Code of Ethics of ISA; professionalism and statutory regulations; current issues in professionalism; professional organisations; professional heritage. The surveyor and statutory authorities. The Surveyors' Board, its purpose, powers, and functions; registration of surveyors. Business planning: market research and analysis, types of business structure, feasibility studies, cost-benefit analysis, financial requirements, business requirements: equipment insurance, staff recruitment, etc. Legal aspects of practice; contract; torts; business organisations: sole trader, partnership,

company, joint venture, association and trusts, business names.

**Course:** PS47

**Prerequisites:** COB163, PSB317 and completion of at least 240 course credit points

**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ PSB339 PROJECT

Each student is to research and report on a topic germane to surveying and mapping that will demonstrate a capacity to satisfy the objectives of this subject. A 20-25 minute seminar will be given by each student in both semesters on the topic of the project, or other approved subject.

**Course:** PS47

**Prerequisites:** BNB001 plus completion of not less than 240 course credit points

**Credit Points:** 16      **Contact Hours:** 3 per week

### ■ PSB340 REMOTE SENSING 1

History and principles of remote sensing: introduction; definitions; principles; electromagnetic radiation: introduction; the electromagnetic spectrum; interaction with the atmosphere; interaction with surfaces; types of imagery; image interpretation: elements of image interpretation; image interpretation strategies; preparation for interpretation; satellite systems: history; current platforms. Image resolution: target variables; system variables; operating conditions; elementary image classification: informational classes and spectral classes; unsupervised classification; supervised classification; other classifications; applications in the earth sciences; land use and land cover remote sensing and geographic information systems.

**Course:** PS47

**Credit Points:** 6      **Contact Hours:** 3 per week

### ■ PSB341 REMOTE SENSING 2

Review of aspects from PSB340; image interpretation: activities of image interpretation; elements of image interpretation; techniques of image interpretation; visual requirements of image interpretation; image processing and image classification; cartographic presentation of remote sensing data: fundamentals of cartographic presentation; approaches to cartographic presentation; rectification; applications environment; terrain and minerals: assessment and evaluation. Forest lands: inventory and assessment; water resources assessment; the marine environment. Weather and climate: measurement and analysis; crops and soils; urban environments: inventory and analysis; regional analysis.

**Course:** PS47

**Prerequisite:** PSB340

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ PSB342 SPATIAL INFORMATION SCIENCE 1

Introduction: what is spatial information science; maps and map analysis; raster SIS; vector SIS; digital elevation models; spatial data bases: spatial objects and data base models; relationships among spatial objects; data base concepts; data acquisition: sampling; data input; coordinate systems; map projections; transformations; georeferencing; Using spatial information systems: spatial analysis; output; graphic output design issues; modes of user/SIS interaction.

**Course:** PS47

**Credit Points:** 8      **Contact Hours:** 3 per week

### ■ PSB343 SPATIAL INFORMATION SCIENCE 2

Coordinate systems and geocoding: common coordinate systems; map projections; transformations.

Vector data structures and algorithms: storage of complex spatial objects; storage of lines; algorithms; polygon overlay operation; raster data structures and algorithms: raster storage; hierarchical data structures; quadtree algorithms and spatial indices; data structure and algorithms for surfaces, volumes and time: digital elevation models; spatial interpolation; temporal and 3-D data bases; data bases for spatial information systems; concepts; error modelling and data uncertainty; accuracy of spatial data bases; managing errors; line generalisation; visualisation: visualisation of spatial data; colour theory.

**Course:** PS47

**Prerequisites:** PSB306, PSB326, PSB334, PSB342  
**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ PSB344 SPATIAL INFORMATION SCIENCE 3

Spatial information science application areas: application areas; resource management; urban and rural planning; cadastral administration; facilities management; system planning: system planning overview; functional requirements analysis; system evaluation; benchmarking; system implementation: database creation; implementation issues; implementation strategies; other aspects: standards; legal issues; knowledge based techniques.

**Course:** PS47

**Prerequisite:** PSB343

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ PSB345 SPATIAL INFORMATION SCIENCE 4

Spatial information application area; decision making in spatial information systems; spatial information planning: system planning; system building; system evaluation; costs and benefits.

**Course:** PS47

**Prerequisite:** PSB344

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ PSB346 SPHEROIDAL COMPUTATIONS

Properties of the meridian ellipse. Radii of curvature, meridian arc. Spheroid as a geodetic reference surface, latitude, longitude, geoid separation and ellipsoidal height. Mutual conversion of geodetic and cartesian co-ordinates. Seven parameter co-ordinate transformations; least squares parameter estimation; Point-to-point computation on the spheroid, Robbin's long line and simplified formulae. Approximate methods; setting out parallels and meridians.

**Course:** PS47

**Prerequisites:** MAB497, PSB303

**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ PSB347 TOPICS IN ENGINEERING SURVEYING

Deformation surveys, design and analysis for structures and subsidence. Large scale metrology, measurement methods and geometric shape fitting; tunnelling surveys; high rise buildings.

**Courses:** PS47, SV34

**Credit Points:** 6 **Contact Hours:** 3 per week

#### ■ PSB902 URBAN PLANNING 1

Building upon preliminary economic knowledge, urban growth theory and constraints are outlined. Population and employment changes and their effect on employment, industry and residential location are identified together with relevant definition and analytical techniques. Introduction to economic base studies, activity rates and use of multipliers. The urban labour market, unemployment and labour supply are outlined. Theory and methods of industry location are developed: types and needs of industry, retailing, retail hierarchies; office activities, office

location; shopping centres; and office, industrial and corporate parks. The role of government and the impact of the post-industrial society are considered.

**Courses:** CN32, PS47

**Credit Points:** 4 **Contact Hours:** 2 per week

#### ■ PSB903 URBAN PLANNING 2

Principles and practice of planning. Introduction: background to emergence of planning in Queensland. Types of planning: development planning; development control; strategic planning. Detailed coverage of the current development approval process including Local Government (Planning and Environment) Act 1990, Conservation and heritage protection.

**Courses:** BN30, CN32

**Credit Points:** 4 **Contact Hours:** 2 per week

#### ■ PSB904 SURVEYING & MEASURING

Basic concepts, applications of surveying, relationship with architecture and building; instrumentation; setting out of procedures, plotting survey data, computations, cadastral systems, land tenure systems; Titles Office procedures, searching, identification, types of surveys, easements, encroachments, interpretation of survey plans.

**Courses:** CN31, CN32, CN33, PU42

**Credit Points:** 4 **Contact Hours:** 2 per week

#### ■ PSB905 PROJECT SURVEY

Two surveys of a building site; chain survey with reduced levels taken on a grid; survey done by theodolite traverse.

**Course:** CN31

**Prerequisite:** PSB904

**Credit Points:** 4 **Contact Hours:** 2 per week

#### ■ PSB907 SURVEYING

Introductory surveying methods, instrumentation; use of level and theodolite for gathering and setting out data points, distance measurement, circular curves, areas of volumes; introductory photogrammetry and digital terrain models.

**Course:** CE42

**Credit Points:** 8 **Contact Hours:** 3 per week

#### ■ PSN001 APPLIED RESEARCH TECHNIQUES

Research techniques, including surveys of various types, statistical analysis, remote sensing and others.

**Courses:** BN73, PS69

**Credit Points:** 6 **Contact Hours:** 2 per week

#### ■ PSN002 CONCENTRATION STUDIES A

Students, in conjunction with and with the approval of the course coordinator elect studies to improve basic knowledge in identified areas of deficiency. Such study may be either in defined units offered outside the major or a specified reading/research program under tutorial guidance.

**Courses:** BN73, PS69

**Credit Points:** 4 **Contact Hours:** 1 per week

#### ■ PSN003 CONCENTRATION STUDIES B

Each student undertakes approved study to develop more specialised knowledge and skills related to their specific focus of study or dissertation topic. Study may be taken within the student's own major through specialist studies offered by staff in their areas of expertise, from other majors in the course, or from other advanced studies in the University.

**Courses:** BN73, PS69

**Credit Points:** 8 **Contact Hours:** 2 per week

#### ■ PSN004 APPLIED RESEARCH TECHNIQUES

Research techniques, including surveys of various types, statistical analysis, remote sensing and others.

Course: BN73

Credit Points: 4      Contact Hours: 1 per week

#### ■ PSN099 DISSERTATION

Provides the opportunity to pursue in depth and with innovation an issue or problem within the chosen focus of study. This may be achieved through emphasis on either design or process. The balance between theory and design application may vary; however, a dissertation which focuses on a specific design must be supported by a theoretical basis and analysis sufficient to define the problem and to explain how the design satisfies the conditions for a solution. Conversely, a dissertation which focuses on the development of a theory must illustrate the practical implications of the theory for the relevant classes of design.

Course: BN73

Credit Points: 24      Contact Hours: 6 per week

#### ■ PSN111 COMPARATIVE PLANNING THEORY

Roles of planners: statutory, pluralist, advocate, consultants; models of planning at different scales and in different contexts: national, regional and local; planning under different economic and social conditions: free market, centrally planned, indicative, directive, interventionist, participatory. Current metropolitan and regional planning issues in Australia.

Course: BN73

Credit Points: 6      Contact Hours: 2 per week

#### ■ PSN112 CONCENTRATION STUDIES

In consultation with the course coordinator, and the approval of the Head of School, each student undertakes an agreed program of study which may involve taking selected courses from outside the urban and regional planning curriculum, focusing on a particular aspect of urban and regional planning which relates to the student's thesis topic. Students prepare a draft outline of the thesis and write a preliminary chapter or discussion paper which normally deals with the theoretical background or broad context of the topic selected for study.

Course: BN73

Credit Points: 12      Contact Hours: 2.5 per week

#### ■ PSN113 OPTION PROJECTS

Working in small groups, students undertake projects which broadly relate to their theses topics. Projects may relate to topics such as urban development and design, regional development planning and management, recreation and tourism planning, and planning in developing countries.

Course: BN73

Credit Points: 12      Contact Hours: 2 per week

#### ■ PSN114 METROPOLITAN PLANNING PRACTICE & LAW

Growth and changes in metropolitan areas with particular reference to Australia; urban sprawl or urban consolidation; the future of metropolitan Brisbane; the current planning and legislative framework; suggestions for reform; group project on an aspect of metropolitan planning, normally in Brisbane.

Course: BN73

Credit Points: 12      Contact Hours: 3 per week

#### ■ PSN121 PLANNING PROJECT

The thesis is normally required to be 30-50,000 words in length, and is related to the Concentration Studies

and Option Project chosen by the student. The precise subject and objectives are chosen in consultation with an appropriate tutor. Field work is usually a necessary component of the research required in the production of the Planning Thesis which should make an original contribution to knowledge in the field of urban and regional planning to a closely related area.

Course: BN73

Credit Points: 24      Contact Hours: 1 per week

#### ■ PSN122 PROFESSIONAL SEMINARS

Contributions by local and visiting speakers with specialist expertise or knowledge of specific issues or projects related to the work and interests of the built environment professions. Master of Built Environment students are expected to attend and to participate fully in the discussions.

Course: BN73

Credit Points: 6      Contact Hours: 2 per week

#### ■ PSN123 PLANNING IN DEVELOPING COUNTRIES

The concept of the Third World: characteristics and setting; theories of national development relevant to the Third World; the roles of international agencies, governments, expatriate urban and regional planners, local expertise and the international community; the problems of rapid social and cultural change; the role of nationalism. Urban issues: rapid urbanisation, dual economies, the provision of shelter, squatters, social and physical infrastructure. Rural issues: definitions and theories of development; rural development schemes and case studies: capital land and labour intensive schemes; economic transformations; the future of urban-rural relations in developing countries.

Course: BN73

Credit Points: 6      Contact Hours: 2 per week

#### ■ PSN124 OPTION COURSE

This course is developed by senior academic staff in response to matters of current significance; there are also opportunities to select appropriate elective courses from elsewhere within and outside QUT.

Course: BN73

Credit Points: 12      Contact Hours: 2 per week

#### ■ PSN201 MASTERS STUDIO

Students select a specific studio related to the proposed focus of study. Studios are organised on a thematic rather than a purely disciplinary basis and projects will involve members of several disciplines in schemes of varying scales. Advanced problem solving and interactive skills are required. Emphasis is placed on coordinated and managed group activity and resulting high levels of team output are expected. Professional aspects of project activities are supported by input on advanced aspects and concepts.

Course: BN73

Credit Points: 12      Contact Hours: 3 per week

#### ■ PSN202 ADVANCED PRACTICE 1

Presumes prerequisite understanding of practice relationships and processes. Emphasis is on the establishment and development of new markets and appropriate methodologies.

Course: BN73

Credit Points: 4      Contact Hours: 1 per week

#### ■ PSN203 ADVANCED PRACTICE 2

See PSN202.

Course: BN73

Credit Points: 8      Contact Hours: 2 per week

### ■ PSN204 PRACTICE SEMINAR

Students are required to prepare and present a formal seminar on a professional topical subject and to participate in those presented by fellow students.

Course: BN73

Credit Points: 4 Contact Hours: 1 per week

### ■ PSN205 PROFESSIONAL SEMINARS

This unit provides a forum for interdisciplinary discussion. Local and visiting speakers contribute specialist expertise and knowledge of specific issues or projects related to the work and interests of the contributing majors.

Course: BN73

Credit Points: 8 Contact Hours: 2 per week

### ■ PSN206 RESEARCH METHOD

Students are introduced to issues related to the purpose, organisation, and conduct of research and to a range of appropriate techniques for the collection and analysis of information relating to their dissertation topics. The current state of research and publication in the profession is highlighted.

Course: BN73

Credit Points: 4 Contact Hours: 1 per week

### ■ PSP001 ENVIRONMENTAL IMPACTS

Applied studies in ecological systems. The influence of these systems collectively and separately on environmental design decisions. Environmental impact studies and assessment techniques; statutory assessment systems.

Course: PS67

Credit Points: 6 Contact Hours: 2 per week

### ■ PSP002 HISTORY OF PLANNING

Links between society, ideas and urban form. Urban evolution from ancient to modern times in Africa, Asia, Europe, America and Australasia. The industrial revolution and its effect on urban form and on planning ideas. Australian urban history and the development of environmental management and town planning in Australia.

Course: PS67

Credit Points: 4 Contact Hours: 1 per week

### ■ PSP003 ECONOMICS OF TOWN PLANNING

Land use allocation and location. Theories of urban growth. Economic aspects of planning issues. Analysis of communities and localities. Employment and the labour market. Land values, densities and patterns. Urban renewal. Costs and finance.

Course: PS67

Credit Points: 6 Contact Hours: 2 per week

### ■ PSP011 CONSERVATION THEORY

Introduction to the concepts of conservation and preservation. Outline of the development and current status of the conservation movement. The structure of conservation legislation and responsibility in Australia. ICOMOS and the Burra Charter. The particular requirements of places, landscapes, and precincts in mixed or public ownership. Application of conservation concepts and their use in the National Listings process. Local and regional case studies.

Courses: BN73, PS66, PS69

Credit Points: 3 Contact Hours: 1 per week

### ■ PSP019 PLANTING DESIGN

Design characteristics and criteria. The use of plants as structural and design elements within landscape. Principles of planting design. Scale. Design for change, growth, replacement, and maintenance. Planting design in typical schemes such as streets,

highways, parks, urban forecourts and interior landscapes, gardens, and broadscale regeneration.

Course: PS66

Credit Points: 3 Contact Hours: 1 per week

### ■ PSP059 POPULATION & URBAN STUDIES

Basic urban definitions, spread and characteristics of urbanisation, structure of cities, economic and social processes at work within cities, particular aspects such as housing and gentrification, basic concepts of population and demography, recent and historical analyses of the Australian population, familiarisation with the role of ABS and with statistical and data analysis of population, world demographic trends.

Courses: BN30, HL88, PS67

Credit Points: 6 Contact Hours: 2 per week

### ■ PSP060 SCHOOL FIELD TRIP

One field course of approximately seven to ten days duration to provide a comparative dimension to students' studies and to develop skills in observation, data collection, recording and interpretation.

Course: PS67

Credit Points: 4 Contact Hours: 7-10 days

### ■ PSP063 HOUSING & COMMUNITY SERVICES

Social justice in the provision of Housing and Community Services. Demographic change; household formation and characteristics; projection of housing stock, tenure, and roles of providers. Significant problems such as homelessness, housing related poverty and the special housing needs of vulnerable groups. Case study examples from interstate and overseas.

Courses: HL88, PS67

Credit Points: 6 Contact Hours: 2 per week

### ■ PSP077 TRANSPORT PLANNING

Movement and its alternative modes: foot, cycle, car, bus, train, plane, pipeline, inland waterway and marine modes. The origin and destination approach to traffic management interchange studies. Inter-urban traffic and regional transport planning. This relationship between land use and traffic generation.

Courses: BN30, PS67

Credit Points: 6 Contact Hours: 2 per week

### ■ PSP078 URBAN LAND DEVELOPMENT

Structural and engineering design requirements in urban development - local physical services, roads and drainage, sewers, water, gas, electricity and Telecom service. Design and control systems, design standards, the effects of standardised requirements and alternative approaches. The roles of statutory authorities - gas, electricity, water, telephone, public transport, railways, waterways, road construction authorities. Development teams - the roles of associated disciplines - civil, municipal and transport engineers, earth and environmental scientist, and others. The role of the private developer.

Courses: BN30, PS67

Credit Points: 4 Contact Hours: 2 per week

### ■ PSP110 SITE PLANNING PRACTICE & LAW

Applications of site planning principles and theory at various scales. Natural and human influences in physical design. Environmental implications of site survey and analysis methods and techniques. Landform manipulation. Alternative concepts formulation and decision-making.

Course: PS67

Credit Points: 12 Contact Hours: 4 per week

#### ■ PSP112 SITE PLANNING METHODS

Natural influences in physical planning: geology, climate, topography, hydrology, soils and vegetation, etc. Ecological considerations in design and development processes. Impact of natural hazards and other physical constraints on design, including air, water, and noise pollution. Impacts of development on the environment. Landscape evaluation techniques.

Course: PS67

Credit Points: 4      Contact Hours: 1 per week

#### ■ PSP113 THEORY OF SITE PLANNING

Exploration of open space theory of regional and local scales; definition of spatial characteristics by edges, nodes, landmarks, districts, and paths. Sense of place, structure and form, legibility, imageability, etc; human responses and expectations and their effects on site planning decisions.

Course: PS67

Credit Points: 4      Contact Hours: 1 per week

#### ■ PSP114 INTRODUCTION TO MAPS & AIR PHOTOS

Types of maps, their uses and limitations. Orientation scale, cartographic symbols, representation of relief, etc. grid coordinates. Vertical and oblique air photos; black and white, colour, false colour. Mosaics and stereopairs. Introduction to stereoscopy and simple mapping from air photos. Introduction to various types of remote sensing imagery available to planners.

Course: PS67

Credit Points: 4      Contact Hours: 1 per week

#### ■ PSP115 PLANNING PROCESSES

Art, design and science as creative processes. Knowledge, interpretation and prediction in planning and design. Public interest and individual preference. Values, activities and land use. Activity systems. Planning and design processes. Objectives, synthesis and analysis. Policy development and alternative strategies. Evaluation.

Course: PS67

Credit Points: 8      Contact Hours: 2 per week

#### ■ PSP120 URBAN DESIGN PRACTICE

Projects involving individual and group work focussing on practical planning and design in a specific urban community. Practical residential subdivision.

Course: PS67

Credit Points: 12      Contact Hours: 3 per week

#### ■ PSP126 URBAN DESIGN METHODS

Design method, visual thinking; principles of perception and spatial arrangement; the vocabulary of design and urban imagery; design elements; the evolution of designer theory; techniques for analysing the quality of existing built environments; analysis of examples. Urban design project.

Course: PS67

Credit Points: 4      Contact Hours: 1 per week

#### ■ PSP130 PLANNING PRACTICE & LAW (URBAN)

This unit takes the form of a problem solving group project set in an inner metropolitan or small town location, often undertaken in conjunction with local communities and councils. In the course of the project, which is accompanied by a series of lectures, the student group formulates policies and strategies relating to a specific urban area. Topics discussed are the statutory basis for urban planning and development in Queensland, including land use allocation, zoning, development control, statutory and non-statutory plans, consultation and participation, and the sources and use of statistical and other data.

Course: PS67

Credit Points: 12      Contact Hours: 4 per week

#### ■ PSP133 RURAL LAND USE & PLANNING

Rural Land Use Patterns: The characteristics and dynamics of rural land uses - forestry, pastoral and arable agriculture, extractive industries, water collection, recreation and tourism, conservation systems. Impacts of rural resource developments. Rural planning and characterisations of rural settlements. The rural urban fringe. Rural issues, problems and conflicts. Case studies of rural land use, abuse and conservation in Australia and overseas. Associated project and field work.

Course: PS67

Credit Points: 4      Contact Hours: 1 per week

#### ■ PSP134 THEORIES FOR PLANNING

The locus and exercise of power in society, structure of society with particular reference to Australia. The structure of the Australian federal system of government and the impact of this on the way cities are governed. An investigation of organisational culture and change, organisational structures, inter-organisational relations, and approaches to improving organisational performance. Ideas and theories in planning; theory as a basis for practice. The political and philosophical determinant of land use planning. Values in planning, models of human nature and planning's relationship to important value traditions; liberalism, utilitarianism, empiricism, idealism, socialism, conservatism. The concepts of the public interest, social justice and public intervention.

Course: PS67

Credit Points: 12      Contact Hours: 3 per week

#### ■ PSP136 REGIONAL PLANNING METHODS

Regionalism. Principles of regional planning. Roles and types of regional planning. Administration and organisation. Physical, ecological, economic, demographic and social analysis. Settlement patterns and hierarchies. The metropolitan region.

Course: PS67

Credit Points: 6      Contact Hours: 2 per week

#### ■ PSP137 RESOURCE MANAGEMENT

Aims and processes of resource management; alternative approaches and techniques, resource inventories and evaluations. Environmental impact analysis and statements, statutory requirements. Multi-purpose schemes and planning and management of regional landscapes in Australia and overseas. Policy studies of land and resource management schemes.

Course: PS67

Credit Points: 8      Contact Hours: 2 per week

#### ■ PSP138 COMPUTER APPLICATIONS IN PLANNING

Applies the introductory material in ISB183 to specific urban planning applications. This will include, but is not limited to use of spreadsheets for analysis and projection, linking spreadsheets to ABS demographic data, applications of data bases, applications of GIS and use of purpose-designed programs.

Course: PS67

Credit Points: 6      Contact Hours: 2 per week

#### ■ PSP140 PLANNING PRACTICE & LAW (REGIONAL & STRATEGIC)

Statutory basis of strategic planning; regional planning; the case of Queensland. Strategy and policy formulation in a group project in a specific region.

Course: PS67

Credit Points: 12      Contact Hours: 4 per week

### ■ PSP144 URBAN POLICY IMPLEMENTATION

The role of implementation and evaluation in the urban policy process. The barriers to implementation and strategies for overcoming them. Methods for evaluating urban policies. Development of skills for improving implementation of urban policies, including conflict resolution and negotiation skills.

Course: PS67

Credit Points: 4 Contact Hours: 1 per week

### ■ PSP145 SOCIAL PLANNING

The genesis of social welfare policies in Australia: employment, health, housing, income and education. The aims and conduct of social surveys. Community development and organisation schemes in Australia and overseas. Public participation and community action; planning aid and advocacy planning.

Courses: HL88, PS67

Credit Points: 4 Contact Hours: 1 per week

### ■ PSP146 PROCEDURAL PLANNING THEORY

Theory, explanation and prescription and the development of planning and decision theory; comprehensive planning and incrementalism, flexibility and commitment, the management of uncertainty, levels of decision making: the concept of mixed scanning, strategic and local planning, procedural planning theory and recent critiques.

Course: PS67

Credit Points: 4 Contact Hours: 1 per week

### ■ PSP147 PROFESSIONAL PROCEDURES & ETHICS

Nature and role of a profession and professionalisation; codes of practice and ethics; role of the expert witness; professional conflict; the role of the professional planner in public and private practice; office practice and procedures, filing, costing, control systems, preparation of briefs, estimating.

Course: PS67

Credit Points: 4 Contact Hours: 1 per week

### ■ PSP150 RESEARCH METHODS & INDIVIDUAL PROJECT

Different approaches to research, and ways of selecting the most appropriate one. The place of objectives in research method; delimitation of areas of concern; structuring the research program; identification of primary and secondary sources; purposes and limitations of analysis; selection and adaptation of techniques. Ways of presenting research findings. Preparation of an individual research study.

Course: PS67

Credit Points: 16 Contact Hours: 2 per week

### ■ PSP210 HISTORY OF LANDSCAPE DESIGN

The form, content, influencing factors, and implications of the creation and development of historically, regionally, and religiously significant consciously designed landscape throughout the world; the evolutionary processes of cultural landscapes.

Course: PS66

Credit Points: 3 Contact Hours: 2 per week

### ■ PSP212 USER & CHARACTER DESIGN STUDIES

Theory: open space and place theory; definition of spatial characteristics; sense of place, structure, form, and legibility; concepts of human functioning in environment; role of privacy, personal space, territorial behaviour; human adaptation to environment; evaluation

and observation techniques. Studio: studies of spaces to determine user behaviour and requirements; analyses of inherent character and user needs and responses; abstractions expressing spirit of places.

Course: PS66

Credit Points: 12 Contact Hours: 6 per week

### ■ PSP213 SITE PLANNING

Theory: processes of site planning and detailed site design; survey and analysis phases; information required; processing of data; data analysis; generation of solutions in conceptual form as basis for strategic planning; Studio: application of theory, principles, and techniques at all scales; site utilisation and selection; environmental and social implications of design decisions; siting and integrating activities, structures, and services; land form manipulation.

Course: PS66

Credit Points: 12 Prerequisite: PSP212 Contact Hours: 4 per week

### ■ PSP214 RESIDENTIAL LANDSCAPE DESIGN

Theory: introduction to the range of housing and subdivision types; consequences for design; controls, by-laws, standards, and regulations; relevant overseas, Australian, and local examples; residents' expectations and development of attitudes to suburban and urban living; design considerations. Studio: intensive program requiring group and individual work; critique; subdivision layouts; detailed setting/use design within specific development type.

Course: PS66

Credit Points: 12 Prerequisite: PSP213 Contact Hours: 3 per week

### ■ PSP215 URBAN LANDSCAPE DESIGN

Theory: client and user analysis, data gathering and information requirements, programming of work for site planning and detailed design services, programming of implementation; user/function analysis and site capacity considerations; preparation of a project brief; space theory and principles of spatial design. Studio: a medium scale intensive/multiple use project which demands re-design and rehabilitation; project site(s) visits and site surveys and client interviews to establish project briefs and carry out the design project; an advanced level of professional presentation is attached to the project output.

Course: PS66

Credit Points: 12 Prerequisite: PSP213 Contact Hours: 3 per week

### ■ PSP216 LANDSCAPE PLANNING

Studies of medium to large-scale projects involving a range of biophysical, cultural and visual issues with a relatively high degree of complexity; focus on assessment and evaluation of related landscape attributes and issues with emphasis on deriving landscape management options in the form of policies, guidelines, and implementation strategies; studio incorporating lecture/seminar program to promote an understanding of the theoretical framework of landscape planning.

Course: PS66

Credit Points: 12 Prerequisite: PSP213 Contact Hours: 4 per week

### ■ PSP217 LANDSCAPE DESIGN

Cultural Values: concepts of *gardeu*, landscape, environment; landscape as art or artefact; fine arts tradition; iconography; picturesque and gardenesque influences; environmental romanticism; functionalism, symbolism, and meaning; quantification of aesthetic and personal response. Studio: design problems of increased scope, complexity, and constraint; resolution

tion at broad scale; contextual concepts; detailed resolution; professional communication.

**Course:** PS66      **Prerequisites:** PSP214, PSP215  
**Credit Points:** 18      **Contact Hours:** 5 per week

#### ■ PSP220 INTRODUCTION TO PRACTICE 1

Concept of professionalism; current issues and controversies; roles and ranges of employment; the professional Institute; private and public practice responsibilities and activities; opportunities and potentials; associated professions; review of relevant laws, regulations, and their interpretation; overview of other aspects of 'environmental law'; formal writing techniques (reports, instructions, proposals (plus CV/folio), correspondence, text for publication); report structuring; complementary use of graphic material.

**Course:** PS66  
**Credit Points:** 6      **Contact Hours:** 3 per week

#### ■ PSP221 INTRODUCTION TO PRACTICE 2

Professional liability, design registration, copyrights: formal oral communication techniques (meetings, conferences, interviews, presentations); time and percentage measurement and costing of relevant professional services; units of management and costing of broad development types; techniques of cost control.

**Course:** PS66      **Prerequisite:** PSP220  
**Credit Points:** 6      **Contact Hours:** 3 per week

#### ■ PSP222 LANDSCAPE PRACTICE 1

Contracts: principles of contract law; forms of contract; standard conditions of contract and engagement; specific requirements of contract documents. Forum/Workshop: discussions structured around topical issues as debates, panels, or seminars involving visiting specialists and/or participants.

**Course:** PS66      **Prerequisite:** PSP221  
**Credit Points:** 6      **Contact Hours:** 2 per week

#### ■ PSP223 LANDSCAPE PRACTICE 2

Practical experience: minimum of three weeks in approved landscape architectural office. Contracts: contract administration; case studies; professional presentation.

**Course:** PS66      **Prerequisite:** PSP222  
**Credit Points:** 3      **Contact Hours:** 2 per week

#### ■ PSP230 LANDSCAPE ECOLOGY 1

Plant science: plant systematics and taxonomy; classification; identification including field methods and keys; familiarisation with commonly used species; physiological processes related to growth, stress, and diseases. Plant ecology: the organism as an ecological unit; concept of species; functional ecological units; populations; limiting factors; niche; resources, competition, and dynamics of plant communities; introduction to ecosystems and energy flows.

**Course:** PS66  
**Credit Points:** 6      **Contact Hours:** 4 per week

#### ■ PSP232 LANDSCAPE ECOLOGY 2

Broad divisions of the earth related to climate and soils: biomes, formations, alliances, associations, and societies; the ecosystem concept and its development and application; plant communities as expressions of ecosystems; energy and water balance; concepts of community ecophysiology and growth equations; vegetation classification in Australia and its functional significance; ecological biogeography of Australian vegetation; classification of landscape: concepts of biogeographic regions, provinces, land systems, and land units; landscape structure and func-

tion and significance for conservation planning; landscape ecology and landscape planning practice.

**Course:** PS66      **Prerequisite:** PSP230  
**Credit Points:** 9      **Contact Hours:** 3 per week

#### ■ PSP233 IMPACTS & ASSESSMENT

Decision-making and conflict resolution techniques relevant to land and other natural resource planning and management; analysis of ecological processes as background to assessing impact of human activities or urbanisation, resource exploitation, mining, and other landscape changes; statutory assessment systems especially those pertaining to Queensland and under Federal legislation.

**Course:** PS66      **Prerequisite:** PSP230  
**Credit Points:** 3      **Contact Hours:** 2 per week

#### ■ PSP234 LANDSCAPE MANAGEMENT A

Horticulture, urban horticulture, arboriculture, plantscapes: production of plant material; standards; site preparation; planting and establishment (including grasses); plant management; bushland management; regeneration techniques; pests, diseases, and their control; monitoring and maintenance programming. Relationship between management and construction: created/dependent and constructed landscapes; specifying and programming construction and management as part of design implementation; specialisations and appropriate case studies.

**Course:** PS66  
**Credit Points:** 6      **Contact Hours:** 4 per week

#### ■ PSP235 LANDSCAPE MANAGEMENT B

Landscape Assessment: visual and scenic quality assessment; EIA components; current procedures and applications. Computer Techniques: types of GIS; potentials, problems, current issues; computerised three-dimensional modelling. Advanced Landscape Ecology: human settlement impact on structures; interactions; connectivity and dispersal; landscape and vegetation dynamics; conservation evaluation; habitat reconstruction. Rural Land Use: issues and systems; characteristics of rural settlement; catchment management; ecosystem protection. Resource Management: issues and systems; inventories and evaluation; conflict resolution; concept of sustainable development; conservation strategies; resource management policies.

**Course:** PS66      **Co-requisite:** PSP216  
**Prerequisite:** PLP514  
**Credit Points:** 6      **Contact Hours:** 4 per week

#### ■ PSP240 LANDSCAPE GRAPHICS 1

Lettering, layout, and visual themes in display communication; scale, emphasis, readability, and organisation of various types of information: photos, diagrams, text, plans, etc.; use of diagrams as major tools to explore and to communicate information from concepts through to physical relationships; range of sketch types and appropriateness to different types of work such as exploration of form, analysis, and communication of concepts.

**Course:** PS66  
**Credit Points:** 6      **Contact Hours:** 3 per week

#### ■ PSP241 LANDSCAPE GRAPHICS 2

Combined application of freehand, drafting and colour techniques. The selection of colour, theme and emphasis in graphics packages. Realism, abstraction and symbolism in landscape communication. Monochromatic graphics for simple reproduction. In-



tegration of various graphic techniques and media. Efficient processes for production and reproduction.

Course: PS66

Prerequisite: PSP240

Credit Points: 6

Contact Hours: 2 per week

### ■ PSP242 ADVANCED LANDSCAPE GRAPHICS

Variety of techniques of presentation graphics; three-dimensional presentation in Drawn and Modelling Forms; animation additions to presentation drawings; section and perspective exploration for design and detail communication; visual presentation packages suited to particular client types.

Course: PS66

Prerequisite: PSP241

Credit Points: 6

Contact Hours: 2 per week

### ■ PSP250 MAP & AIR PHOTO INTERPRETATION

Types, sources, uses and availability of maps and air photos, map reading, understanding of contours, land form and use of sections; methods and techniques of map production; introduction to photogrammetry and use of stereoscopes; introduction to remote sensing.

Course: PS66

Credit Points: 3

Contact Hours: 1 per week

### ■ PSP251 LANDSCAPE CONSTRUCTION 1

### ■ PSP252 LANDSCAPE CONSTRUCTION 2

Basic Site Measurement: equipment; techniques of use for horizontal and vertical measurement; recording of results; preparation of site drawings. Introduction to structures: definition of terms; basic actions/reactions of beams, columns, slabs, structural units, and types of structures; loadings and types including wind loading. Properties and application of common construction materials in landscape situations: concrete, masonry, stonework, timber, metalwork, glass, applied finishes; foundation soils; basic services of site storm water drainage, water and electricity; applied systems; construction for planting and small water features. Grading: manual techniques of land surface manipulation for site uses including building platforms, car parks, sports ovals, and surface drainage. Technical Drawing and Documentation: establishment of sound techniques of technical drawing in the preparation of construction documents.

Course: PS66

Contact Hours: PSP251: 4 per week; PSP252: 3 per week

Credit Points: 9 each subject

### ■ PSP253 ADVANCED LANDSCAPE CONSTRUCTION 1

### ■ PSP254 ADVANCED LANDSCAPE CONSTRUCTION 2

Landscape Construction: platforms; land stability and stabilisation; clearing; demolition; earth dams; lakes; broadscale stormwater drainage; sporting facilities; irrigation. Engineering services and structures: subdivision engineering; hydrology; hydraulic structures; coastal engineering; water supply, sewerage; construction planning and control. Documentation: working drawings; specifications; bills; schedules; methods of production. Computer Support; database management software; Autocad graphics.

Course: PS66

Prerequisites: PSP251, PSP252

Contact Hours: 3 per week each unit

Credit Points: 6 each unit

### ■ PSP260 SCHOOL FIELD TRIP

The field trip is a 7-10 day organised trip either interstate or in Queensland away from Brisbane. Environments may be natural, rural, or urban and the

work and issues for discussion may relate to any or all of these. Current projects and complexity, areas of work, or contextual issues not able to be experienced locally form the major thrust of the field trip.

Course: PS66

Credit Points: 3

Contact Hours: 7-10 days

### ■ PSP311 PROFESSIONAL PRACTICE MANAGEMENT

Business communication; oral communication, interviews, meetings, workshops and seminar presentations; office management; small business law; trade practice, contract, taxation, employment; workplace and safety legislation; professional ethics, professional bodies, Surveyors Act and Regulations, disciplinary procedures, relationships, clients and marketing; survey integration; aspects of change; roles of barrister and solicitor; brief for court appearance; expert witness; government agencies.

Course: PS68

Credit Points: 12

Contact Hours: 9 per week

### ■ PSP312 SURVEY COMPUTING & PROCESSING

DOS operating system and computer programming; word processing, project management, spreadsheets; programmable calculators for field use; surveying and drafting packages; management and technical applications.

Course: PS68

Credit Points: 8

Contact Hours: 6 per week

### ■ PSP313 SURVEY PROJECT MANAGEMENT

Quality assurance; client requirements, submission, execution and wrap-up; complex projects, involving resources, costs and timing; network methods; project management software; time costing, hourly rates and chargeable time; involvement with clients and other consultants; project team building; project specifications; technical requirements - field methods, booking forms and equipment; overseas projects.

Course: PS68

Credit Points: 8

Contact Hours: 6 per week

### ■ PSP314 BOUNDARY DEFINITION SURVEYS 1

Land registration requirements; cadastral history, field procedures and records; reinstatement theory and practice related to urban and rural boundaries; field survey work involving the redefinition of urban and rural boundaries; office reinstatement exercises of increasing complexity to develop the necessary skills in assessing various types of survey problems; office completion of project work, including plan preparation using appropriate computer technology.

Course: PS68

Credit Points: 12

Contact Hours: 9 per week

### ■ PSP315 PROPERTY DEVELOPMENT SURVEYS

Legislation; urban and rural subdivision design and requirements; procedures involved with rezoning and subdivision applications; building units and group titles developments; multiple use development.

Course: PS68

Credit Points: 8

Contact Hours: 6 per week

### ■ PSP321 SPATIAL INFORMATION SYSTEMS

Assessment of maps and aerial photographs as data sources; mapping specifications; planning mapping projects; aerial photography, flight planning and costing; ground control requirements, including place-

ment of ground targets and photo identification of ground points; aero triangulation, stereo plotting, map production and digital data aspects; planning, costing and preparation of specifications for comprehensive mapping task; GPS theory and practical application; LIS/GIS technology and its practical application.

**Course:** PS68

**Credit Points:** 8

**Contact Hours:** 6 per week

#### ■ PSP322 ENGINEERING SURVEYING

Assessment of available technology, configuration of measuring systems and recording of data; project definition, preparation of specifications including field methodology, documentation requirements of field records, determination and assessment of results; management of engineering survey projects, including costing, submissions, working with other professionals, dealing with on-site variations; long-line survey control; road surveys; flood surveys; curves, batter staking, other marking for construction and road design.

**Course:** PS68

**Credit Points:** 12

**Contact Hours:** 9 per week

#### ■ PSP323 PROJECT SITE SURVEYS

Detail surveying; methods, equipment, data requirements and data transfer; specifications and estimate of costs; field detail survey; processing of field data, report and plan presentation; types of construction and building control surveys; preparation of plans and specifications; building construction site inspection; instructions, documentation and communication with contractors; high precision survey and error adjustment techniques involved with construction and building control surveys; construction site set out calculations.

**Course:** PS68

**Credit Points:** 8

**Contact Hours:** 6 per week

#### ■ PSP324 BOUNDARY DEFINITION SURVEYS 2

Complex and difficult reinstatement exercises; field survey project work associated with difficult boundary definition; field survey project work associated with boundary definition for easement surveys and mining lease surveys.

**Course:** PS68

**Credit Points:** 12

**Contact Hours:** 9 per week

#### ■ PSP325 PROPERTY MANAGEMENT SURVEYS

Requirements for survey and registration of plans in various Government Acts relating to surveying; easements for transmission lines; easement surveys; dealing with client, proposal, costing and submission, field survey and plan preparation; road closures, location certificates and lease surveys; Cadastral survey problem areas.

**Course:** PS68

**Credit Points:** 8

**Contact Hours:** 6 per week

#### ■ PSP401 URBAN DESIGN ANALYSIS STUDIO

This unit emphasises the development of skills in analysis related to the urban design process and adequate communication of the results.

**Courses:** BN73, PS69

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ PSP402 URBAN DESIGN CONTEXT STUDIO

Students undertake studies typically from a community participation project, a sense of place project, a conservation and infill project for the redevelopment/rehabilitation of urban precincts or residential areas.

Techniques of guidance and control: the use of regulations, ratios, and performance standards. Positive planning and the use of incentives for good design: bonuses, transferable rights, advance publication of permissible development, rapid decisions, early dissemination of information. Work in other units of study will be related to this unit.

**Courses:** BN73, PS69

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ PSP403 URBAN DESIGN CONJECTURE STUDIO

Identification and classification of approaches to urban design. The setting of objectives, the adoption of a method and the testing of implications for a particular urban design problem type. Students are required to undertake studies typically from: local area, precinct, part of the city, the city as a whole. Where applicable, work in other units of study will be incorporated into this unit.

**Courses:** BN73, PS69

**Credit Points:** 12

**Contact Hours:** 3 per week

#### ■ PSP405 URBAN DESIGN FIELD STUDIES

This unit consists of a field trip of approximately ten days duration. Visits to successful and unsuccessful examples of urban design and to design offices in the eastern states and the Australian Capital Territory. Students analyse existing and proposed examples in the context of their original design criteria including cultural, social, political, economic and physical aspects to understand the applicable design rules. Examples are reviewed through site visits, discussion and seminars with designers and users.

**Courses:** BN73, PS69

**Credit Points:** 4

**Contact Hours:** 10 days

#### ■ PSP411 ENVIRONMENTAL PSYCHOLOGY

The social and cultural development of Australian urban environments, with particular reference to the local built environment. The study of human functioning in urban environments. Theory: privacy, person space, territoriality, environmental meaning and cognition, cognitive ways and wayfinding, intercultural and intracultural differences. Application via examination and analysis of an urban environment or an artefact with respect to its sociocultural function.

**Courses:** BN73, PS69

**Credit Points:** 4

**Contact Hours:** 2 per week

#### ■ PSP416 COMPUTER AIDED DATA ANALYSIS

The development of skills and application of computer aided data analysis in landscape architecture. The emphasis is on building graphical data and attribute data skills; database management software; input and manipulation of data; development of graphic skills using the Autocad system.

**Courses:** BN73, BN75, PS69

**Credit Points:** 2

**Contact Hours:** 1 per week

#### ■ PSP421 HISTORY OF URBAN SYSTEMS

Analysis of urban forms and systems in the pre-industrial, industrial and post-industrial periods. Specific topics include urban activities: commerce, manufacture, administration, dwelling, recreation and culture; urban services: water supply, transportation, defence and public order, fire control, sewerage and waste disposal, fuel and power, public information; urban form: planning for intelligibility, planning for propriety and symbolism, planning for delight.

**Courses:** BN73, PS69

**Credit Points:** 4

**Contact Hours:** 1 per week

**■ PSP424 URBAN DESIGN THEORY & CRITICISM**

The characteristics of good theory in the field of urban design in relation to the work of a number of theoretical writers and schools. Specific topics include theoretical writing on urban design before 1800, theory and practice in the nineteenth century, the *kunstlerischen Grundsätzen* of Camillo Sitte, the Garden City movement, Le Corbusier and Modernism, the Townscape movement, Jacobs and 'The Death and Life of Great American Cities', Alexander on the urban system, the intelligible city, the work of Lynch and Appleyard, Rapoport on urban meaning, Habraken, Rowe and the city as independent artefact, Canter, Relph and Tuan on the phenomenology of the city, Maitland's analysis of urban design concepts.

**Courses:** BN73, PS69

**Credit Points:** 4 **Contact Hours:** 1 per week

**■ PSP432 URBAN LANDSCAPE**

The city as a landscape unit, examples of city/site relationships; contribution of natural factors and patterns: topography, soils, drainage, vegetation, climate; towards better delineation of urban form and character. Spaces and their organisation, the city as spatial entity, sequential experience; spaces for specific purposes; choreography of spaces: use, settings, and furnishings, enclosures, floors, overhead structures, services, features, finishes. Natural elements and their nurture within urban areas: vegetation species, groupings, their requirements, streets, plazas, forecourts, roofs, urban forests, natural areas; water bodies and their conservation as healthy features; urban wildlife: habitats and contribution to the urban experience; landscape conservation techniques in urban areas.

**Courses:** BN73, PS69

**Credit Points:** 4 **Contact Hours:** 1 per week

**■ PSP434 URBAN SERVICES & FUNCTIONS**

Urban services: functional services of power, telephone, gas, water, stormwater and sewerage reticulation; controlling authorities, planning requirements and controls relevant to urban design. Community services related to health, safety, and welfare: such as medical, fire, emergency services, libraries, police, community participatory groups; controlling authorities, extent of services provided and controls relevant to urban design. Origins and destinations of traffic movements. The road hierarchy and its characteristics. Features of major terminals, car parks, pedestrian and cycle networks. Modes of travel and transport systems, railway and light rail, water, evaluation of comparative system. Major traffic generators: airports, terminals, CBD circulation. Related environmental and design issues: noise, atmospheric pollution, physical and visual impacts of different systems and traffic channels. Future trends in transport and movement systems and related issues.

**Courses:** BN73, PS69

**Credit Points:** 4 **Contact Hours:** 1 per week

**■ PSP441 COMPUTER APPLICATIONS IN URBAN DESIGN**

The use of computers to analyse and solve urban design problems and communicate solutions. Feasibility studies; land use studies; generation of envelope and space layouts; environmental and service systems analysis; development control testing; data handling and manipulation; computer graphics; interactive integrated design systems.

**Courses:** BN73, PS69

**Credit Points:** 4 **Contact Hours:** 1 per week

**■ PSP442 LAW & LEGISLATION IN URBAN DESIGN**

Legislative controls and law reform related to urban design and the development process with specific reference to Queensland. Topics include the potential range of legislative controls, principal relevant legislation in Queensland and its impacts on urban design, the development control authority, arbitration processes of the State Government and influence of additional legislation (eg. Group Title, Heritage Acts, pedestrian malls) on the urban design process.

**Courses:** BN73, PS69

**Credit Points:** 4 **Contact Hours:** 1 per week

**■ PST901 ENGINEERING SURVEYING**

Fundamental survey concepts, coordinate systems, differential and simple ingometric levelling, angular measurements; bearing and azimuth; linear measurements by steel tape and stadia.

**Course:** CE21

**Credit Points:** 7 **Contact Hours:** 3 per week

**■ PUB109 INTRODUCTION TO ENVIRONMENTAL HEALTH**

Students are introduced to a brief history of environmental health in Queensland. The current issues of environmental health within the public health agencies at all levels of government and the principal public health legislation in this state is reviewed. Students develop an understanding of the complexity of environmental systems, the effects of pollutants on such systems and the interdisciplinary approaches needed to address these problems.

**Courses:** NS40, NS48

**Credit Points:** 8 **Contact Hours:** 3 per week

**■ PUB130 AUSTRALIAN HEALTH INDUSTRY**

A broad overview of the systems of health care in Australia and their methods of operation. The public and private health and medical care sectors are discussed. The political environment, health care institutions, community health, public health, and the problems of coordination and integration of health services are also studied.

**Course:** PU48

**Credit Points:** 12 **Contact Hours:** 3 per week

**■ PUB207 INTRODUCTION TO ENVIRONMENTAL HEALTH**

A brief history of environmental health in Queensland; the current role of environmental health officers within the public health agencies at all levels of government and the principal public health legislation in this State; development of an understanding of introductory law and environmental law, the complexity of environmental systems, the effects of pollutants on such systems and the interdisciplinary approaches needed to address these problems; aspects of professional communications and report writing.

**Course:** PU42

**Credit Points:** 12 **Contact Hours:** 4 per week

**■ PUB210 OCCUPATIONAL HEALTH & SAFETY 1**

Introduces students to the basic concepts of occupational health and safety, such that they can identify health and safety problems in the workplace; strategies for dealing with such problems, and the legislation, government agencies and health personnel associated with the working environment. Topics covered include the physical, chemical and biological working environments and temporal work patterns.

**Courses:** ME46, PU42

**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ PUB211 OCCUPATIONAL HEALTH & SAFETY 2

Develops further the principles covered in PUB210 and PUB212 and highlights their practical application to the workplace. Students also develop knowledge and skills associated with the actual measurement of the physical and chemical working environment, physiological effects on humans in the workplace and evaluation of the data collected.

**Courses:** ME46, PU42

**Prerequisite:** PUB210 or PUB212

**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ PUB212 OCCUPATIONAL HEALTH & SAFETY 1

The basic concepts and theoretical framework of occupational health and safety as noted in PUB210; introduces students to the communication skills and devices relevant to the profession. Students participate in single and group activities to develop English expression, public speaking, debating and discussion group skills.

**Courses:** PU44, PU48

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ PUB220 MEDICAL TERMINOLOGY

The language of medicine, and the analysis of medical terms into Latin and Greek roots, prefixes, suffixes, combining forms; define, spell, pronounce and use terms related to the diseases and systems of the human body; expand and use abbreviations and symbols in medicine; interpret and explain abstracts from patient records in non-technical language.

**Course:** PU48

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ PUB233 INFORMATION, EDUCATION & COMMUNICATION FOR HEALTH

A study of the processes of communication in the health fields. It covers person-to-person communication such as patient-professional communication; communication in small groups; public education for health; diffusion and adoption of new health-related behaviours; the role of information; the use of mass media; communication within health organisations.

**Courses:** HM42, PU48

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ PUB241 HEALTH STUDIES 1

Overview the nature of health in Australian society; serves as the foundation study in this minor from which a number of separate, more detailed studies emerge in level 2 and 3 units; an understanding of broad health issues and problems is essential to equipping health educators for their roles in promoting optimal health of Australians, viz, addressing prevention of major risk factors, and developing a commitment to promoting healthy lifestyles.

**Course:** ED41

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ PUB251 INTRODUCTION TO PUBLIC HEALTH

Introduction to the philosophy and approach of public health; the traditional public health process; the multidisciplinary nature of public health; health policy and its impact on public health; some recent reformulations of traditional public health approaches including: health promotion, intersectoral action for health and healthy public policy. The role of public health in Australia and overseas, its main components and some of the constraints faced by public health.

**Course:** PU48

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ PUB272 HOME ECONOMICS 2

The place of the consumer in the Australian economy; the consumer in the market place; alternatives to mass consumption; legal procedures; legal requirements regarding business transactions and business organisations; consumer protection; family and the law.

**Course:** PU49

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ PUB274 HOME ECONOMICS SOCIAL ISSUES

Introduction to the nature of sociology and psychology; social image; social control; deviance; environmental planning and human behaviour; family patterns; gender roles and relationships; work and unemployment in relations to home economics.

**Course:** PU49

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ PUB276 HOME ECONOMICS 1

Art elements and principles; qualities of natural and non-natural materials; design process; design presentation; effects of changing technology on form and construction; ergonomics.

**Course:** PU49

**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ PUB299 HEALTH INFORMATION MANAGEMENT 1

An introduction to the principles of health record management and their application in hospitals; presents an overview of the interrelationships between the various processes of the medical record department and functionally related areas in health care facilities. Topics include: the structure, format and use of medical records, the function of medical record departments, quantitative analysis of medical records, and health information collection and retrieval systems, both manual and computerised.

**Course:** PU48

**Credit Points:** 12 **Contact Hours:** 5 per week

### ■ PUB300 POLLUTION SCIENCE 1

The causes, effects, control measures, standards and legislation relating to land contamination and solid waste management.

**Course:** PU42

**Prerequisites:** CHB242, PHB250

**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ PUB302 PODIATRIC MEDICINE 1

The health, social and economic implications of podiatric care in the general population with particular reference to specialised groups, eg, children, diabetics, the aged and sports patients. It also provides foundation studies essential to the pre-clinical student in the diagnosis and treatment of conditions commonly manifest in the foot.

**Course:** PU45

**Co-requisite:** PUB303

**Credit Points:** 8 **Contact Hours:** 4 per week

### ■ PUB303 CLINICAL SCIENCE 1

On completion, students should be able to demonstrate competent operating skills; expertise in clinical observation of the patient and the elicitation of an accurate medical record; recognise common clinical entities and implement appropriate treatment and develop a professional attitude towards patients, clinical teaching and care of equipment.

**Course:** PU45

**Prerequisite:** MEB031

**Co-requisite:** PUB302

**Credit Points:** 12 **Contact Hours:** 6 per week

### **■ PUB304 PHYSICAL MEDICINE**

Introduction to a wide range of diagnostic and physical treatment modalities used in modern podiatric practice. On completion, students should be able to understand the uses, applications, contra indications and limitations of each modality studied in direct connection with ongoing clinical studies and the theoretical component of podiatric medicine lectures.

**Course:** PU45 **Prerequisite:** LSB451  
**Co-requisite:** PUB504, PUB410  
**Credit Points:** 8 **Contact Hours:** 3 per week

### **■ PUB306 PHARMACOLOGY**

Designed to ensure that students understand basic drug therapies their patients may be using, the groups of drugs used for specific diseases and their application and relevance to podiatry and clinical podiatry. Emphasis is placed on drug groups and their use for specific disease, rather than proprietary brands. Students learn to recognise the drug groups and know the system they are acting on in the body. In addition, differentiation between the different groups within one group of systemic drugs and why they are used for a condition is emphasised.

**Course:** PU45 **Prerequisite:** CHB242 or CHB289  
**Co-requisite:** LSB371  
**Credit Points:** 8 **Contact Hours:** 3 per week

### **■ PUB312 HOME ECONOMICS CURRICULUM STUDIES 1**

Provides students with a range of understandings and competencies for analysing, interpreting and managing Home Economics classrooms in order to maximise learning. Long and short term planning is explored with an emphasis on planning, implementing and evaluating lessons using a variety of strategies, resources and assessment techniques. The nature of Home Economics and how this is manifest in curriculum documents are examined.

**Course:** ED50  
**Prerequisite:** 48 credit points in relevant discipline area.  
**Credit Points:** 12 **Contact Hours:** 3 per week

### **■ PUB313 DESIGN**

Design has a relevance to both the teaching and learning process and the discipline of home economics. In the areas of textiles, food and shelter there is a role for the application of design as well as critical evaluation and communication of the products of design; provides students with generic design knowledge as well as experience in the application of this knowledge in the specific areas of home economics.

**Course:** ED50  
**Credit Points:** 12 **Contact Hours:** 3 per week

### **■ PUB317 MANAGEMENT & CONSUMER STUDIES**

Management and consumer issues pervade all areas of home economics. Management and consumer concepts pertinent to individual and group living leading to the optimising of well-being.

**Course:** ED50  
**Credit Points:** 12 **Contact Hours:** 4 per week

### **■ PUB319 FOOD & NUTRITION**

Issues related to choosing a diet which will promote health; nutritional needs for humans; translating these to food selection and preparation.

**Course:** ED50  
**Credit Points:** 12 **Contact Hours:** 6 per week

### **■ PUB321 TEXTILES 1**

Scientific understanding and aesthetic aspects of textiles, their selection, use and care, with reference to specific end uses; practical aspects of construction and surface design of textile articles; textile project.

**Course:** ED50  
**Credit Points:** 12 **Contact Hours:** 6 per week

### **■ PUB322 HOME ECONOMICS CURRICULUM STUDIES 2**

Encourages students to make independent judgements about Home Economics curriculum decision-making, within syllabus guidelines and broader systems policies concomitant with national and international trends in education and society. Students are given the opportunity to explore current issues and emerging and future trends in Home Economics and to develop a confident approach to school-based curriculum development. Advanced teaching strategies and current assessment procedures will be developed.

**Course:** ED50 **Prerequisite:** PUB312  
**Credit Points:** 12 **Contact Hours:** 3 per week

### **■ PUB323 HOME ECONOMICS: SOCIAL FOUNDATIONS**

Home economics is concerned with the well-being of individuals and families; to achieve this goal, individuals must have an understanding of development from conception to old age, and a critical awareness of the social processes which influence this development; home economics issues.

**Course:** ED50  
**Credit Points:** 12 **Contact Hours:** 3 per week

### **■ PUB325 SHELTER STUDIES**

Critical aspects of shelter as a fulfilment of people's basic needs; design, technology and legislation linked to decisions affecting provision of shelter for the differing needs of individuals and families.

**Course:** ED50  
**Credit Points:** 12 **Contact Hours:** 4 per week

### **■ PUB327 HEALTH ISSUES IN AUSTRALIA**

Australians' major health concerns; the multidimensional nature of health; initiatives undertaken to address health problems at individual, community, and national levels; prevention as a pivotal concept in health status.

**Courses:** ED50, ED51  
**Credit Points:** 12 **Contact Hours:** 3 per week

### **■ PUB328 CONTEMPORARY INFLUENCES ON HEALTH STATUS**

Concept of contemporary social, economic and political influences on well-being; major, contemporary health concerns resulting from these influences.

**Courses:** PU49, ED50  
**Credit Points:** 12 **Contact Hours:** 3 per week

### **■ PUB329 FOUNDATIONS OF HEALTH STUDIES & HEALTH BEHAVIOUR**

The foundations of the discipline of health education, its theoretical framework and concepts of models of health, health education and health promotion.

**Course:** ED50 **Prerequisites:** SSB922, PUB327  
**Co-requisite:** HMB305  
**Credit Points:** 12 **Contact Hours:** 3 per week

### **■ PUB331 SHELTER STUDIES 2**

The linking of human physical and psycho-social needs, environmental and technological issues and design aspects to the effective provision of shelter, with emphasis being placed on the development of advanced skills and knowledge; environmental and

technological aspects which have implications on shelter design for the well-being of the individual and families; effective design to accommodate changing family structures; legislative updates.

**Courses:** PU49, ED50

**Prerequisites:** PUB325 or PUB372

**Credit Points:** 12      **Contact Hours:** 4 per week

#### ■ PUB333 SHELTER: CULTURAL & HISTORICAL CONTEXTS

Investigation of shelter decisions based on historical and cultural factors, integrating the effect technological advances have had on this. It considers possible future shelter options given the impact of historical and cultural factors.

**Courses:** PU49, ED50

**Prerequisites:** PUB325, PUB372 or equivalent

**Credit Points:** 12      **Contact Hours:** 4 per week

#### ■ PUB334 FOOD FOR HEALTH

Exploration of concepts which impinge on food-related behaviours and develop concomitant cognitive competencies. Students are encouraged to recognise that their own personal pro-active stance in relation to food-related health issues can contribute to better health for all Australians.

**Course:** ED50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ PUB335 OCCUPATIONAL & ENVIRONMENTAL HEALTH

Study of environmental and occupational health issues in their broadest context and their impact on individual health.

**Course:** ED50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ PUB336 WOMEN'S HEALTH

Exploration of the data and health issues related to women's health and critically evaluates health-related policies, systems and practices in terms of their impact on women's health.

**Course:** ED50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ PUB337 HEALTH NEEDS OF SPECIFIC POPULATIONS

The health needs of a range of specific population groups and considers the broad picture of actual differences in health status among population groups.

**Course:** ED50

**Prerequisite:** PUB327

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ PUB338 SUBSTANCE USE IN CONTEMPORARY SOCIETY

An introduction to analytical models, statistical evidence and health education and health promotion strategies applicable to substance use and abuse, to familiarise students with the contemporary nature and extent of substance use in Australia and examines models and strategies to address these issues.

**Course:** ED50

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ PUB345 FAMILY RELATIONSHIPS

Prepares teachers for the teaching of the Family Studies component of Home Economics. Drawing from the psychological and sociological disciplines, it examines such issues as power, dominance and submission that occur in families and society and dynamics which operate between individuals.

**Course:** ED50

**Prerequisite:** PUB323

**Credit Points:** 12      **Contact Hours:** 4 per week

#### ■ PUB347 FAMILIES IN OTHER CULTURES

Individuals, the structured elements within families and the relationship of families to society; kinship, family structures, mate selection practices, legitimacy and illegitimacy, contemporary family issues.

**Courses:** PU49, ED50

**Credit Points:** 12      **Contact Hours:** 4 per week

#### ■ PUB349 FAMILIES & HOUSEHOLDS IN AUSTRALIA

The unit examines the emphasis of the family in home economics. Perspectives considered include: structural functionalist, symbolic interactional, conflict and feminist, whether the family provides an appropriate orientation for home economics.

**Course:** ED50

**Credit Points:** 12      **Contact Hours:** 4 per week

#### ■ PUB353 CONSUMER FOOD

The role of the food industry in relation to lifestyles in modern societies; the scientific principles and operations involved in the preservation and manufacture of foods; the composition, the ingredients, the labelling and marketing methods of a representative range of commercial foods; current consumer issues such as the safety of food additives, food irradiation, consumer protection, new product development, food regulations and future trends in our food supply.

**Courses:** ED50, SC30

**Prerequisite:** Any Level 1 Science unit

**Credit Points:** 12      **Contact Hours:** 4 per week

#### ■ PUB355 FOOD SERVICE MANAGEMENT

The use of relevant management principles, safe and hygienic work practices, effective communication skills, sound nutrition and mastery of techniques in food production and presentation.

**Courses:** PU49, ED50

**Prerequisites:** PUB474, COB160 or equivalent

**Credit Points:** 12      **Contact Hours:** 4 per week

#### ■ PUB356 CLINICAL CLASSIFICATION 1

Development of skills in one of the major specialties of health information management: clinical classification of diseases and procedures using the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM). Clinical classification responds to internal and external demands for medical information, for example, in-house research and education, ABS hospital morbidity data collections, and casemix information systems. (Not offered in 1994).

**Course:** PU48

**Credit Points:** 12

**Prerequisite:** PUB220

**Contact Hours:** 4 per week

#### ■ PUB357 NUTRITION ISSUES IN AUSTRALIA

A background study into the nutritional issues which are impacting on the quality of Australian lives. These issues are considered in two broad frameworks: (1) the nutritional needs throughout the lifecycle and the environmental factors which impinge on realisation of these needs and (2) the aetiology, incidence, outcomes and management of diet-related disorders.

**Course:** ED50

**Prerequisite:** PUB319

**Co-requisite:** PUB334

**Credit Points:** 12      **Contact Hours:** 4 per week

#### ■ PUB361 TEXTILES 2

Continuation of PUB321. An understanding of textile consumer issues is developed by a study of relevant commercial enterprises and the implications for the consumer. Creativity is encouraged by students com-

binning skills in pattern development with advanced techniques in constructing textile articles.

**Course:** ED50 **Prerequisite:** PUB321  
**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ PUB363 CONSUMER TEXTILES

Technological advances in the production of textiles with particular reference to fibres, yarns, fabric, finishing and dyeing; consumer protection legislative and regulatory framework with particular reference to textile products; textile performance requirements of these major consumer textile end-uses; experimental evaluation of textiles for suitability of purpose; development of problem identification and solution skills in consumer textiles through a major project-based assignment.

**Course:** ED50 **Prerequisite:** PUB361  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ PUB365 EVOLUTION OF WESTERN DRESS

Evaluation of western fashionable dress from ancient times to the present; the relationship between costume and the environment; influencing factors: social, aesthetic, political, economic, geographic, spiritual, technological; emphasis on primary sources from the nineteenth and twentieth centuries; teaching strategies and resources.

**Courses:** ED26, ED50  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ PUB369 TEXTILES: SUPERVISED PROJECT

Students select and complete an indepth study in one or more methods of creating with textiles. The study includes the development of advanced technical skills and an investigation and evaluation of the corresponding commercial production.

**Courses:** ED50, PU49  
**Prerequisite:** PUB321 or PUB472 or equivalent  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ PUB372 SHELTER STUDIES 1

Housing tenure; advantages and disadvantages of ownership/tenancy; housing finance; housing for special groups; special needs in housing; interior environment; housing heritage.

**Course:** PU49  
**Prerequisites:** PUB276, SSB000 or equivalent  
**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ PUB374 FAMILY STUDIES

Definitions of the family; the family and society; social class and geographical differences in family patterns; influence of changing social conditions; socialisation and child rearing patterns; families in a multicultural society.

**Course:** PU49  
**Prerequisites:** SSB000, SSB912 or equivalent  
**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ PUB381 INTRODUCTION TO APPAREL DESIGN & PRODUCTION

Offers students an insight into the fashion industry. It also offers an opportunity for students to develop expertise in the area of women's fashion design. Students implement the design process through the production of apparel items. Emphasis is placed on production techniques used in cottage industry.

**Course:** ED50 **Prerequisite:** PUB361  
**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ PUB399 HEALTH INFORMATION MANAGEMENT 2

Continuation of PUB299. Emphasis on analysis and improvement of health information management throughout hospitals; health information services outside medical record departments of hospitals, wards, bed allocation and admission offices, accident and emergency departments, outpatient and allied health services, and other specialised hospital services such as radiology, pharmacy and pathology.

**Course:** PU48 **Prerequisite:** PUB299  
**Credit Points:** 12 **Contact Hours:** 4 per week

### ■ PUB404 CLINICAL SCIENCE 2

At this stage students will be able to follow cases through to observe the short-term effect of therapy and are expected to commence case studies to develop comparative and recording skills. Students should now be adopting the standard medical terminology and abbreviations used in clinical situations.

**Course:** PU45  
**Prerequisite:** PUB303 **Co-requisite:** PUB303  
**Credit Points:** 12 **Contact Hours:** 9 per week

### ■ PUB405 HUMAN NUTRITION

Human nutrition provides a solid basis of nutrition knowledge upon which studies in nutrition may be built. It examines the sociology of food in providing required nutrients, and gives an indepth explanation, at a biochemical level, of the role of nutrients. At least one semester of biochemistry is assumed.

**Course:** PU49, SC30  
**Prerequisite:** LSB305 or LSB308  
**Credit Points:** 12 **Contact Hours:** 5 per week

### ■ PUB410 MEDICINE

Following completion of this subject students should be able to recognise and understand the clinical features, pathogenesis and significance of common conditions affecting the lower limbs, eg. oedema; obesity; motor, sensory and trophic disturbances and their resultant effects in paralysis, ataxia, deformity and ulceration; intermittent claudication, vascular spasm and cramp are taught so as to emphasise their significance. Medical conditions with manifestations in the feet are given particular attention.

**Course:** PU45 **Prerequisites:** LSB470, LSB451  
**Co-requisite:** PUB503  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ PUB411 ORTHOPAEDICS

Emphasis on orthopaedic surgery; develops a detailed knowledge of general and specific orthopaedic conditions which have an effect on the lower limbs and the surgical treatment of systemic conditions as seen by the podiatrist, ie. diabetes; provides an understanding of the special problems associated with children and specific lower limb conditions with emphasis on the surgical techniques used in their treatment.

**Course:** PU45  
**Prerequisite:** PUB505 **Co-requisite:** PUB303  
**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ PUB414 HOME ECONOMICS APPLIED CURRICULUM

Issues relating to home economics education; bases for curriculum decision making; nature and structure of home economics; syllabus implementation; innovation; issues that affect home economics.

**Course:** ED26  
**Prerequisites:** CUB410 or equivalent and curriculum implementation studies at Diploma of Teaching level.  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ PUB421 PODIATRIC MEDICINE 2

The foundation for study in the role of therapeutics in patient management including short-term and long-term management of conditions. It expands the range of understanding of the wide variety of conditions presenting to the podiatrist. On completion, students should be able to develop an understanding of the biomechanical principles affecting the joints of the foot and the structural and functional consequences presenting in podiatric practice.

Course: PU45

Prerequisite: PUB302 Co-requisite: PUB404  
Credit Points: 12 Contact Hours: 6 per week

#### ■ PUB422 PODIATRIC ANAESTHESIOLOGY

Designed to provide a sound understanding of the science of anaesthetics as applicable to the practice of podiatry. Students are required to understand the pharmacology of local anaesthetics and their clinical usage, and be competent in injection techniques, including local infiltration and local nerve block in the lower limbs.

Course: PU45

Prerequisite: PUB421 Co-requisite: PUB410  
Credit Points: 8 Contact Hours: 2 per week

#### ■ PUB423 FOOD & NUTRITION

Nutrition is an important factor in the provision of health, and prevention and management of many disease states. This unit provides an overview of concepts fundamental to an appreciation of the role of nutrition in health care. Topics include: the chemical nature, digestion, absorption and assimilation of nutrients; nutrients provided by the five food groups; food selection for a healthy diet; nutrient requirements in particular clinical situations.

Courses: NS40, NS48

Prerequisites: Physiology and Pharmacology  
Credit Points: 8 Contact Hours: 3 per week

#### ■ PUB430 APPLIED HEALTH CARE ANALYSIS

An introduction to epidemiology and biostatistics. Descriptive and analytical epidemiological methods used in the study of acute and chronic disease and in health services planning are studied. The statistical techniques appropriate to public health problems are included at an introductory level.

Course: PU48

Prerequisite: EPB163  
Credit Points: 12 Contact Hours: 3 per week

#### ■ PUB431 ECONOMIC EVALUATION OF HEALTH SERVICES

Economic evaluation of health services; the application of cost analysis, cost effectiveness analysis, cost utility analysis and cost benefit analysis to health programs; problem identification and definition, identifying and valuing costs and benefits, externalities, decision rules and reporting.

Course: PU48

Credit Points: 12 per week

#### ■ PUB440 CLOTHING DESIGN

Clothing design offers an opportunity for teachers to study in this area at a greater depth than that available in the pre-service units. It allows for critical evaluation of influences of the fashion industry, pattern making, clothing construction and the teaching strategies and resources available.

Course: ED26

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUB441 NUTRITION EDUCATION

Biochemical approaches to nutrition; history and evolution of nutrition; popular nutrition literature; development of a philosophy of nutrition.

Courses: ED26, ED50, PU49,

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUB456 CLINICAL CLASSIFICATION 2

Students will learn to abstract and interpret the information recorded in client/patient medical records. Therefore, students will become well versed in the clinician's response to various disease processes and how this information presents in the medical record. A significant component of the unit will involve coding from hospital medical records on-site in an acute care setting. Students will become proficient in the art of clinical classification using ICD-9-CM.

Course: PU48

Prerequisites: LSB242, LSB361, PUB220, PUB356  
Credit Points: 12 Contact Hours: 4 per week

#### ■ PUB472 TEXTILE SCIENCE & TECHNOLOGY

Overview of textiles and textile evaluation; fibres; yarns; fabric construction; finishing treatments; colour and its application to textiles; textile care; textile end-use; principles and practice of textile performance evaluation.

Course: PU49

Co-requisite: PUB405  
Prerequisite: CHB242 or equivalent  
Credit Points: 12 Contact Hours: 4 per week

#### ■ PUB474 FOOD STUDIES

The behaviour of foods; nature, properties and behaviour of major nutrients in food; interaction between major ingredients in certain foods.

Courses: PU49, ED50

Co-requisite: CHB259  
Credit Points: 12 Contact Hours: 6 per week

#### ■ PUB478 FOOD SCIENCE & TECHNOLOGY

The role of the food industry in modern society; issues and problems facing consumers and the food industry; food preservation principles; unit processes in the food industry; commercially available food; product development; food technology workshop.

Courses: PU42, PU49

Prerequisites: LSB301, LSB405 or equivalent  
Credit Points: 12 Contact Hours: 5 per week

#### ■ PUB481 POLLUTION SCIENCE 2

The causes, effects, control measures, standards and legislation relating to water, air and noise pollution.

Course: PU42

Prerequisites: CHB242, PHB263  
Credit Points: 12 Contact Hours: 5 per week

#### ■ PUB482 OCCUPATIONAL HEALTH

Basic concepts of toxicology and the body's responses to toxic substances; basic disease processes in humans and the various agents in the workplace adversely affecting the health of workers.

Course: PU44

Co-requisite: LSB242  
Credit Points: 12 Contact Hours: 5 per week

#### ■ PUB483 ERGONOMICS 1

The structure and function of relevant body systems and the ways in which the work environment and work tasks can impinge on normal functions; occupational biomechanics; biomechanical modelling; anthropometry; manual handling; tool and equipment design; the effects of physical factors such as lighting, temperature and humidity on human performance; ergonomics methodologies.

Course: PU44

Prerequisite: MEB035  
Credit Points: 8 Contact Hours: 3 per week



## ■ PUB485 OCCUPATIONAL HYGIENE 1

The field of occupational hygiene and the theory of occupational hygiene in the management of hazardous substances; the uses and limitations of a range of sampling and analytical equipment in the measurement and assessment of workplace particulates.

Course: PU44

Prerequisite: CHB242

Credit Points: 12

Contact Hours: 4 per week

## ■ PUB499 HEALTH INFORMATION MANAGEMENT 3

Health information systems outside acute care hospitals; special-purpose health record systems, ambulatory health record systems, and those used in health care facilities other than acute care hospitals, systems for the registration and notification of disease and health problems, clinical classification systems other than ICD-9-CM and nomenclatures, which may be used in specialised health settings; concepts and processes of quality assurance in health (e.g. accreditation, criteria audits etc).

Course: PU48

Prerequisite: PUB399

Credit Points: 12

Contact Hours: 4 per week

## ■ PUB502 DERMATOLOGY

An appreciation of the many varieties of skin lesions and their particular relevance when found in the lower limbs. The lecture program consists of classification of skin disease, vascular reaction group, vasculitides, ulcers, peripheral vascular disease, tumours, eczema, dermatitis, allergy, immunity, infections, psoriasis, squamous eruptions, nails and hair, skin manifestations of internal disease, pharmacology and general therapeutics. The clinical sessions utilise this information in allowing students the opportunity to see and diagnose many of these conditions.

Course: PU45

Prerequisites: PUB410, PUB421, PUB503

Credit Points: 8

Contact Hours: 3 per week

## ■ PUB503 PODIATRIC MEDICINE 3

Develops professional understanding of the general and specific effects of medical and surgical conditions on the human foot. Also expands the concept of total case management in terms of the interdisciplinary approach, including physical, mechanical and surgical techniques. Completion of this unit should enable students to consolidate the podiatrist's role in the health care team across the spectrum of practice.

Course: PU45

Prerequisite: PUB421

Co-requisite: PUB504

Credit Points: 8

Contact Hours: 3 per week

## ■ PUB504 CLINICAL SCIENCE 3

On completion, the student should be able to consolidate skills acquired in operative mechanical, chemical and physical therapy and to demonstrate expertise in the treatment of the diabetic arthritic foot, and related circulatory and neurological disorders. Diagnostic skills are also developed with the wider range of patients being treated and the specialised study of disciplines such as dermatology and radiology further integrating academic and clinical studies.

Course: PU45

Prerequisites: PUB404, PUB421

Co-requisite: PUB304

Credit Points: 8

Contact Hours: 12 per week

## ■ PUB505 PODIATRIC SURGERY

Implementation of podiatric surgical techniques based on strong theoretical knowledge. On completion, students should understand the principles and techniques of minimal incision surgery.

Course: PU45

Prerequisites: PUB422, PUB410

Co-requisite: PUB603

Credit Points: 8

Contact Hours: 3 per week

## ■ PUB512 ERGONOMICS 2

Application of industrial and organisation psychology to the industrial environment; examination of key individual, social and organisational factors contributing to health and safety at work; an appreciation of the interface between humans, machines and the environment, information processing and learning, stress, job design, job satisfaction and work schedules.

Course: PU44

Prerequisites: PUB483, SSB914

Credit Points: 12

Contact Hours: 4 per week

## ■ PUB513 EPIDEMIOLOGY & DISEASES

Enables students to become familiar with the terminology used in the epidemiology and the study of diseases; includes the conducting of various types of study including the analysis of data in the workplace; topics include: the causes and preventative factors of the most common non-infectious diseases, their incubation periods, modes of infection and transmission of infectious diseases, and the principles and applications of vaccination.

Courses: PU42, PU44, PU48

Credit Points: 12

Contact Hours: 4 per week

## ■ PUB516 OCCUPATIONAL HEALTH & SAFETY PRACTICE 1

Investigation of management principles and practices as they may be applied to resolve occupational health and safety problems; an examination of industrial relations processes and the legal framework within which occupational health and safety is addressed; field studies are used to provide students with a practical insight into the application of the principles to which they have been introduced.

Course: PU44

Co-requisite: PUB485

Prerequisites: MEB035, PHB404, PUB483

Credit Points: 12

Contact Hours: 6 per week

## ■ PUB518 FOOD HYGIENE STUDIES

The various types of food poisoning; food poisoning investigation techniques; laboratory procedures and interpretation of results.

Course: PU42

Prerequisites: LSB431, PUB207, PUB478

Credit Points: 8

Contact Hours: 4 per week

## ■ PUB520 ENVIRONMENTAL HEALTH MANAGEMENT 1

Management of an environmental health unit; legal and professional procedures associated with the duties of environmental health officers.

Course: PU42

Prerequisites: PUB207, PUB481

Credit Points: 12

Contact Hours: 5 per week

## ■ PUB528 HEALTH ADMINISTRATION PROJECT

Enables students to do follow-up work of a practical nature in an area of interest to them. Before being admitted to this unit, students must have completed all the required coursework in the discipline area of the proposed project. Projects may be undertaken in any of the discipline areas covered by the degree, eg. health economics, law, health finance, health information management, health management, statistics, epidemiology, either individually or in small groups. Projects must have prior approval and will be closely supervised. Being of a practical nature, projects are undertaken in a health or medical care delivery setting, eg. hospital medical record department; group practice; local authority health department, State health department.

Course: PU48

Credit Points: 12

Contact Hours: 3 per week

### ■ PUB529 HEALTH PLANNING & EVALUATION 1

The concept and processes of program management; health planning in a program management context; issues relating to community participation in health planning, planning for accountability, planning for future evaluation, as well as the steps in program planning; resources management and health resource inventories; the rudiments of evaluation research applied to health programs. (Not offered in 1994.)

Course: PU48

Credit Points: 12      Contact Hours: 3 per week

### ■ PUB531 HEALTH CARE ECONOMICS 1

Application of economic analysis to the health care industry; an examination of the demand for health care, the supply of and market for health care.

Course: PU48

Prerequisite: EPB150

Credit Points: 12      Contact Hours: 3 per week

### ■ PUB533 INTERNATIONAL HEALTH CARE SYSTEMS

Makes students aware of how different countries have organised their health delivery systems. The comparisons are historical and economic. An analysis is made of the growth of the welfare state in a number of countries, eg. United Kingdom, USA, Sweden, Canada, with particular reference to the organisation and delivery of health services. International organisations working in health are studied. Students are introduced to the distribution of diseases in both the West and the Third World; the distribution of health and material resources; international agencies; aid programs and their roles; functions, effectiveness and coordination problems.

Course: PU48

Credit Points: 12      Contact Hours: 3 per week

### ■ PUB535 HEALTH CARE ECONOMICS

The definition and determination of health from an economics perspective; factors affecting the demand for and supply of health and medical services; market structure in the health industry; distribution of health sector output; and measures of efficiency and equity in health care in Australia. (Not offered in 1994.)

Course: PU48

Credit Points: 12      Contact Hours: 3 per week

### ■ PUB540 THE HOME ECONOMIST AS A COUNSELLOR

The counselling process; major approaches to counselling; models of helping and the helping relationship; communication skills; the home economist as counsellor; moral, ethical and legal responsibility of the home economist as a helping professional.

Course: PU49

Prerequisites: PUB574, SSB000, or equivalent

Credit Points: 12      Contact Hours: 3 per week

### ■ PUB552 NUTRITION ISSUES IN AUSTRALIA

Evaluation of nutritional information; psychology of food; methods of assessing nutritional status; nutritional disorders; community, remedial and nutrition education programs.

Courses: ED50, PU49

Prerequisite: PUB319, PUB405, or equivalent

Credit Points: 12      Contact Hours: 4 per week

### ■ PUB556 FOOD PRESENTATION & PROMOTION

Advanced techniques and complex skills of food production and presentation; commercial production and presentation of food; production and presentation

of food for photography or display purposes; food demonstrations; special occasion cookery.

Course: PU49

Prerequisite: PUB474

Credit Points: 12

Contact Hours: 6 per week

### ■ PUB572 APPAREL DESIGN 1

Factors influencing garment and household goods designs; design development; yarn structure; techniques of fabric construction and decoration; the textile industry.

Course: PU49      Prerequisite: PUB276 or equivalent

Credit Points: 12      Contact Hours: 5 per week

### ■ PUB574 HOME ECONOMICS 3

The family as a social system; resources and constraints related to the life cycle; management in the family context; the family in Australia; managing finance.

Course: PU49

Prerequisite: PUB272 or equivalent

Credit Points: 12      Contact Hours: 3 per week

### ■ PUB575 HOME ECONOMICS PRACTICUM

Experience in working in industry, commerce or government; placement in a number of organisations for 10 weeks.

Course: PU49

Prerequisite: COB160 or equivalent

Credit Points: 12

### ■ PUB580 HEALTH ADMINISTRATION FINANCE

Fund/accrual accounting; financial administration in Commonwealth and State Government; financial management in the health industry; financial analysis; planning and budgeting, working capital management in the health industry; health care performance and evaluation.

Course: PU48      Prerequisite: AYB104 or AYB110

Credit Points: 12      Contact Hours: 3 per week

### ■ PUB582 APPAREL DESIGN 2

The design and production of a range of apparel suitable for a specific client group for example: corporate wear; department store; large mass market; detailed research of client needs, textile specification and evaluation and costing; develops to an advanced level knowledge, understanding and processes established in PUB572.

Course: PU49

Prerequisite: PUB572

Credit Points: 12

Contact Hours: 4 per week

### ■ PUB585 OCCUPATIONAL HYGIENE 2

Continuation of PUB495; concentrates on the application of the principles to which the student has already been introduced; extends the student's ability to recognise, evaluate and suggest the most efficient control strategies for physical and chemical hazards in the working environment; examines the elements of successful monitoring programs in the workplace.

Course: PU44

Prerequisites: CHB411, LSB431, PUB482, PUB485

Credit Points: 12      Contact Hours: 6 per week

### ■ PUB590 PRODUCT DEVELOPMENT & MARKETING

The consumer market; product development; critical path analysis and network planning; idea generation and product evaluation; feasibility study and product cost analysis; quality assurance; the production and marketing of products; career prospects.

Course: PU49

Prerequisite: PUB478 or equivalent

Credit Points: 12      Contact Hours: 3 per week

**■ PUB592 HOME ECONOMICS  
INDEPENDENT STUDY**

Self-initiated and self-directed academic study in an interest area consistent with the courses overall aims.

Course: PU49

Credit Points: 12 Contact Hours: 1 per week

**■ PUB600 HEALTH MANAGEMENT 1**

A problem-solving approach which relates the science of management to decision making and control in health services administration. Management science (operations research) techniques are learned and applied in case studies from the health industry.

Course: PU48

Prerequisite: 16 units in PU48

Credit Points: 12 Contact Hours: 3 per week

**■ PUB602 SPORTS MEDICINE**

The importance of a multidisciplinary approach to the diagnosis, evaluation and treatment of sports injuries. Students study the symptomology of lower limb functional pathologies as related to specific sports and devise treatment programs. An understanding of the principles of human fitness and potential in relation to athletic injuries and expectations forms the foundation for further studies.

Course: PU45 Prerequisites: PUB503, PUB410

Co-requisite: PUB411

Credit Points: 8 Contact Hours: 3 per week

**■ PUB603 CLINICAL SCIENCE 4**

Prepares the student for the transition to private practice. Students are introduced to the sports medicine patient in terms of the range of injuries which occur affecting the lower back, hip, knee, ankle and foot. Case presentations are an integral part of clinical learning and sessions conclude with exchange between students and staff over case management.

Course: PU45

Credit Points: 8 Contact Hours: 12 per week

**■ PUB605 HEALTH MANAGEMENT 2**

Involves a problem-solving approach to decision making and strategic management in health services administration. Case studies and projects are used to allow students to apply theory to practical situations. Specific management techniques and current health management issues are explored.

Course: PU48

Prerequisite: PUB600

Credit Points: 12 Contact Hours: 3 per week

**■ PUB610 PROJECT & PROFESSIONAL  
MANAGEMENT**

This unit explains firstly how a professional practice may be set up and how a small practice can operate as a business enterprise. Methods of budgeting, finance and control are explained. Secondly it aims to develop an interest in podiatry research using scientific methods of investigation and presentation. Students are encouraged to publish these projects as original material in related professional journals.

Course: PU45

Credit Points: 8 Contact Hours: 3 per week

**■ PUB611 HAZARD ASSESSMENT &  
MANAGEMENT**

Enhances skills in risk management; risk communication; workplace auditing; investigation, analysis and reporting of accidents.

Course: PU44

Prerequisite: PHB404

Credit Points: 12 Contact Hours: 6 per week

**■ PUB612 HEALTH PROMOTION &  
EDUCATION**

The scope and nature of health promotion; use of resources for such activities; planning, conduct and evaluation of health promotion programs; adult learning principles; training needs analysis; training program development and evaluation; specific training methods.

Course: PU44

Credit Points: 8

Prerequisite: SSB914

Contact Hours: 3 per week

**■ PUB613 OCCUPATIONAL HEALTH &  
SAFETY PRACTICE 2**

Experience working in industry, commerce or government; placement in an organisation one day per week; ethics; professional practice; current issues.

Course: PU44

Credit Points: 8

Prerequisite: PUB516

Contact Hours: 3 per week

**■ PUB614 INDUSTRY SPECIALISATION**

The hazards associated with particular industries including construction, manufacturing, chemical and mining through field trips and specialist lectures; the various laws and standards that apply to these industries and an investigation of the control strategies applicable to the management of hazards in industry; introduction to the principles of workplace rehabilitation.

Course: PU44

Credit Points: 8

Prerequisite: PUB516

Contact Hours: 4 per week

**■ PUB617 OCCUPATIONAL HEALTH &  
SAFETY PROJECT**

Through independent work under the guidance of supervisors, students learn to appreciate the connection between their theoretical studies and practical aspects of environmental health. Practice is gained in research techniques, logical reasoning and presentation of research findings.

Course: PU44

Prerequisites: PUB512, PUB513, PUB585

Credit Points: 12

Contact Hours: 3 per week

**■ PUB618 HEALTH COMPUTER SYSTEMS**

Principles and applications of electronic data processing in health care settings. Computerised health information systems are analysed from a variety of viewpoints including the objectives of the system, specific methods employed to meet user needs, structure in an overall information system, the technology which makes it operative, the data base, and the various ways information is transferred and used in health facilities.

Course: PU48

Credit Points: 12

Prerequisite: ISB892

Contact Hours: 4 per week

**■ PUB619 HEALTH INFORMATION  
MANAGEMENT 4**

The role and function of the health information manager in the management of health care services; the principles and processes of management as applied to health information services; current issues in health information management.

Course: PU48

Credit Points: 12

Prerequisites: PUB499, PUB456

Contact Hours: 4 per week

**■ PUB620 ENVIRONMENTAL HEALTH  
MANAGEMENT 2**

Integration of the student's theoretical understanding of physical and biological sciences and application of such to the management of a range of environmental health problems encountered in the professional practice of an environmental health officer.

Course: PU42

Prerequisites: PUB520, PUB481

Co-requisite: PUB481

Credit Points: 12

Contact Hours: 6 per week

#### ■ PUB621 ENVIRONMENTAL HEALTH PRACTICE

Visits to all types of establishments in environmental health management, pollution sciences and food studies for the purpose of practical demonstration, evaluation and professional experience.

Course: PU42 Prerequisites: PUB481, PUB520  
Co-requisite: PUB620  
Credit Points: 12 Contact Hours: 6 per week

#### ■ PUB622 ENVIRONMENTAL HEALTH PROJECT

Through independent work under the guidance of supervisors, students learn to appreciate the connection between their theoretical studies and practical aspects of environmental health. Practice is gained in research techniques, logical reasoning and presentation of research findings.

Course: PU42 Prerequisites: PUB520, LSB408  
Credit Points: 8 Contact Hours: 4 per week

#### ■ PUB629 HEALTH PLANNING & EVALUATING 2

Continuation of PUB529. The study of resource management and evaluation research. Evaluation concepts and processes, steps in evaluation research, stakeholder analysis, reporting results and replanning with evaluation research results. (Not offered in 1994.)

Course: PU48  
Credit Points: 12 Contact Hours: 3 per week

#### ■ PUB631 NUTRITIONAL BIOCHEMISTRY

The digestion, absorption and metabolic assimilation of nutrients; hormonal control of metabolism; the role of drugs; genetic and environmental influences; significant parameters measured in clinical laboratories examined in a variety of health and disease states; diet and exercise for health; starvation; obesity; diabetes mellitus; cardiovascular disease; renal disease; liver disease; alcohol consumption; physiological and traumatic stress.

Course: SC30 Prerequisites: LSB408, PUB405  
Credit Points: 12 Contact Hours: 5 per week

#### ■ PUB634 HEALTH SERVICES EVALUATION

A study of process evaluation, program evaluation and evaluation research with applications to the health field; designed for health professionals in both the administration and practice areas. Theory, practice, the utilisation of evaluation results and the administration of evaluation studies are emphasised in this course. Addresses topics such as quality assurance, utilisation, review and accreditation.

Course: PU48 Prerequisite: PUB646  
Credit Points: 12 Contact Hours: 3 per week

#### ■ PUB646 HEALTH SERVICES PLANNING

The administrator's role in the planning and development of health care facilities and health services; an examination of the reasons for planning, the concepts and principles of planning and the types and categories of planning applied to the health industry.

Course: PU48 Prerequisites: PUB130, PUB430  
Credit Points: 12 Contact Hours: 3 per week

#### ■ PUB651 CASEMIX MANAGEMENT

History and development of casemix classification systems; structure of AN-DRGs; casemix applications in quality improvement, utilisation review, costing, planning and management; casemix and funding health care services; casemix classification systems for acute in-patients; data quality issues; casemix

grouping software; current casemix initiatives and applications.

Course: PU48

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUB653 PROFESSIONAL EXPERIENCE

Increase knowledge and level of understanding of health information management in health care facilities through direct observation and participation. The managerial role of the health information services with medical, administrative and allied health professionals; reinforcement of clinical classification skills by coding from medical records.

Course: PU48 Prerequisites: PUB399, PUB956  
Credit Points: 12 Contact Hours: 6 per week

#### ■ PUB655 HEALTH POLICY

How health policy is created; the role of vested interests; the role of the mass media; an appreciation of the difference between policy in use and espoused policy; analysis of health policy using analytical frameworks; health policy impact; policies pertaining to special groups. (Not offered in 1994.)

Course: PU48

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUB672 RESEARCH METHODS

Introduction to research; research in home economics; theoretical elements; research types or settings; sampling and measurement; methods of data collection; analysis and interpretation of data; planning and design of a major research project.

Course: PU49

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUB674 BUSINESS ORGANISATIONS

The structure of business organisations; types of organisations; business objectives, strategies and policies; functions within business organisations; the role of unions and the nature of industrial relations in Australia; women's issues.

Course: PU49

Prerequisite: PUB272 or equivalent

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUB675 HOME ECONOMICS 4

The conceptual, theoretical and philosophical foundations of home economics; societal issues relating to the provision of food, textiles and shelter; a critical examination of social, economic, technological and ethical issues on individual and family wellbeing.

Course: PU49

Prerequisite: PUB674  
Credit Points: 12 Contact Hours: 3 per week

#### ■ PUN600 DISSERTATION

Undertaken by full-time Master of Public Health students following successful completion of coursework. This unit is intended as a practicum, offering experience in investigating and/or solving a public health problem.

Course: PU85

Credit Points: 48

#### ■ PUN601 CONTEMPORARY HEALTH POLICIES

An examination of the social, political, geographical and economic factors which have shaped the organisation of health care services at local, state, national and/or international levels; funding and resource management; the level and nature of responsibility for health care and health care maintenance; planning for structural change.

Courses: HL88, LS85, NS62, NS85

Credit Points: 12 Contact Hours: 3 per week

**■ PUN602 HEALTH PLANNING, MANAGEMENT & EVALUATION**

Application of the theory and principles of planning, management and evaluation to health services; a detailed analysis of health services planning techniques; information requirements and decision making for the strategic management of health services; the principles of financial and personnel management required for the effective development and utilisation of health care; process and program evaluation in health services; the appreciation of evaluation research and cost-effectiveness.

**Courses:** HL88, LS85, NS85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ PUN607 DISSERTATION**

Undertaken by part-time Master of Public Health students following successful completion of coursework. The unit is intended as a practicum, offering experience in investigating and/or solving a public health problem.

**Course:** PU85

**Credit Points:** 48

**■ PUN608 ECONOMICS & HEALTH**

The role of economics in planning and decision making in health care; application of economic analysis to the health care industry; issues related to the demand for health care; the supply of health care and the market for health care.

**Courses:** HL88, PU85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ PUN609 HEALTH CARE FINANCE**

The financial management aspects of health care delivery in Australia; sources of finance at federal, state and local government levels; priority setting; budgetary processes; responsibilities for provision of various services.

**Courses:** HL88, PU85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ PUN610 HEALTH SERVICES MANAGEMENT**

Evolution and changing status of management in health services; interactions between general managers, doctors and others; power/authority concepts; leadership and leadership styles; principles of motivating people and managing conflict; effective decision making by individuals and groups; theories and methods of effective communication, both verbal and written; performance assessment and outcome measures in health management.

**Courses:** HL88, NS85, PU85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ PUN611 ADVANCED HEALTH PLANNING**

The planning of action programs of prevention, care and cure; students taking this subject will previously have studied the determination of health needs using epidemiological methods. This subject has a bias towards ensuring participation in the planning process by all interests affected by the program.

**Course:** PU85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ PUN612 ADVANCED HEALTH EVALUATION**

A study of evaluation research with applications to the health fields; theory and practice; evaluation results and the administration of evaluation studies.

**Course:** PU85

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ PUN613 PUBLIC HEALTH INTERVENTION: PRINCIPLES & PRACTICES**

Prepares students to carry out effective field investigations in preparation for the dissertation. Coursework includes the analysis of the social determinants of public health problems, and theory and practice in health education and health promotion.

**Course:** PU85

**Prerequisites:** PUN604, PUN605, PUN606

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ PUN617 ENVIRONMENTAL HEALTH MANAGEMENT 1**

This unit considers environmental health management as an important component in resolving health threatening hazards in the community. Topics include: history of environmental and community health and the approaches of preventive health including the 'old' and 'new' public health; the concept of environmental health and the reduction of life threatening hazards in the community; the legal system and its approach to environmental legislation and environmental health legislation; a critical review of existing legislation and its effectiveness; the administrative system and political system and the role of government in formulating public health policy and its effect on environmental health decision making; the relevance of the structure and function of the Commonwealth, State and Local Government in Australia for environmental health programs; the professional role of environmental health officers and a detailed analysis of Acts, regulations and policies relevant to environmental health.

**Course:** HL88

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ PUN618 ENVIRONMENTAL HEALTH MANAGEMENT 2**

This unit builds on PUB617 and considers other relevant environmental health management issues which are an important component in resolving health threatening hazards in the community. Topics include: management principles; including the functions of planning, leading, controlling and co-ordinating in the environmental health setting; budgeting formats at all levels of government, including fiscal arrangements for public health policy initiatives; assessment of risk and environmental health policy delivery; modelling processes to calculate the best alternative for policy delivery; survey methodology and data collection and presentation to improve decision making in environmental health; a review of computer software to enhance decision making and office management systems and record and monitor legislative requirements in environmental health.

**Course:** HL88

**Credit Points:** 12      **Contact Hours:** 3 per week

**■ PUN619 ENVIRONMENTAL HEALTH 1**

Considers land as a major component of the environment and as a finite resource which must be properly managed to ensure continued health and well-being for individuals and communities. Examines land as a resource; management strategies and adverse pressures on this component of the environment. Adverse impacts considered include solid and hazardous waste generation and disposal, land contamination and strategies for prevention and management.

**Course:** HL88

**Credit Points:** 12      **Contact Hours:** 3 per week

## ■ PUN620 ENVIRONMENTAL HEALTH 2

This unit considers water and atmosphere as finite resources which must be properly managed to ensure continued health and well-being for individuals and communities. It examines water and atmosphere as resources, management strategies and adverse pressures on these components of the environment. Adverse impacts resulting from various forms of pollution and use are considered together with strategies for prevention and management of such issues.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

## ■ PUN622 CLOTHING: THE HUMAN CONSTRUCTED ENVIRONMENT

Clothing has physiological, psychological, and sociological connotations that affect the self image and the social relationships of all people. For those who deviate from the norms, the physically disabled, the chronically ill, the mentally handicapped, the visually impaired, and those with extreme problems of weight and stature, these connotations become more important. In this unit of study the requirements of specific target groups will be investigated and students will then be challenged to meet their needs through functional clothing design.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

## ■ PUN623 HOME ECONOMICS, THE FAMILY & THE POLITICS OF FEMINISM

Theories of family and the politics of feminism are investigated and the relationship between family and feminist thought are juxtaposed. Topics include: contextualising the study of feminism and the family in home economics; what is family? sociology of the family; the family in Australia; history of feminist thought and current feminist thinking; feminism in Australia; critique of feminism; which way feminism?; feminism and the family; feminism and home economics; well being of individuals and families - what does it mean?

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

## ■ PUN624 HOME ECONOMICS FOOD & NUTRITION

A significant factor influencing food patterns is the changing food market with concomitant political, psycho-social, economic, technical and ethical aspects affecting the supply of food to the consumer. Students will be directed to research nutritional practices, and to uncover the factors influencing such practices. This research will then form the basis for, not only developing strategies for individuals accepting responsibility for their own food-related experiences, but also for examining critically existing nutrition education programs and recommended nutrition goals and guidelines. Topics include: the individual; the food supply; nutritional science; nutrition education.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

## ■ PUN625 HOME ECONOMICS PHILOSOPHICAL FOUNDATIONS

This unit entails a critical examination of relevant political, social, economic, technological and ethical issues which influence well-being of individuals and families. Topics include: what is home economics?; societal issues; implications for home economics praxis; developing a personal philosophy of home economics.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

## ■ PUN626 HOME ECONOMICS FIELD STUDY

This unit enables students to develop an area of their own choosing and to explore this in depth. The format and content of the program will be negotiated between student and lecturer. However it is intended that the focus of the study would be investigating Home Economics theory and practice within the school and/or community setting. Possible areas of study might include: education issues for home economics, home economics and feminism, family studies; human development, human relationships, food and nutrition, textiles, shelter, consumerism, management, design, environmental issues, and technology. Areas available will be determined by the expertise and research interests of the staff.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

## ■ PUN627 ADVANCED PHARMACOLOGY

Topics include: an in depth study of drugs relevant to podiatric practice; including their actions, indications, contra-indications, adverse reactions, drug interactions and dosages; indications and contra-indications and adverse effects of the use of antibiotics, sedatives, NSAIDs analgesics, cortico-steroids, epinephrine in relevant local anaesthetics; the actions of systemic drugs on; the nervous system, cardiovascular, endocrine and musculo skeletal systems; prescription writing and drug regulations.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

## ■ PUN628 CLINICAL PATHOLOGY & DIAGNOSIS

This unit provides students with advanced clinical management skills commensurate with the Master's Degree level of education: an important practical adjunct to the theoretical concepts of clinical pathology and associated diagnostic techniques; gives the Podiatrist the opportunity to apply acquired knowledge in a supervised clinical environment facilitating a comprehensive approach to the evaluation and treatment of foot pathology in the community; students undertaking the management of patients attending the QUT clinical facility.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

## ■ PUN629 GENERAL MEDICINE

This unit provides an advanced level of knowledge necessary for a holistic medical approach to the management of disease processes. The relationship between pathogenesis and advanced therapeutic treatment will be explored; designed to enhance the theoretical and clinical knowledge gained from the advanced pharmacology and clinical pathology/diagnosis subjects. Topics include: haematopoietic and lymphoid system; immune system; endocrine system; musculoskeletal system; hereditary and genetic; nervous system; cardiovascular system; gastrointestinal system; the liver, the biliary tract and the pancreas; respiratory system; the renal system.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

## ■ PUN630 COMPUTERISED GAIT ANALYSIS

Students have the opportunity to further their study and understanding of human movement and gait analysis; and to enhance their clinical biomechanical assessment of a patient, thus allowing for better evaluation and treatment regimes. This will be achieved using computerised video motion assess-

ment and foot force assessment systems. Particular emphasis will be directed to providing the student with the opportunity of applying this information to specialised areas of podiatric sports medicine.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUN631 PODIATRIC SURGERY

Introduces professionals to the more technical aspects of foot surgery. It deals with pre-operative planning of procedures as well as post-operative complications. By the end of the course students will gain sufficient knowledge to be able to make informed referrals to those qualified to perform appropriate procedures.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUN641 CLINICAL DATA MANAGEMENT

Development of skills in data management systems and techniques used in clinical trials and epidemiological research. Methods of collecting and organising clinical data for research purposes; organisation of clinical trials; protocol design and interpretation; quality control and maintaining the integrity of trials; software applications for clinical data management; presentation skills in data management.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUN642 CLASSIFICATION & CASEMIX IN HEALTH

The use of classification systems in health services and their applications; statistical classifications (such as ICD) and nomenclatures (such as SNOMED); specialist classification systems for different health care settings (e.g. hospitals, ambulatory care, general practice); the development, application and use of casemix classification systems, especially AN-DRGs.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUN643 HEALTH INFORMATICS

The use of information technology in health services; computers, telecommunications and electronic storage systems (such as optical disk); technical, financial, human resource management and legal issues associated with the use of health informatics; applications for health authorities, hospitals, other health institutions and private practice. Field trips will be included.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUN644 CASE STUDIES IN HEALTH INFORMATION MANAGEMENT

Either individually or in groups students analyse case studies, assess the situation and propose a solution or alternative solutions. The case studies will be based on recent or current situations in local health care settings.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUN692 HEALTH CARE DELIVERY SYSTEMS

The context in which public health operates in Australia; an introduction to the health administration branch of public health; the coordination of human, physical, financial and information resources to solve existing problems, to prevent future problems, and to promote good health.

Course: PU85

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUP007 SOCIAL & BEHAVIORAL EPIDEMIOLOGY

Introduction to the field of social and behavioral epidemiology. Examines the role of epidemiology in identifying health problems as well as seeking measures to control or prevent the occurrence of illness in human populations.

Courses: HL88, PU69

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUP010 HEALTH IN AUSTRALIAN SOCIETY

Addresses significant issues associated with the multifactorial relationships between health and social, economic, political and lifestyle factors. Examination of the structure of Australian society as it impacts on health; patterns of mortality and morbidity and the nature and extent of health care delivery systems.

Courses: HL88, PU69

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUP012 PROGRAM EVALUATION

An introduction to the role of research and evaluation in a broad range of health education and promotion contexts. The unit focuses on the development of skills in program evaluation, research skills to analyse and interpret current research literature and the development of research proposals.

Course: PU69

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUP014 SCHOOL HEALTH EDUCATION

Introduction to the field of school health education. Focuses on the nature, scope and place of school health education in the total school environment; major issues facing schools and educators involved in developing and implementing school health education; structural and organisational factors impacting on program development.

Courses: HL88, PU69

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUP018 HEALTH PROMOTION STRATEGIES

Examines and analyses the process of selection and implementation of appropriate educational approaches for health education and health promotion programs; a broad range of theories, methods and strategies for planning educational experiences.

Courses: HL88, PU62, PU69, PU85

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUP021 CASE STUDIES ON CONTEMPORARY HEALTH ISSUES

Focuses on current issues facing practitioners in health education and promotion. Includes critical analysis of strategies and policies designed to address contemporary health issues and encourages students to become informed and critical practitioners.

Courses: HL88, PU69

Credit Points: 12 Contact Hours: 3 per week

#### ■ PUP022 HEALTH PROMOTION CONCEPTS & POLICY: A CRITICAL ANALYSIS

Essential advanced study for practitioners engaged in the application of health promotion strategies. It acknowledges the importance of knowledge and skills to reduce behavioral risks, however, it emphasises the significant strategies and policies of health promotion including healthy public policy, social view of health, laws and regulations and leadership and advocacy.

Courses: HL88, PU69

Credit Points: 12 Contact Hours: 3 per week

### ■ PUP023 PROGRAM PLANNING IN SCHOOL & COMMUNITY HEALTH

Major components of health education and health promotion - the planning and implementation of intervention strategies and comprehensive programs. Provides a conceptual synthesis of the foundation of health education and promotion and analyses models of program planning and evaluation.

**Courses:** HL88, PU69

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ PUP024 FOUNDATIONS OF HEALTH EDUCATION

Introduction to the theoretical and practical dimensions of health education as a major component of the process of health promotion. Subject introduces knowledge, skills and practices necessary to implement health education strategies.

**Courses:** HL88, PU69

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ PUP025 COMMUNITY HEALTH PROMOTION

The field of health education and health promotion specifically focusing on the nature of the community health education; examines the environmental, social and educational elements supporting and encouraging behaviours conducive to health.

**Courses:** HL88, PU69

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ PUP027 INDEPENDENT STUDY

Research work in an area of personal or professional interest to the student in the health sciences. The focus may be one of specific content area or process in health education or health promotion. Involves liaison with academic adviser.

**Course:** PU69

**Contact Hours:** To be negotiated

**Credit Points:** 12

### ■ PUP109 NUTRITION

A comprehensive study of the nutritional sciences building on students' backgrounds in physiology, biochemistry and nutrition. Topics include: food composition databases; food commodities; factors affecting food choice; factors affecting access to food; barriers within Australia; public health nutrition; food grouping systems; dietary guidelines and the food needs of various groups in the community.

**Course:** PU62

**Credit Points:** 12      **Contact Hours:** 5 per week

### ■ PUP110 NUTRITIONAL EPIDEMIOLOGY

Statistics; validity; reliability; assessing nutritional studies; data management; interpretation of results. During the semester students have the opportunity to gather data, statistically analyse and assess the data, draw conclusions and construct a written report of the results. Students also learn to use computers to carry out basic statistical and dietary analyses.

**Course:** PU62

**Credit Points:** 12      **Contact Hours:** 5 per week

### ■ PUP115 OCCUPATIONAL HEALTH & SAFETY LAW & MANAGEMENT 1

Introduces students to basic concepts in occupational health and safety; develops both an understanding of and skills in not only basic management principles as they apply to this discipline but also in the development and delivery of health and safety training programs develops a sound foundation in the principles and practice of health promotion.

**Courses:** NS62, PU65

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ PUP116 ERGONOMICS

The relationship between the worker, the work environment and the workspace. Occupational ill-health and injury arise from a lack of fit between the capabilities of workers and the design of the working environment, the work processes and the physical and mental demands of the task. Insight into ergonomics can assist practitioners to enhance the worker's safety and comfort, improve work efficiency and performance, and optimise work performance. Topics include: basic anatomy and physiology of body systems; occupational biomechanics; psychology.

**Courses:** HL88, NS62, PU65

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ PUP122 PRACTICE IN CLINICAL DIETETICS

Practical experience and seminar presentations relevant to PNP120 conducted in institutions off-campus (40 hours per week for 11 weeks).

**Course:** PU62

**Prerequisites:** Completion of all Semester 1 and Semester 2 units.

**Credit Points:** 24      **Contact Hours:** 11 weeks

### ■ PUP123 PRACTICE IN COMMUNITY NUTRITION

Students gain experience in the nutrition and health care of individuals and groups in the community through off-campus practice (40 hours per week for 3 weeks).

**Course:** PU62

**Prerequisites:** Completion of all Semester 1 and Semester 2 units.

**Credit Points:** 12      **Contact Hours:** 4 weeks

### ■ PUP126 CLINICAL DIETETICS 1

The dietetic process; the gathering of information using dietary histories; anthropometry; biochemical indices. It builds on basic studies in nutrition; biochemistry and physiology; integrates medical, biochemical and dietary aspects of inborn errors of metabolism, energy imbalances, cardiovascular disorders and metabolic disorders. As part of the subject students are required to attend various hospitals and other locations to interact with clients and others.

**Course:** PU62      **Co-requisites:** PUP109, PUP110

**Credit Points:** 12      **Contact Hours:** 5 per week

### ■ PUP127 CLINICAL DIETETICS 2

This is a continuation of PUP126. Topics includes: nutritional assessment; the management of disorders of the digestive and immune systems; renal disease; liver disease; paediatric disorders; nutritional support and hypermetabolic conditions. Students are required to undertake various visits to hospitals and other locations to interact with clients and others.

**Course:** PU62

**Prerequisite:** PUP126      **Co-requisite:** PUP128

**Credit Points:** 12      **Contact Hours:** 5 per week

### ■ PUP128 PRACTICAL DIETETICS

Provides an opportunity to experiment with food commodities and to practise service planning, and food presentation. Examines the ingredient content of commercial foodstuffs. Examines the role of individual ingredients of foodstuffs in the determination of food structure and organoleptic properties.

**Course:** PU62

**Prerequisite:** PUP126      **Co-requisite:** PUP127

**Credit Points:** 12      **Contact Hours:** 5 per week



### **■ PUP129 FOOD SERVICE & DIETETIC MANAGEMENT**

An introduction to the principles of management including general management theory; organising functions; leadership; staffing; management of change; marketing the profession. This is applied to food service management in terms of planning and organising food service; menu planning; kitchen design; food delivery systems; computer assistance and quality assurance. Field trips to visit various food services.

Course: PU62

Credit Points: 12      Contact Hours: 5 per week

### **■ PUP132 PRACTICE IN FOOD SERVICE MANAGEMENT**

Practical experience and seminar presentations. Conducted in institutions off-campus (40 hours per week for 4 weeks).

Course: PU62

Prerequisites: Completion of all Semester 1 and Semester 2 units.

Credit Points: 12      Contact Hours: 3 weeks

### **■ PUP140 COMMUNICATION THEORY & PRACTICE FOR HEALTH PROFESSIONALS**

Provides health professionals with skills in communication. Covers communication between clients and health professionals on a one-to-one basis; communication in small groups; public education on health-related matters; diffusion and adoption of health-related behaviours; the role of information; the use of mass media; and communication within health organisations, i.e., between health educators and promoters and other health professionals.

Courses: HL88, PU62

Credit Points: 12      Contact Hours: 3 per week

### **■ PUP215 OCCUPATIONAL HEALTH & SAFETY LAW & MANAGEMENT 2**

Students develop an understanding of both the legal framework within which the discipline operates and industrial relations concepts and practices in so far as they impinge upon occupational health and safety. Basic statistical techniques are reviewed as an introduction to the study of concepts of epidemiology applicable to an occupational setting.

Courses: HL88, PU65

Credit Points: 12      Contact Hours: 3 per week

### **■ PUP250 OCCUPATIONAL HYGIENE**

Lectures, practical work and industrial visits to instruct students so that they may recognise, evaluate and control the physical, biological and chemical environmental factors which can adversely affect the health, safety, comfort and efficiency of workers.

Courses: HL88, NS62, PU65

Credit Points: 12      Contact Hours: 3 per week

### **■ PUP301 SAFETY TECHNOLOGY & PRACTICE 2**

Risk analysis; occupational health and safety audits; hazard detection and analysis; control strategies; use and limitations of personal protective equipment; safety audits; fire and explosion prevention; safe storage of chemicals; ventilation systems - design and operation; reporting systems and methods.

Courses: HL88, PU65

Credit Points: 12      Contact Hours: 3 per week

### **■ PUP415 OCCUPATIONAL HEALTH**

This unit explores chemical hazards in the working environment, epidemiological principles and practice, and identification of special risk groups in the

workforce. Topics include: the pathological bases of disease in humans; chronic occupational diseases; occupational skin conditions; respiratory diseases; biological hazards in the work environment (bacteria, parasites, viruses, rickettsia and fungi); chemical and physical stresses and their physiological responses; physiological monitoring - principles and practice; special risk groups; epidemiological principles and practice.

Courses: HL88, PU65

Credit Points: 12      Contact Hours: 3 per week

### **■ PUP416 OCCUPATIONAL HEALTH & SAFETY PROJECT**

This major project gives students an opportunity to research a particular aspect of their theoretical or practical studies, and thereby develop their research techniques, data collection and evaluation skills and ability to work independently under supervision. By submission of a written project report, they will draw upon many of the skills developed in the unit.

Course: PU65

Credit Points: 12

### **■ PUP430 HOME ECONOMICS CURRICULUM STUDIES 1**

The bases for making decisions about home economics curriculum design and implementation are explored in order for participants to appreciate the complexity of this process and the necessity to clarify their own philosophical base for teaching in the area. The skills appropriate for preparing and implementing sequenced units of work will be developed.

Course: ED37

Credit Points: 12      Contact Hours: 3 per week

### **■ PUP431 HOME ECONOMICS CURRICULUM STUDIES 2**

Development of further skills in writing programs of work with an emphasis on advanced teaching/learning strategies, assessment and evaluation and the processes of accreditation and certification concomitant with BOSSSS requirements; current developments in education and implications for Home Economics curriculum; feasible teaching/learning approaches congruent with the needs of specific groups are developed to achieve more equitable education outcomes for all students.

Course: ED37

Prerequisite: PUP420

Credit Points: 12      Contact Hours: 3 per week

### **■ SBB230 ENVIRONMENTAL EDUCATION**

Designed to assist the beginning teacher to implement the Queensland Department of Education's environmental policy in primary schools; aims to develop expertise in the design and delivery of class programs and activities for children.

Course: ED41      Prerequisites: SBB229, MDB228

Credit Points: 8      Contact Hours: 3 per week

### **■ SBB261 SOCIAL SCIENCES 2**

Continuation of SBB260. Contemporary problems in the Australian, Asian and Pacific region; pedagogical issues of studying Australia and other countries in their political, cultural, geographical, and economic relationships. Students undertake an independent study of an area applied to an identified curriculum need within the P-10 social education framework.

Courses: ED41, ED51

Prerequisite: SBB260

Credit Points: 12      Contact Hours: 3 per week

### **■ SBB262 SOCIAL SCIENCES 3**

Continuation of SBB261. An introduction to the study of futures is attempted through an analysis of principal

methods and contemporary eminent contributors. Methods and models are applied to the development of futures scenarios and contemporary issues relevant to the region, eg. population and migration, political institutions and systems, resource allocation and utilisation, sustainable development, environmental issues and structural change. Using their understandings from the above, together with suggestions from the Commission on the Future (Australia), teaching methods and techniques are developed for the P-10 curriculum.

**Courses:** ED41, ED51 **Prerequisite:** SBB261  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SBB325 ACCOUNTING/BUSINESS MANAGEMENT CURRICULUM STUDIES 1

This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50 **Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SBB326 ACCOUNTING/BUSINESS MANAGEMENT CURRICULUM STUDIES 2

This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50 **Prerequisite:** SBB325  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SBB327 OFFICE COMMUNICATIONS TECHNOLOGY CURRICULUM STUDIES 1

This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50 **Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SBB328 OFFICE COMMUNICATIONS TECHNOLOGY CURRICULUM STUDIES 2

This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50 **Prerequisite:** SBB327  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SBB329 ECONOMICS CURRICULUM STUDIES 1

This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50 **Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SBB330 ECONOMICS CURRICULUM STUDIES 2

This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50 **Prerequisite:** SBB329  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SBB331 GEOGRAPHY CURRICULUM STUDIES 1

This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50 **Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SBB332 GEOGRAPHY CURRICULUM STUDIES 2

This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50 **Prerequisite:** SBB331  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SBB333 HISTORY CURRICULUM STUDIES 1

This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50 **Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ SBB334 HISTORY CURRICULUM STUDIES 2**

This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50 **Prerequisite:** SBB333  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ SBB335 LEGAL STUDIES CURRICULUM STUDIES 1**

This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50  
**Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ SBB336 LEGAL STUDIES CURRICULUM STUDIES 2**

This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50 **Prerequisite:** SBB335  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ SBB337 SOCIAL SCIENCE CURRICULUM STUDIES 1**

This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

**Course:** ED50  
**Prerequisite:** Normally the completion of 48 credit points in each relevant discipline area.  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ SBB338 SOCIAL SCIENCE CURRICULUM STUDIES 2**

This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

**Course:** ED50 **Prerequisite:** SBB337  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ SBB339 CURRICULUM IN SOCIAL EDUCATION**

Builds on SBB340 to develop a coherent and balanced understanding of the nature and role of Social Education, the Queensland Primary Schools Social Studies Syllabus and P-10 Social Education Framework and introduces other national and international syllabi and

programs. Investigates some of the more recent significant initiatives in Social Education, such as Aboriginal and Torres Strait Island Education, Environmental Education and Global Education. Students design an innovative curriculum program for the classroom and clarify their own philosophy and degree of commitment to Social Education teaching.

**Course:** ED51 **Prerequisite:** SBB340  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ SBB340 TEACHING SOCIAL EDUCATION**  
Develops an introductory understanding of the nature and role of Social Education and Queensland Primary Schools Social Studies Syllabus and Guidelines, Workbooks, and the P-10 Social Education Framework. Investigates the various learning styles in the classroom and appropriate teaching strategies to cater for these and especially by processes for individualising instruction via inquiry learning.

**Course:** ED51  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ SBB341 DIRECTIONS IN SOCIAL EDUCATION**

Builds on SBB339 and SBB340 and analyses the contribution to social education in the classroom of areas, themes and topics, such as, teaching for a better world, environmental education, peace and justice, effective citizenship, political literacy, human rights, development education, gender and equity, global education and futures education.

**Course:** ED51  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ SBB342 SOCIAL & ENVIRONMENTAL FOUNDATIONS**

The unit explores from an interdisciplinary perspective a number of thematic questions about teaching: the historical development of social and environmental foundations in the study of society; the current socio-cultural context of social and environmental education; culture and beliefs as an influence on social and environmental activity; the quality of natural and social systems in the world; resources: conservation and development; place and space, continuity and change, key skills and competencies, critical and creative thinking, perceptions, attitudes and values in social and environmental studies.

**Course:** ED51  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ SBB343 THE AUSTRALIAN LEGACY**

This course examines those forces which have shaped contemporary Australia. Through a consideration of this historical legacy it aims to give a better understanding of those social, economic and constitutional developments which are taking place as Australia moves towards the twenty-first century.

**Course:** ED51  
**Credit Points:** 12 **Contact Hours:** 3 per week

**■ SBB344 CONSUMER EDUCATION IN PRIMARY SCHOOLS**

This unit provides opportunities for Primary School teachers to gain an awareness of the role and functions of consumers in the Australian economy, and the interrelationship between consumers, business and the government. It discusses consumer protection laws and the need for consumer protection. The subject examines various teaching strategies and teaching resources and assists teachers to plan Consumer Education teaching programs for implementation in primary schools.

**Course:** ED51  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SBB345 AUSTRALIA, ASIA AND THE PACIFIC – A FUTURES APPROACH

An introduction to the study of futures is attempted through an analysis of principal methods and contemporary eminent contributors. Methods and models are applied to the development of future scenarios and contemporary issues relevant to the region, eg. population and migration, political institutions and systems, resource allocation and utilisation, sustainable development, environmental issues and structural change. Using understandings from the above, teachings methods and techniques are developed for the P-10 Social Education Curriculum.

Course: ED51

Credit Points: 12      Contact Hours: 3 per week

### ■ SBB346 ENVIRONMENTAL EDUCATION

This unit is designed to assist the beginning teacher to implement the Queensland Department of Education's environmental policy in primary schools. The major goal is to develop expertise in the design and delivery of class programs and activities.

Course: ED51

Credit Points: 12      Contact Hours: 3 per week

### ■ SBB410 CONSUMER EDUCATION

Preparation of teachers to teach consumer education at various school levels either as a subject in its own right or as aspects of consumer education within other disciplines. Topics include: consumer education in the school curriculum; content in consumer education; teaching consumer education; curriculum development and innovation.

Courses: ED26, ED69, NS48

Credit Points: 12      Contact Hours: 3 per week

### ■ SBB411 SOCIAL EDUCATION CURRICULUM DEVELOPMENT

Designed for teachers wanting to specialise in curriculum planning in primary social studies, secondary economics, history, geography or social science, or TAFE liberal studies; explores recent curriculum movements in social education and relevant curriculum development projects; advanced skills for planning a teaching subject and a work program.

Courses: ED26, NS48

Credit Points: 12      Contact Hours: 3 per week

### ■ SBB412 SOCIAL EDUCATION IN THE CURRICULUM

Provides opportunities for teachers of social education at all levels to investigate key issues and debates about social education and to refine their own purpose as social educators; focuses on global challenges to social educators, the debate over the purposes and structure of social education, the place of critical thinking in the curriculum and the implications of the current P-10 initiative in Queensland.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

### ■ SBB413 LEGAL STUDIES APPLIED CURRICULUM

For secondary teachers of legal studies (or intending teachers) who have no formal curriculum training in legal studies. The nature of legal studies within the school curriculum; current teaching strategies; the socio-critical approach; program planning and applications; curriculum innovation and development.

Course: ED26

Credit Points: 12      Contact Hours: 3 per week

### ■ SBB440 ENVIRONMENTAL EDUCATION

Valuable for all educators concerned with communicating environmental knowledge, concepts, skills, attitudes and values in formal and informal learning situations. Students are encouraged to pursue the objectives of environmental education within their own subject specialisations.

Courses: ED26, NS48

Credit Points: 12      Contact Hours: 3 per week

### ■ SBN603 CRITICAL APPROACHES IN SOCIAL EDUCATION

Analysis of emerging fields of social education; including development education, human rights education, global education and futures education; basis in social theory, theories of knowledge and curriculum theories; links with current national and state policy developments; analysis of principles, resources and practices; applying critical approaches in disciplinary fields such as History and Geography, and in integrated studies; evaluating their applicability to various school/age settings.

Courses: ED11, ED13

Credit Points: 12      Contact Hours: 3 per week

### ■ SBN604 ENVIRONMENTAL EDUCATION & INTERPRETATION

The theoretical and practical knowledge and skills for leadership in fields of environmental education and interpretation; study of concepts of society and environmental and interpretive learning experiences; the use of museums, exhibits and environmental centres; teaching about controversial issues/sites.

Courses: ED11, ED13

Credit Points: 12      Contact Hours: 3 per week

### ■ SBP401 ACCOUNTING CURRICULUM STUDIES 1

The nature of Accounting/Business Management education and its role and contribution as a medium for education; introduction to the relevant syllabuses and curriculum documents; lesson and curriculum planning activities; teaching strategies designed to promote a range of learning experiences in the Accounting/Business Education areas.

Course: ED37

Credit Points: 12      Contact Hours: 3 per week

### ■ SBP402 ACCOUNTING CURRICULUM STUDIES 2

Consideration and practical application of curricular and teaching principles in the Accounting/Business Management area, emphasis on the use of computers; development of work programs, assessment programs and teaching packages in Accounting/Business Management areas. Establishment of principles which are used to guide school experience during teaching practice and also as a beginning teacher; contemporary issues and emerging trends in Accounting/Business Management education curriculum development.

Course: ED37

Credit Points: 12      Prerequisite: SBP401  
Contact Hours: 3 per week

### ■ SBP403 ECONOMICS CURRICULUM STUDIES 1

The nature of Economics and its role in the general curriculum; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning applied to Economics; teaching strategies and resources designed to motivate students and promote a range of interactive learning experiences.

Course: ED37

Credit Points: 12      Contact Hours: 3 per week

**■ SBP404 ECONOMICS CURRICULUM STUDIES 2**

Continuation of SBP403. Curriculum development within the context of contemporary policies, frameworks and agencies; advanced teaching strategies and the use of computers in teaching Economics; unit development; assessment and evaluation in Economics; issues and directions in curriculum development.

Course: ED37

Prerequisite: SBP403

Credit Points: 12

Contact Hours: 3 per week

**■ SBP405 GEOGRAPHY CURRICULUM STUDIES 1**

The interpretation of geography syllabi in Queensland; the nature and role of geography in general education; lesson and unit planning; teaching and learning approaches designed to promote different classroom activities and cater for different students needs.

Course: ED37

Credit Points: 12

Contact Hours: 3 per week

**■ SBP406 GEOGRAPHY CURRICULUM STUDIES 2**

Continuation of SBP405. Examination of the broader issues of geographical education and the roles of the geography teachers in the community and the profession.

Course: ED37

Prerequisite: SBP405

Credit Points: 12

Contact Hours: 3 per week

**■ SBP407 HISTORY CURRICULUM STUDIES 1**

Development of a rationale for inquiry-based curricula in history for secondary schools; application of inquiry-based principles to curriculum development at levels from school programs to individual lessons.

Course: ED37

Credit Points: 12

Contact Hours: 3 per week

**■ SBP408 HISTORY CURRICULUM STUDIES 2**

Continuation of SBP407. Assessment of principles and practices; evaluation of the potential for history to contribute to emerging fields of social education, including global education and development education.

Course: ED37

Prerequisite: SBP407

Credit Points: 12

Contact Hours: 3 per week

**■ SBP409 LEGAL STUDIES CURRICULUM STUDIES 1**

Legal studies in the school curriculum; socially-critical approach to the teaching of Legal Studies; overview of the Legal Studies course in Queensland; lesson and curriculum unit planning activities; basic teaching strategies to promote a range of learning experience in Legal Studies; developing basic teaching skills related to the first teaching practice session.

Course: ED37

Credit Points: 12

Contact Hours: 3 per week

**■ SBP410 LEGAL STUDIES CURRICULUM STUDIES 2**

Continuation of SBP409. Curriculum development within the context of contemporary principles; advanced strategies to further promote a range of learning experiences; assessment and evaluation techniques; assessment programs and teaching packages in Legal Studies; issues and directions in curriculum development.

Course: ED37

Prerequisite: SBP409

Credit Points: 12

Contact Hours: 3 per week

**■ SBP411 OFFICE COMMUNICATIONS TECHNOLOGY CURRICULUM STUDIES 1**

The nature of office communications technology, its role in the general curriculum; introduction to relevant syllabuses and curriculum documents; basic teaching strategies (including microteaching), and resources designed to motivate students and promote a range of participative learning experiences.

Course: ED37

Credit Points: 12

Contact Hours: 3 per week

**■ SBP412 OFFICE COMMUNICATIONS TECHNOLOGY CURRICULUM STUDIES 2**

Continuation of SBP411. Curriculum development within the context of contemporary policies; advanced teaching strategies; unit development; general principles of measurement, assessment and evaluation; issues and directions in curriculum development which are pertinent to office communications technology; opportunities to assist students reflect on their own professional development, as they prepare for teaching career.

Course: ED37

Prerequisite: SBP411

Credit Points: 12

Contact Hours: 3 per week

**■ SBP500 CURRICULUM ISSUES IN ENVIRONMENTAL EDUCATION 1**

The nature of environmental education, environmental ethics; theoretical and practical appreciation of the issues and problems facing environmental education curriculum planners.

Course: ED22

Credit Points: 12

Contact Hours: 3 per week

**■ SBP501 CURRICULUM ISSUES IN ENVIRONMENTAL EDUCATION 2**

A theoretical appreciation of, and practical exposure to, the design of environmental teaching experiences in formal and non-formal settings within subject areas; builds upon SBP500.

Course: ED22

Prerequisite: SBP500

Credit Points: 12

Contact Hours: 3 per week

**■ SBP502 ETHICS & ECONOMICS IN ENVIRONMENTAL EDUCATION**

Development of an understanding of the nature of environmental economics and different philosophies, ideologies and cultural views towards the environment; development of teaching strategies and resources for teaching environmental economics and ethics.

Course: ED22

Credit Points: 12

Contact Hours: 3 per week

**■ SBP503 NATURAL ENVIRONMENTAL EDUCATION ISSUES**

Relationship between human beings and their natural environment; historical development of environmental ethics; studies of current human impacts on vegetation, animal life, soils, waters, geomorphological processes and climate and implications of these for current notions of sustainability.

Course: ED22

Credit Points: 12

Contact Hours: 3 per week

**■ SBP504 PRACTICAL & FIELDWORK IN ENVIRONMENTAL EDUCATION**

Development of a range of practical and technological skills and a variety of field-based experiences to enable students to reflect on and refine their attitudes and perceptions about environmental education. Studies include rural and urban field activities.

Course: ED22

Credit Points: 12

Contact Hours: 3 per week

#### ■ SBP505 SOCIAL ENVIRONMENTAL EDUCATION ISSUES

Development of an understanding of people's responses to their urban environment; opportunities for decision-making about the effective and sustainable use of urban environments; strategies to promote effective practices in the urban environment.

**Course:** ED22

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ SBP506 CURRICULUM ISSUES IN BUSINESS EDUCATION

The nature and scope of business education; business education curricular developments; projections and implications of social economic and demographic changes for business education; technology in business education; catering for special needs students in business; integrating business into the lower school curriculum; linkage of business and industry with education; implications of change for effective teaching; promotion of business educators; innovation in the business education area.

**Courses:** ED22, ED69

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ SBP507 BUSINESS ORGANISATION & MANAGEMENT EDUCATION 1

Development of the business organisation and management curriculum; comparison with curricula in other states; rationale; nature and aims of business organisation and management; learning experiences appropriate to business organisation and management; examination of curriculum content in the area of business organisation and management.

**Courses:** ED22, ED69

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ SBP508 BUSINESS ORGANISATION & MANAGEMENT EDUCATION 2

Learning experiences for business organisation and management; resources for teaching business organisation and management; technology in business organisation and management; development of extension studies; language education in business organisation and management; values and educational equity in business organisation and management; assessment and evaluation in business management.

**Courses:** ED22, ED69

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ SBP509 ISSUES IN LEGAL EDUCATION

Nature and scope of legal education; development of legal education curriculum in Australia; comparisons with overseas programs; nature and scope of legal studies in Queensland; development of relevant teaching strategies within a socially-critical framework; optional studies for legal studies.

**Course:** ED22

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ SBP510 ISSUES IN OFFICE COMMUNICATION TECHNOLOGY EDUCATION

Role of office communication technology in a changing social world; impact of office communication technology on the teaching-learning process; enquiry and process in office communication technology education; implementing office communication technology education in primary and lower secondary curriculum; values and educational equity in office communication technology education; applications of office communication technology in teaching and learning; curriculum development and change management in office communication technology

education; assessment and evaluation in office communication technology education.

**Course:** ED22

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ SBP511 ISSUES IN ACCOUNTING EDUCATION

Curriculum development in accounting; use of computers in teaching and learning accounting; integration of language education into the accounting curriculum; critical examination of teaching strategies; assessment and evaluation in accounting; other issues.

**Courses:** ED22, ED69

**Credit Points:** 12      **Contact Hours:** 3 per week

#### ■ SCB001 LEARNING AT UNIVERSITY

Aims to develop students' awareness and use of learning processes necessary for quality learning at university. It encourages a more meaningful approach to learning through the development of active learning strategies effective in scientific study. The content is closely allied to other first year units. Classes have an interactive format which require active student involvement and participation.

**Course:** SC30

**Credit Points:** 2      **Contact Hours:** 1 per week

#### ■ SCB100 COOPERATIVE EDUCATION

Ten to 12 months placement in paid employment related to their course, in a commercial environment under the joint supervision of an industry supervisor and an academic adviser. An academic adviser obtains reports from the student and their work supervisor at regular intervals. The student is required to complete a progressive assessment program. Results are determined on the basis of reports, continuous assessment, and the employer's report.

**Courses:** CH32, MA34, SC30

**Prerequisite:** Completion of 4 semesters of a standard full-time degree-level course, normally with a GPA of not less than 4.5 overall.

#### ■ SCB202 SCIENCE, TECHNOLOGY & SOCIETY

The origins of modern science and technology in a social and historical context leading to the study of their role and impact in contemporary society; includes case studies of the development of particular concepts, issues and science and technology based industries. Topics include: the study of the nature of science and technology; the sociological functioning of the scientific enterprise - its norms and values; the nature of scientific knowledge - objectivity and epistemological issues; the future of science and technology - policy and influences.

**Courses:** ED50

**Credit Points:** 12      **Contact Hours:** 5 per week

#### ■ SCB222 EXPLORATION OF THE UNIVERSE

Introduction to optical observational astronomy; instrumentation; celestial sphere and astronomical coordinates, observations of constellations, stars, planets, clusters and other interesting celestial objects. Theory: physical geology of the planets and formation of the solar system, gravitation, optics of telescopes, spectra and their measurement, phenomena of astronomical origin, brief introduction to stars and galaxies. Practical exercises and field trips.

**Courses:** ED50, SC30

**Credit Points:** 12      **Contact Hours:** 5 per week

**■ SCB510 INTRODUCTION TO QUALITY MANAGEMENT**

Management: concepts, systems, costs and total quality management. Improvement: techniques and procedures.

Course: SC30

Prerequisite(s): MAB237 or MAB347 and successful completion of at least 192 credit points.

Credit Points: 12      Contact Hours: 4 per week

**■ SSB000 AUSTRALIAN SOCIETY: INTRODUCTION TO SOCIOLOGY**

An introduction to sociology; basic sociological concepts and theories will be introduced and applied in an analysis of the key institutions and structures in Australian society. Students will be exposed to a number of important debates concerning the nature of, and future prospects for, Australian society.

Courses: PU49, SS07

Credit Points: 12      Contact Hours: 3 per week

**■ SSB001 HUMAN DEVELOPMENT 1**

Theories of human development; theories of child development; life-events, transitions and stresses of childhood; values clarification regarding children; disturbances in children; applying developmental theory to service provision for children; cross-cultural and Aboriginal child development; moral development; gender development; child abuse; play and creativity in children; bonding and attachment in early childhood; historical development of childhood; family life cycle; biological bases of child development; the impact of political oppression.

Course: SS07

Credit Points: 12      Contact Hours: 3 per week

**■ SSB002 STUDIES IN HUMAN RIGHTS 1**

Historically, social science enquiry has sustained a particular interest in both explaining and changing human situations characterised by deprivation, exploitation, oppression, persecution, disadvantage and disempowerment. This subject, the first of three dealing with the study of human rights, explores such situations from a human rights perspective. It begins with an exploration of idea the of individual and collective human rights and assesses selected international and national situations in terms of civil, political, economic, social and cultural rights.

Course: SS07

Credit Points: 12      Contact Hours: 3 per week

**■ SSB003 INTRODUCTION TO PSYCHOLOGY**

Using an inductive learning approach, this unit examines ways of conceptualising and understanding behaviour focusing on social perception; learning theories and paradigms; the nature of emotions and defensiveness; the social psychology of attitudes/values, self concept, roles, gender, power, groups; models of verbal and non-verbal communication; stress.

Course: SS07

Credit Points: 12      Contact Hours: 3 per week

**■ SSB004 SOCIAL INEQUALITY IN AUSTRALIA**

Theories of class and stratification; patterns of social inequality in Australia: class, gender, race and ethnicity; inequality in social life in: education; work; wealth and income; welfare; housing; health; the law; tackling inequality: future options.

Course: SS07

Credit Points: 12      Contact Hours: 3 per week

**■ SSB005 HUMAN DEVELOPMENT 2**

Theories of adolescence; transitions and events in adolescence; adult life and transitions; theories of adulthood; human empowerment; mid-life issues; renewal in mid-life; models of ageing; aged care issues; death.

Course: SS07

Credit Points: 12      Contact Hours: 3 per week

Prerequisite: SSB001

**■ SSB006 STUDIES IN HUMAN RIGHTS 2**

Examines social differentiation; inquires into situations of disadvantage and disempowerment; applies a human rights perspective to discrimination on the grounds of gender, race, religion, linguistic heritage and age; analyses the human rights of selected vulnerable individuals and groups (children, young people, juvenile offenders, prisoners, refugees and persons with psychiatric, physical or intellectual disability); evaluates the adequacy of legal, administrative and advocacy arrangements designed to protect and promote fundamental human rights and freedoms.

Courses: HU20, SS07

Credit Points: 12      Contact Hours: 3 per week

Prerequisite: SSB002

**■ SSB007 INTERPERSONAL PROCESSES & SKILLS**

Examines complex communication skills and understandings; communication as a change process and as narrative; awareness and skills with regard to social style, assertion, confrontation and other influencing skills; conflict; stress and burnout; gender and cross cultural issues in communication; interviewing skills.

Course: SS07

Credit Points: 12      Contact Hours: 3 per week

Prerequisite: SSB003

**■ SSB008 COUNSELLING THEORY & PRACTICE 1**

Analyses and develops skills associated with the counselling process and helping relationship; theoretical bases of major counselling approaches; counselling skills of major approaches; "re-authoring" and deconstructionist perspectives; ethical, gender and cultural issues in counselling; counselling applied in particular situations; group counselling; change processes in counselling; sociological analysis of the role and function of counselling.

Course: SS07      Prerequisites: SSB003 and SSB007

Credit Points: 12      Contact Hours: 3 per week

**■ SSB009 THE AUSTRALIAN WELFARE STATE**

The origins and contemporary nature of the Australian welfare state; historical data on the antecedents to and stages of welfare state development; major debates and controversies; an overview of the structural arrangements of the Australian welfare state.

Course: SS07

Credit Points: 12      Contact Hours: 3 per week

**■ SSB010 PROFESSIONAL RESOURCES 1**

Develops two key themes: 'worker as a resource' introduces students to frameworks for practice; human service worker roles and interventions; notions of need and assessment; 'government and non-government services as resources' introduces students to the legislative base, referral and appeal mechanisms of government and non-government services.

Course: SS07

Credit Points: 12      Contact Hours: 3 per week

**■ SSB011 CHILD & FAMILY SERVICES 1**

The history of child and family services in Australia; an overview of the major service agencies; legislation; causes of family breakdown; family assessment

process and models; the needs and rights of families; professional ethics and standards.

**Course:** SS07

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB012 DISABILITY SERVICES 1

History and attitudes to disability; impact of disability upon individuals and families; reviews principles and theoretical frameworks: normalisation, social role valorisation, etc. underpinning services. Planning around individuals; personal futures planning.

**Course:** SS07

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB013 CORRECTIVE SERVICES 1

The criminal justice system; its relationship to the offender; social control and social order; the impact of incarceration on offenders, their families and wider community; women and aboriginals in the criminal justice system; victims of crime.

**Course:** SS07

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB014 AGED SERVICES 1

Physiological, psychological, social and cultural aspects of ageing; theories of ageing; ageism; an introduction to ageing research; quality of life issues; common transition and ageing; communication with the aged.

**Course:** SS07

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB015 MULTICULTURAL SERVICES 1

Orientation to the context, options and difficulties associated with human service programs for multicultural Australia; introduction to the policies, concepts and issues surrounding multicultural services; immigration and resettlement experiences.

**Course:** SS07

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB016 YOUTH SERVICES 1

The development and character of youth services in Australia; outline of a framework for reflective youth-work practice; youth services relating to labour market housing, juvenile justice, education, health and young people in the context of families; contemporary practice and policy issues identified through field enquiry and examination of relevant literature.

**Course:** SS07

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB017 GROUP WORK

Types of groups and group experiences; the importance and uniqueness of group medium; understanding behaviour in the group context; theories and models of group development; leader and member behaviours; planning, implementing and evaluating group methods; establishing groups and planning group approaches; the group as a therapeutic community; evaluating group work; ethical issues. Includes an intensive group experience in either a camp, weekend residential or two single-day programs.

**Course:** SS07

**Prerequisite:** SSB007

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB019 PROFESSIONAL RESOURCES 2

Integration of welfare interviewing and referral skills with their knowledge of service networks through a series of interview role plays; introduction to statistics (from electronic and print resources) in service planning and submission writing.

**Course:** SS07

**Prerequisite:** SSB010

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB020 CHILD & FAMILY SERVICES 2

An overview of the frameworks, assessments and intervention skills necessary for human service work with children in the following contexts: child protection, alternative care, domestic violence, divorce, juvenile justice and chemical dependency.

**Course:** SS07

**Prerequisite:** SSB011

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB021 DISABILITY SERVICES 2

Major life domains of home, work, education, leisure, relationships as they relate to people with a disability. Contemporary service responses to these life domains. Impact of specific disabling conditions: intellectual, physical, sensory and psychiatric.

**Course:** SS07

**Prerequisite:** SSB012

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB022 CORRECTIVE SERVICES 2

Criminological theory and research; correctional policy and practice; empirical data on criminality; major theoretical paradigms of criminality; social location and extent of crime; the costs of crime; individual and community attitudes towards crime and criminals.

**Course:** SS07

**Prerequisite:** SSB013

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB023 AGED SERVICES 2

Services available to the aged within the community and institutions; policy issues and assessment procedures; special interest groups; ethnic aged, Aboriginal and Torres Strait Islander aged, rural aged, aged carers.

**Course:** SS07

**Prerequisite:** SSB014

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB024 MULTICULTURAL SERVICES 2

The characteristics and circumstances of Australia's ethnic minorities and their implications in the use of welfare intervention techniques; needs and issues of specific interest groups; promotes cultural sensitivity by exploring the social mores of Australia's ethnic minorities.

**Course:** SS07

**Prerequisite:** SSB015

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB025 YOUTH SERVICES 2

The way gender, ethnicity, class, geographical locations and disability affect the experience of young people as described through various forms of social commentary and research; current and emerging intervention strategies; their assumptions, strengths and limitations.

**Course:** SS07

**Prerequisite:** SSB016

**Credit Points:** 12      **Contact Hours:** 3 per week

### ■ SSB026 FIELDWORK PRACTICE 1

A two-stage program of pre-placement tutorials, a ten-week block placement (or negotiated equivalent) in a human service setting offering a professionally supervised, contracted learning experience of human service work. Students acquire and integrate critical human service competencies, attitudes and knowledge. **Note:** Students who fail to achieve a satisfactory standard of performance on placement are liable to exclusion from the course.

**Course:** SS07

**Prerequisites:** Enrolment in the Bachelor of Social Science (Human Services). All preceding subjects are prerequisites/co-requisites at the discretion of the course coordinator and field education coordinator.

**Contact Hours:** 360 hours over 10 weeks



### ■ SSB027 COMMUNITY WORK

Community work as a distinct intervention skill; the background to community work in Australia; models of community work; basic skills and techniques are developed: entering a community; building community involvement; developing community action; managing common problems.

Course: SS07

Credit Points: 12 Contact Hours: 3 per week

### ■ SSB028 AUSTRALIAN POLITICAL STRUCTURES & INSTITUTIONS

The application of a contemporary human services framework to Australian political structures and institutions; social policy development with reference to the delivery of human services; aspects of the Australian economy and industrial system relevant to the human services practitioner.

Course: SS07

Prerequisite: SSB004

Credit Points: 12 Contact Hours: 3 per week

### ■ SSB030 CHILD & FAMILY SERVICES 3

An overview of current services and the frameworks, assessment and intervention skills necessary for human service work with parents in the following contexts: child protection, alternative care, domestic violence, chemical dependency and adoption.

Course: SS07

Prerequisite: SSB020

Credit Points: 12 Contact Hours: 3 per week

### ■ SSB031 DISABILITY SERVICES 3

Policies, legislation and programs which impact upon people with a disability reviewed at Federal, State and Local government levels; analysis of international influences on the Australian scene; policy areas on disability, income maintenance, housing, education, transport, employment, etc.

Course: SS07

Prerequisite: SSB021

Credit Points: 12 Contact Hours: 3 per week

### ■ SSB032 CORRECTIVE SERVICES 3

The Queensland Corrective Services Commission: social and political influences on correctional policy; statutory responsibilities and limitations of corrections; communication and organisational change.

Course: SS07

Prerequisite: SSB022

Credit Points: 12 Contact Hours: 3 per week

### ■ SSB033 AGED SERVICES 3

International trends in aged care; environmental issues and ageing; mental health and ageing; sexuality and ageing; ageing, work and retirement.

Course: SS07

Prerequisite: SSB023

Credit Points: 12 Contact Hours: 3 per week

### ■ SSB034 MULTICULTURAL SERVICES 3

This unit aims to develop the students' ability to critically evaluate Australia's social institutions for their relevance and fairness to ethnic minorities. It explores contemporary principles which direct service delivery as it relates to ethnic minorities and evaluate current promotion methods employed.

Course: SS07

Prerequisite: SSB024

Credit Points: 12 Contact Hours: 3 per week

### ■ SSB035 YOUTH SERVICES 3

The nature and implications of youth work within various contexts; different settings, eg. statutory and non-statutory, government and non-government focusses on youth policy development and analysis; contemporary policy and practice issues relating to the juvenile justice system.

Course: SS07

Prerequisite: SSB025

Credit Points: 12 Contact Hours: 3 per week

### ■ SSB036 FIELDWORK PRACTICE 2

A two-stage program of pre-placement tutorials, a ten week block placement (or negotiated equivalent) in a human service setting offering a professionally supervised, contracted learning experience of human service work. Students consolidate and extend critical human service competencies, attitudes and knowledge. **Note:** Students who fail to achieve a satisfactory standard of performance on placement are liable to exclusion from the course.

Course: SS07

**Prerequisites:** Enrolment in the Bachelor of Social Science (Human Services). All preceding subjects are prerequisites/co-requisites at the discretion of the course coordinator and field education coordinator.

**Contact Hours:** 360 hours over 10 weeks

### ■ SSB037 STUDIES IN HUMAN RIGHTS 3

Examines notions of collective or solidarity rights; applying to linguistic, religious, legal, social and political issues relating to ethnic minorities and indigenous peoples; explores the inter-relationship between human rights and global issues including peace, international security, sustainable development, environmental degradation and the national right to economic, social and cultural development.

Courses: HU20, SS07

Prerequisite: SSB006

Credit Points: 12 Contact Hours: 3 per week

### ■ SSB038 SOCIAL POLICY & SOCIAL CHANGE

Conceptualising economic, population and structural change in Australia; understanding emergent ideas about state and society; identifying and contrasting alternative social policies and strategies.

Course: SS07

Credit Points: 12 Contact Hours: 3 per week

### ■ SSB039 CONTEMPORARY SOCIAL POLICIES

The major debates in Social Policy will be explored. Analyses of Australia's response and the impact on redistribution in the Welfare State. Current analyses of health, housing, income security, legal, immigration and family policies at Federal, State and Local government level.

Course: SS07

Credit Points: 12 Contact Hours: 3 per week

### ■ SSB046 DIRECTED STUDIES IN HUMAN SERVICE PRACTICE & THEORIES

Students undertake a directed reading and study project within their chosen service area; with a high level of specificity within an area or areas of practice identified by each service coordinator. Content will be tailored to the specific service area.

Course: SS07

Credit Points: 12 Contact Hours: 3 per week

### ■ SSB047 ORGANISATIONAL SKILLS 1

Development of an empowering approach for functioning effectively as a member of a human service organisation; personal and interpersonal skills including career, time and stress management, working collaboratively with co-workers and managers, resolving disagreement and conflict, participating in change.

Course: SS07

Prerequisites: SSB003, SSB007

Credit Points: 12 Contact Hours: 3 per week

### ■ SSB048 ORGANISATIONAL SKILLS 2

The managerial task in human service organisations; managerial paradigms and an empowering managerial framework; developing collaborative

work environments; recruitment, selection and development of workers; managing disagreement and conflict; introducing change.

**Course:** SS07

**Prerequisite:** COB018

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ SSB802 TECHNOLOGY & CULTURE

Investigates the social and cultural aspects of technology-practice; the relationship between social and cultural organisation and behaviour, and the technical aspects of human development; historical, anthropological, sociological and cultural perspectives are used to analyse the relationship between technology and culture.

**Course:** ED26

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ SSB803 SOCIAL PSYCHOLOGY

General study of applied social psychology and its relevance to a variety of professional roles and work environments; group dynamics and related concepts; analysing small group development; behaviours affected by stress or pressure, health, environmental design and work space.

**Course:** PU49

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ SSB804 PSYCHOLOGY & GENDER

Theories of gender; male and female; masculine and feminine; roles vs power; counselling issues; old and new paradigms; history of psychology of gender; sexuality; mothers and fathers; "psychology constructs the female"; psychology in patriarchal discourse; family therapy theory and feminist critiques; psychological constructs and the media; film and media; psychology of gender and power.

**Course:** SS07

**Prerequisite:** SSB003 or SSB912

**Co-requisites:** SSB930 and SSB937

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ SSB806 INTERPERSONAL & GROUP PROCESSES

Understanding relationships and small group dynamics with emphasis on skill development in listening, helpful responding, assertion, conflict resolution, disclosure, feedback; models of group development and roles lead to facilitation and leadership skills. Skills are applied and analysed outside the class.

**Course:** ED50

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ SSB807 HUMAN SEXUALITY

Sexuality; model strategies for dealing appropriately with sensitive, value-laden issues; personal comfort in discussion of sexual matters; aspects of sexuality relevant to the student's own development; the sexual development of adolescents; issues of social concern such as sexual abuse of children.

**Course:** ED50

**Credit Points:** 12

**Contact Hours:** 3 per week

### ■ SSB890 PSYCHOLOGY

Students critically evaluate statements about behaviour; state and give examples of higher order motives and apply this knowledge to work and interpersonal situations; understand factors which cause people to misperceive others, and explain how to minimise misperception; use of effective social skills in interpersonal and group settings; understand theories of attitude, change and know implications of changing the behaviour of others; use skills necessary for starting a successful small business.

**Course:** PU45

**Credit Points:** 8

**Contact Hours:** 3 per week

### ■ SSB903 SOCIOLOGY FOR HEALTH PROFESSIONALS

An examination of sociology's origins, theories, perspectives and methodologies with reference to health and wellness, illness and premature mortality; empirical data on mortality and morbidity in contemporary Australia are presented and subjected to sociological analyses to indicate social patterns, processes promoting or constraining levels of health.

**Course:** PU42

**Credit Points:** 6

**Contact Hours:** 3 per week

### ■ SSB904 SOCIOLOGY OF HEALTH & ILLNESS

This unit analyses in detail the statement that: "The major determinants of health and illness are social, cultural, behavioural, occupational, regional, environmental and parental." Indigenous, migrant and rural health determinants in Australia are investigated. The importance of a social and cultural approach to environmental health issues is highlighted.

**Course:** PU42

**Prerequisite:** SSB903

**Credit Points:** 6

**Contact Hours:** 3 per week

### ■ SSB905 PSYCHOLOGY FOR HEALTH PROFESSIONALS

This unit presents particular aspects of the theories, skills and approaches of interpersonal, social and organisational psychology which are relevant to nursing practice. Topics include: humanistic, cognitive, behavioural and social models for understanding the individual; communication processes; self-concept and self-esteem; protection of the ego; the impact of emotions and beliefs on health behaviour; and interpersonal communication skills.

**Courses:** NS40, NS48

**Credit Points:** 8

**Contact Hours:** 3 per week

### ■ SSB906 SOCIOLOGY FOR HEALTH PROFESSIONALS

Sociological theories and methods are studied to identify and analyse social relationships, social processes and social patterns relating to the social origins of illness and wellness; analysis trends in morbidity and mortality in society which are not randomly distributed but associated with social structural variables such as ethnicity, gender, social class, age and geographical location; examines the health care system internally and in relation to its public use and its effectiveness in addressing contemporary health issues in Australia.

**Courses:** NS40, NS48

**Credit Points:** 8

**Contact Hours:** 3 per week

### ■ SSB907 PSYCHOLOGY FOR ENGINEERS

Introductory psychology; basic elements of transactional analysis and their application to work settings; self-concept and its relationship to socially effective behaviour; attitudes and attitude change; the dynamics of supervision in the work place.

**Courses:** ME44, ME45

**Credit Points:** 4

**Contact Hours:** 2 per week

### ■ SSB908 BEHAVIOURAL SCIENCE

An introduction to perception, motivation, individual personality, social attitudes, group interaction and dynamics; social motives and the sources and resolution of conflict; the practical application and limitations of behavioural studies readings and case studies drawn from the building industry; the job and responsibilities of management; the functions and role of the manager including planning, organisation, control, budgeting and decision-making; styles of leadership;

employee selection training, appraising and promotion; worker efficiency and working conditions.

**Courses:** CN31, CN32

**Credit Points:** 6 **Contact Hours:** 3 per week

### ■ SSB910 INTRODUCTORY PSYCHOLOGY FOR HEALTH PROFESSIONALS

A course of lectures and tutorials on psychology as a science and interpersonal behaviour and skills and its relevance to the radiographer.

**Course:** PH38

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ SSB911 GENERAL PSYCHOLOGY

This course is designed to give optometry students an ability to demonstrate effective interpersonal skills in relation to patients and other health professionals; indicate bases of individual differences; diagnose patient needs and respond appropriately; state causes of stress, effects on health, and indicate appropriate techniques to reduce stress; indicate techniques that may be used to modify patient attitudes.

**Course:** OP42

**Credit Points:** 4 **Contact Hours:** 3 per week

### ■ SSB912 PSYCHOLOGY

An introduction to general psychology providing limited skills training in some areas for personal development; research approaches; learning and motivation; individuals and groups; the development of groups and the assessment of individuals within groups; perception, human development, and stress management, individual differences, psychological testing and personality.

**Courses:** PU49, SS08

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB913 DEVELOPMENTAL PSYCHOLOGY

A basis for the study of the promotion of psychological health of individuals at differing developmental stages; psychological adjustment, developmental theories, developmental aspects of childhood, adolescence, middle and old age and specific areas such as sexual development, death and dying; relationships to work and professional environments.

**Course:** SS07

**Prerequisite:** SSB912

**Incompatible with:** SSB001 and SSB005

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB914 PSYCHOLOGY

Students are taught to critically evaluate statements about behaviour; state and give examples of higher order motives, and apply this knowledge to work and interpersonal situations; understand factors which cause us to misperceive others, and explain how to minimise misperceptions; use effective social skills in interpersonal and group settings; understand theories of attitude, change and know implications for changing the attitudes of other persons; know theories of behaviour change and understand implications for changing the behaviour of others; use skills to reduce interpersonal stress; emphasis is on the role of environmental health officers and occupational safety and health professionals.

**Courses:** PU42, PU44, PU45

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ SSB915 SOCIAL PSYCHOLOGY

Philosophy of social science; historical perspective; social and self and personal space; social perception; research methodology; stereotypes and prejudice; conformity; persuasion; attraction and intimacy; help seeking and giving; aggression; leadership.

**Course:** SS07 **Prerequisite:** SSB003 or SSB912  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB917 PHYSIOLOGICAL & HEALTH PSYCHOLOGY

The physiological and cognitive bases to human behaviour; the nervous and endocrine systems of the body, the brain and its functioning; consciousness and altered states of consciousness; hormones and drugs and their effects on emotional expression; the relation of physiological and cognitive factors to motivation and behaviour.

**Course:** SS07

**Incompatible with:** SSB934

**Prerequisite:** SSB912 or 96 credit points of approved study.

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB918 COUNSELLING FOR HEALTH PROFESSIONALS

A study of the psychology of illness and the counselling process for advanced radiographers.

**Course:** PH38

**Credit Points:** 4 **Contact Hours:** 2 per week

### ■ SSB921 COUNSELLING & CRISIS MANAGEMENT

The basic theories and principles of crisis intervention methodology; the roles of nurses in counselling clients who are currently experiencing difficulties; appropriate interpersonal and specific counselling skills to assist with this therapeutic communication process; short term strategies in crisis management.

**Course:** NS48

**Credit Points:** 8 **Contact Hours:** 3 per week

### ■ SSB922 SOCIAL & CULTURAL ASPECTS OF HEALTH

A broad overview of the key theoretical and practical questions currently being addressed in the field of the sociology of health and illness and provides a framework for individuals wishing to develop professional skills in health education.

**Course:** ED50

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB930 PSYCHOLOGICAL RESEARCH METHODS

An overview of the purposes and strategies of research; elementary research design; operationalising variables; descriptive statistics; distributions; measures of central tendency and spread; standard scores and percentiles; comparing variables through correlation will be addressed; using the computer.

**Course:** SS07

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB933 COGNITIVE PSYCHOLOGY

History and development of cognitive psychology and cognitive science; the bases of cognition; perception; representation of knowledge; memory; the development of expertise, problem-solving and reasoning; cognitive development; computer models of cognition; applications of cognitive psychology.

**Course:** SS07

**Prerequisite:** SSB003 or SSB912

**Incompatible with:** SSB937

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB934 BIOLOGY & BEHAVIOUR

The physiological and cognitive bases to human behaviour; the nervous and endocrine systems of the body, the brain and its functioning; consciousness and altered states of consciousness; hormones and drugs and their effects on emotional expression; and overall the relation of physiological and cognitive factors to motivation and behaviour. Some attention is also

given to comparative psychology, with reference to animal/human behaviour.

**Course:** SS07 **Prerequisite:** SSB003 or SSB912  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB936 PERSONALITY & PSYCHOPATHOLOGY

The concept of personality and individual differences from the viewpoint of theory, research and assessment/application; functional and dysfunctional aspects of personality; the integration of traditional theoretical perspectives - psychoanalytic, trait, humanistic and social-cognitive - with more modern perspectives; research methods and applications in personality studies, validity and reliability of personality profiles; biological issues in behaviour, environmental and cultural effects on personality including workplace situations, life style changes.

**Course:** SS07 **Prerequisite:** SSB915  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB937 APPLIED COGNITIVE PSYCHOLOGY

An introduction to cognitive psychology; perception processes in cognition; memory processes; problem-solving and decision-making; the development of intelligence application of cognitive psychology. Artificial intelligence, ergonomics and job design also included as topics.

**Courses:** IF52, IS43, IT20, SS07  
**Prerequisite:** SSB912 or 96 credit points of approved study.

**Incompatible with:** SSB933  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB938 PSYCHOLOGY OF VIOLENCE

Types of violence including family violence, crime (assault, threats, robbery with violence, rape, murder, abduction, torture), war; reactions to violence (general post-trauma and specific effects); service responses including those focused on families, community networks, social support, counselling and therapy, group work; societal attitudes; responses to the perpetrators; differences between the effects of general trauma and personal violence; cultural and gender issues.

**Course:** SS07 **Co-requisites:** SSB017 and SSB946  
**Prerequisite:** 24 credit points of approved second or third level psychology units.

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB939 ALCOHOL & OTHER DRUG STUDIES

An advanced unit giving special attention to the following: what is a drug?; an overview of licit and illicit drugs; states of consciousness; models of use; assessment; and referral practices, theories and research into dependency, historical examples of drug use; Australian drug use; social reinforcement of drug use; gender issues; cultural issues; physiology of drug use; power issues; crisis intervention; legal issues; mythology and drug use.

**Course:** SS07  
**Prerequisites:** Any two of the following: SSB934, SSB936, SSB937, SSB946

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB940 ETHICAL, LEGAL & PROFESSIONAL ISSUES IN PSYCHOLOGY

Issues will be chosen each year but will cover at least ten of the following topics: philosophy and the scientific method (paradigms old and new eg. constructionists and postconstructionists); ethics; gender;

cross-cultural issues; legal issues (advocacy, litigation, expert witness, freedom of information); treatment issues (contentious treatments); psychology and social control (custodial issues); psychology in the public domain (T.V. pop psychology, marketing and advertising); psychologist as person (burnout, role conflicts); psychology as colonisation (exporting constructs to other cultures); psychology of violence and trauma.

**Course:** SS07  
**Prerequisite:** 36 credit points of approved second or third year psychology units

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB941 PSYCHOLOGICAL ASSESSMENT

Theory and principles underlying psychological or personal assessment and testing are involved; applications are primarily examined in personnel or organisational areas (such as the assessment of ability, interests, values, job satisfaction, commitment and morale, and other attitudinal measures); issues in clinical and counselling assessment using interviews for selection, work analysis, counselling and appraisal; practical application including project or assignment work involving a short organisational placement.

**Course:** SS07  
**Prerequisite:** 36 credit points of second or third year psychology units.

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB942 INDEPENDENT STUDY (PSYCHOLOGY)

Students either individually or in small groups, undertake one or several approved learning activities within an approved content area. Activities could include literature reviews, research (mini-thesis), project, practicum (work placement and report), classroom presentation to a selected class, and other activities.

**Course:** SS07  
**Prerequisite:** 36 credit points of second or third year psychology units.

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB943 OCCUPATIONAL & VOCATIONAL PSYCHOLOGY

The well-being and productivity of individuals and groups in the work force; the psychological and social effects of unemployment; career planning and choice; the transition from school or college to work; adjustment at work; interests, values and ethics inherent in or related to the different workplaces and professions; theories and models of career choice and development; health and adjustment at work; unemployment.

**Course:** SS07  
**Prerequisite:** 36 credit points of second or third year psychology units.

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB944 INDUSTRIAL & ORGANISATIONAL PSYCHOLOGY

This unit examines human factors in job design, occupational health and safety, work and personal motivation, the assessment of suitability and/or of performance, and the qualities needed in career advancement.

**Course:** SS07  
**Prerequisites:** SSB950 and at least one of SSB017 or SSB915

**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSB946 COUNSELLING THEORY & PRACTICE 2

Counselling issues and approaches in relation to loss and grief, post-traumatic stress, rehabilitation, drugs

and substance abuse, relationship counselling, separation, sexual abuse, suicide, cultural differences, psychosis; current approaches to counselling including process work, brief psychotherapy, languaging and the construction of problems; group therapy; group counselling; analytic psychotherapy; ethical, social and moral issues in counselling.

**Course:** SS07 **Prerequisite:** SSB008  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SSB948 ADVANCED DEVELOPMENTAL PSYCHOLOGY

History of research approaches with primary attention to the 1980's and 1990's, in each of the language, cognitive, moral and social development areas; child and youth and young adult development and the relation of progress and learning to whole of life development in the four areas; applications to crime and deviance (mainly moral and social development issues), education and culture (mainly language and cognition) and the workplace (mainly cognition, moral and social development aspects).

**Course:** SS07  
**Prerequisite:** 36 credit points of second level psychology units including SSB005 or SSB913 as one of the units.

**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SSB949 INTRODUCTION TO FAMILY THERAPY

Major concepts of systemic theory as applied to families; major models of family therapy eg. structural, strategic, systemic, solution focused; assessment of family structures and dynamics; using therapeutic teams eg. reflecting team; contemporary issues in family work eg. gender, ethnicity, changing family foundations; specific ethical issues eg. confidentiality, record keeping, interaction with other systems, referral management; family dynamics.

**Course:** SS07 **Prerequisite:** SSB008  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SSB950 RESEARCH DESIGN & DATA ANALYSIS

An overview of the scientific method; the use of the null hypothesis; Type I and Type II errors; issues of control; underlying assumptions; basic experimental and non-experimental design; inferential statistics; tests; simple regression; one-way analysis of variance; correlations and correlational analysis, computer-based statistical analysis; introduction to non-parametric analyses including Chi-Square and the analysis of ranked data. Introduction to the use of SAS or SPSS in statistical analysis.

**Course:** SS07 **Prerequisite:** SSB930  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SSB951 ADVANCED STATISTICAL ANALYSIS

A specialist statistical program is taught for the preparation and support of students using quantitative procedures for research; procedures are practised on data available in ACSPI archives and/or from school and other research projects and will prepare for the collection of their own database for their major project; may be offered to postgraduate students enrolled in other QUT Schools and Faculties.

**Course:** SS07 **Prerequisite:** SSB950  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SSB952 RESEARCH PROJECT

Review of principles in proposal development, hypothesis raising, research design and related analyses; differences between employer reports and

academic reports; students will develop and carry out a project capable of report in both 'academic' and 'employer' form and two reports will be required, one for academic purposes and the other for practical and/or employer/consultant advisory purposes.

**Course:** SS07  
**Prerequisite:** 60 credit points of second or third year psychology units  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SSB953 SPECIAL TOPIC

Specifically, as determined by the special topic presenter in conjunction with the Head of School; usually at 'third year' level.

**Course:** SS07  
**Prerequisites:** At least 144 credit points at degree level and specific units as required  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SSB960 SOCIOLOGICAL THEORY

The major approaches to social theory, focus on: social explanations, social structures, cultural structures and social organisations.

**Course:** SS07 **Prerequisite:** SSB000  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SSB969 SOCIOLOGICAL ANALYSIS

Contemporary forms of theoretical analysis and methodology; the fundamental theoretical tools which underpin different methods of research and analysis.

**Course:** SS07 **Prerequisite:** SSB960  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SSB970 ECONOMIC SOCIOLOGY

The relations between the economy and other social institutions such as the State, the labour market, and the family.

**Course:** SS07 **Prerequisite:** SSB000  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SSB971 POLITICAL SOCIOLOGY

Key concepts such as the modern state, participation; democracy; citizenship power; authority; conflicts; and political movements.

**Course:** SS07 **Prerequisite:** SSB000  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SSB980 ADVANCED SOCIOLOGICAL THEORY

Wide range of contemporary sociological theories; current debates and critiques of leading social theorists.

**Course:** SS07 **Prerequisite:** SSB960  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SSB981 ACTION RESEARCH & PROFESSIONAL PRACTICE

The implementation and monitoring of change within areas of professional practice.

**Course:** SS07 **Prerequisite:** SSB969  
**Credit Points:** 12 **Contact Hours:** 3 per week

#### ■ SSB989 HEALTH & THE LIFE-CYCLE

An examination of changing patterns of individual wellness, illness, and mortality often coinciding with life-cycle changes or 'Rites of Passage'; the social, cultural, anthropological and technological aspects of the pre-birth and post-death phases; analysis of the cyclical process; compared and contrasted with a psychological human developmental approach.

**Note:** Can be undertaken by students from other Faculties as an elective unit.

**Courses:** ED26, ED50  
**Credit Points:** 12 **Contact Hours:** 3 per week

### ■ SSP000 INTERPERSONAL RELATIONSHIPS IN COUNSELLING

Overview of concepts related to interpersonal relationships; social perception and attribution theory; self-concept and the circular process of social interaction; contemporary models of interpersonal communication; the emotions and their effects on communication; facilitating communication; interpersonal influence; defensiveness; conflict; stress; gender issues.

Course: SS10

Credit Points: 12 Contact Hours: 3 per week

### ■ SSP001 THEORY & PRACTICE OF COUNSELLING 1

Overview of the counselling process; role of the major theories in counselling; micro-counselling skills; general philosophical assumptions in counselling; humanistic approaches: (client-centred, Gestalt, TA); existential model; a four-day intensive practicum workshop of microskills development is compulsory.

Course: SS10

Credit Points: 12 Contact Hours: 3 per week

### ■ SSP004 THEORY & PRACTICE OF COUNSELLING 2

Change processes in counselling from a brief therapy or solution-focused perspective; emphasis on the viewing, doing and language of problems and on the narrative metaphor for counselling.

Course: SS10

Credit Points: 12 Contact Hours: 3 per week

### ■ SSP005 PRACTICUM 2

Advanced skill training workshops; supervised counselling experience involving work with clients; interaction of students and supervisor.

Course: SS10

Prerequisite: SSP001 Co-requisite: SSP007

Credit Points: 8

### ■ SSP006 COUNSELLING: A SOCIOLOGICAL PERSPECTIVE

Sociological analysis of counselling and the helping process in terms of the functions they serve for society; the nature of helping and the helping process; sociological conceptions of the individual; social control function of helping; medicalisation and professionalisation of helping; the effect of organisation on the helping process.

Course: SS10

Credit Points: 8 Contact Hours: 3 per week

### ■ SSP007 THEORY & PRACTICE OF COUNSELLING 3

Historical development of psychoanalysis and analytic theory; psychodynamics in counselling practice; hypnosis and conscious phenomena in counselling; scientific credibility of psychoanalytic and analytic psychotherapy; neurosis and psychosis in counselling.

Course: SS10

Prerequisite: SSP004 Co-requisite: SSP005

Credit Points: 12 Contact Hours: 3 per week

### ■ SSP009 CAREER GUIDANCE & COUNSELLING

Theoretical approaches to career guidance; developmental theories and opportunity structure theories; resources and information for career guidance; career education programs; independent research.

Course: SS10

Credit Points: 8 Contact Hours: 3 per week

### ■ SSP012 THE COUNSELLOR & THE ORGANISATION

Helping organisations as bureaucracies; organisational response to social change; stress within helping organisations; teamwork among professional helpers; counsellor roles.

Course: SS10

Credit Points: 8 Prerequisite: SSP001 Contact Hours: 3 per week

### ■ SSP013 INDEPENDENT STUDY

Independent counselling-related studies under the supervision of a member of staff. Studies must be approved by the course coordinator.

Course: SS10

Credit Points: 8 Prerequisite: SSP007 Contact Hours: 3 per week

### ■ SSP014 FAMILY THERAPY 1

Self-awareness in family counselling; formation and models of the family; family systems perspectives and counselling approaches.

Course: SS10

Credit Points: 8 Prerequisite: SSP007 Contact Hours: 3 per week

### ■ SSP016 ADVANCED PRACTICUM

Further supervision of counselling work using a group process and a focus on student's work context, personal issues and professional side.

Course: SS10

Credit Points: 8 Prerequisite: SSP005

### ■ SSP017 COUNSELLING IN GROUPS

Organising and facilitating group work; establishing group norms; stages of group development; member behaviour and facilitator interventions; models and ethics of group work.

Course: SS10

Credit Points: 8 Contact Hours: 3 per week

### ■ SSP018 GROUPWORK IN COUNSELLING

Skills and experience in facilitating and guiding the development of personal support and therapeutic groups; planning, evaluating and establishing ethical group work practices.

Course: SS10

Credit Points: 8 Prerequisite: SSP000 Contact Hours: 3 per week

### ■ SVB121 LAND SURVEYING 1

Principles of surveying; surveying instrumentation; traversing; levelling; elements of tachymetry; contouring; elementary theory of error; plane surveying computations.

Courses: IF52, SV34

Credit Points: 13 Contact Hours: 6 per week

### ■ SVB122 DATA PRESENTATION 2A

Developing drafting skills; introduction to engineering survey drafting and computer graphics.

Course: IF52

Prerequisite: SVB111 Co-requisite: SVB226

Credit Points: 2 Contact Hours: 1 per week

### ■ SVB226 LAND SURVEYING 2

Plane surveying computations; detail surveying; reconnaissance surveying; route location; curve theory; setting out surveys; earthworks computation; elements of cadastral surveying.

Course: IF52, SV34

Prerequisite: SVB121 Co-requisite: SVB211

Credit Points: 13 Contact Hours: 6 per week

### ■ SVB270 LAND ADMINISTRATION 1

Introduction to elements of law; law relating to land title and registration; crown land administration in Queensland.

Courses: IF52, SV34

Credit Points: 6 Contact Hours: 3 per week

**■ SVB306 SURVEYING**

Introductory surveying methods, instrumentation; use of level and theodolite for gathering and setting out data points, distance measurement, circular curves, areas and volumes; introductory photogrammetry and digital terrain models.

Course: CE42

Credit Points: 8 Contact Hours: 3 per week

**■ SVB311 DATA PRESENTATION 3**

Cadastral plan drawing; introduction to cartography; cartographic reproduction; mapping agencies.

Courses: IF52, SV34

Prerequisite: SVB111

Credit Points: 5 Contact Hours: 3 per week

**■ SVB331 OBSERVATIONS & ADJUSTMENTS 1**

Review of relevant statistical concepts; theory of observations and of random errors; linear and nonlinear functional models, the stochastic model, the law of propagation of variances, the error ellipse; practical applications.

Courses: IF52, SV34

Co-requisite: MAB795

Prerequisites: MAB495, MAB499

Credit Points: 4 Contact Hours: 2 per week

**■ SVB343 PHOTOGRAMMETRY 1**

Introduction to photogrammetry; photogrammetric optics; aerial photography; geometry and use of single photographs; geometry and use of stereogram; half-day visit to an aerial survey/mapping organisation.

Courses: IF52, SV34

Prerequisite: PHB170

Credit Points: 6 Contact Hours: 3 per week

**■ SVB352 LAND STUDIES A**

Introductory ecology; conservation of resources; introduction to physical aspects of land; assessment of physical land parameters; land classifications; land utilisation; sieve mapping and land use surveys; regional geography; students are required to undertake a full-day ecology field trip.

Courses: IF52, SV34

Credit Points: 12 Contact Hours: 3 per week

**■ SVB393 LAND SURVEYING 3**

Cadastral surveying; field astronomy; off-campus field work.

Courses: IF52, SV34

Prerequisites: MAB495, SVB121, SVB270

Co-requisites: SVB311, SVB573

Credit Points: 10 Contact Hours: 5 per week

**■ SVB399 INDUSTRIAL EXPERIENCE 3**

At least six weeks employment, approved by the Head of School. Students must submit an industrial experience record form, completed by both student and employer.

Course: SV34

Contact Hours: 6 weeks

**■ SVB412 CARTOGRAPHIC PRACTICE**

Reprographic processes; colour systems, colour separation and colour correction; digital mapping techniques; cartographic data structures; geographical surfaces.

Courses: IF52, SV34

Prerequisites: SVB211, SVB311

Credit Points: 5 Contact Hours: 3 per week

**■ SVB430 LAND SURVEYING 4**

Primary traversing; classical triangulation; trigonometrical levelling; precise levelling; off-campus field work.

Courses: IF52, SV34

Prerequisite: SVB121

Co-requisites: SVB431, SVB442

Credit Points: 9 Contact Hours: 4 per week

**■ SVB431 OBSERVATIONS & ADJUSTMENTS 2**

Introduction to least squares adjustment; standard problems one and two; extensive practical applications to linear and non-linear problems with both univariate data sets.

Courses: IF52, SV34

Prerequisite: SVB331

Credit Points: 4 Contact Hours: 2 per week

**■ SVB442 GEODETIC COMPUTATIONS**

Plane coordinate computation; geometrical geodesy, geometry of spheroid, computation on the spheroid; theory of map projections; the transverse mercator and UTM; computations on the Australian Map Grid.

Courses: IF52, SV34

Co-requisite: SVB430

Prerequisites: MAB495, SVB121

Credit Points: 9 Contact Hours: 4 per week

**■ SVB443 PHOTOGRAMMETRY 2**

Principles of construction; operation of analogue stereoplotters; aerial triangulation; terrestrial photogrammetry; analytical photogrammetry; half-day visit to an aerial survey/mapping organisation.

Courses: IF52, SV34

Co-requisite: SVB431

Prerequisites: MAB795, SVB343

Credit Points: 11 Contact Hours: 6 per week

**■ SVB451 LAND STUDIES B**

Introduction to theory of price; location theory; land economics.

Course: SV34

Credit Points: 5 Contact Hours: 3 per week

**■ SVB470 LAND ADMINISTRATION 2**

Introduction to government and public administration; Australian public land administration; private sector land administration.

Courses: IF52, SV34

Credit Points: 4 Contact Hours: 2 per week

**■ SVB473 LAND INFORMATION SYSTEMS 1**

Need for a computerised land information system review of cadastral systems; land title systems: the multipurpose cadastre and automation; survey requirements for land information systems; design principles, retrieval techniques.

Courses: IF52, SV34

Prerequisites: CSB294, SVB211, SVB393

Co-requisites: SVB393, SVB573

Credit Points: 5 Contact Hours: 3 per week

**■ SVB535 LAND SURVEYING 5**

Hydrographic surveying; topographic surveying.

Courses: IF52, SV34

Prerequisites: MAB495, SVB121, SVB430

Credit Points: 5 Contact Hours: 3 per week

**■ SVB551 LAND VALUATION**

Concepts and purposes of valuation; improvements; urban and rural valuation; interest in land; compensation; legislation affecting land valuation; land valuation practice.

Courses: IF52, SV34

Prerequisite: SVB451

Credit Points: 5 Contact Hours: 3 per week

**■ SVB561 LAND DEVELOPMENT PRACTICE 1**

Land development as an economic activity; surveys for subdivision design; site planning; land use determinants; political, economic, social and physical; traffic aspects affecting subdivision design; case studies.

Courses: IF52, SV34

Prerequisites: SVB352, SVB451

Co-requisites: CEB364, SVB551, SVB574

Credit Points: 10 Contact Hours: 6 per week

**■ SVB563 LAND INFORMATION SYSTEMS 2**

Data acquisition, storage and management; spatial identifiers; cartographic display and generalisation in automated systems; implementation of a system.

**Courses:** IF52, SV34

**Prerequisite:** SVB473

**Co-requisite:** SVB412

**Credit Points:** 4

**Contact Hours:** 2 per week

**■ SVB571 CADASTRE**

Complex and modern problems involved in the cadastre.

**Course:** SV34

**Prerequisite:** SVB393

**Credit Points:** 4

**Contact Hours:** 2 per week

**■ SVB573 LAND ADMINISTRATION 3**

Queensland case law; legislation affecting land and the survey of land including the registration of interests in land, and statutory control of land development.

**Courses:** IF52, SV34

**Prerequisite:** SVB270

**Credit Points:** 6

**Contact Hours:** 3 per week

**■ SVB574 LAND ADMINISTRATION 4**

Introduction to rural and urban sociology; social aspects of land administration.

**Course:** SV34

**Credit Points:** 4

**Contact Hours:** 2 per week

**■ SVB634 TOPICS IN ENGINEERING SURVEYING**

Network reliability; deformation surveys; subsidence monitoring; precision alignment and distance measurement; jig surveys; high rise buildings.

**Course:** SV34

**Prerequisite:** SVB431

**Co-requisite:** SVB639

**Credit Points:** 5

**Contact Hours:** 3 per week

**■ SVB636 LAND SURVEYING 6**

Geophysical surveying; mine surveying; field astronomical observation.

**Courses:** IF52, SV34

**Prerequisites:** PHB170, SVB430

**Credit Points:** 6

**Contact Hours:** 3 per week

**■ SVB639 OBSERVATIONS & ADJUSTMENTS 3**

Design, pre-analysis and optimisation followed by execution, adjustment and assessment of horizontal (two-dimensional) control networks, traverse and level networks (one-dimensional).

**Course:** SV34

**Prerequisite:** SVB431

**Credit Points:** 4

**Contact Hours:** 2 per week

**■ SVB640 GEODESY**

Introduction to history; definitions; gravity field of earth; level surfaces; spherical harmonics; variations of the gravity field; gravity measurements; geodetic reference systems; datum transformations; satellite geodesy; satellite doppler surveying; global positioning system; inertial surveying systems; geodynamics.

**Course:** SV34

**Co-requisite:** SVB639

**Prerequisites:** PHB170, SVB430, SVB442

**Credit Points:** 6

**Contact Hours:** 3 per week

**■ SVB643 PHOTOGRAMMETRY 3**

Numerical relative and absolute orientation; independent model and bundle methods of block adjustment for triangulation; close range photogrammetry including nonconventional techniques; analytical plotters including generation, manipulation and storage of digital data; use of micro and mini computers in analytical photogrammetry.

**Course:** SV34

**Prerequisite:** SVB443

**Co-requisite:** SVB431

**Credit Points:** 5

**Contact Hours:** 3 per week

**■ SVB645 REMOTE SENSING**

Definitions and major systems for remote sensing; characteristic spectral reflectance of objects and spectral response of sensors; remote sensing acquisition hardware; remote sensing satellites; thermography and radar; data processing for presentation and enhancement; cartographic correction of remote sensing data for systematic geometric error.

**Courses:** EE43, SV34

**Prerequisite:** SVB343

**Credit Points:** 5

**Contact Hours:** 3 per week

**■ SVB664 LAND DEVELOPMENT PRACTICE 2**

Preliminaries of development, data assembly, statutory approvals, elements of design, requirements of communication, hydraulic and energy services, development costs, controls of land development schemes; neighbourhood, residential, industrial estate, canal and reclamation estates, commercial and rural development schemes; design of small towns.

**Course:** SV34

**Prerequisites:** SVB561, SVB574

**Credit Points:** 10

**Contact Hours:** 6 per week

**■ SVB670 LAND ADMINISTRATION 5**

Organisation theory; development planning procedures; land development analysis.

**Course:** SV34

**Prerequisites:** SVB451, SVB470

**Credit Points:** 5

**Contact Hours:** 3 per week

**■ SVB680 PROFESSIONAL PRACTICE**

History of surveying and surveyors; the surveyor in relation to statutory authorities, civil, commercial and taxation laws; the surveyor as employer, employee, expert witness; surveyor-client-consultant relationships; professional ethics.

**Course:** SV34

**Prerequisite:** SVB470

**Credit Points:** 6

**Contact Hours:** 3 per week

**■ SVB682 SEMINAR 2**

Preparation and presentation of at least one technical seminar paper in a field germane to surveying.

**Courses:** IF52, SV34

**Prerequisites:** SVB282, successful completion of units totalling not less than 85 hours of weekly contact time.

**Credit Points:** 2

**Contact Hours:** 1 per week

**■ SVB683 PROJECT**

Undertake and report on an approved project in the field of surveying. Field trips on site or to local firms.

**Course:** SV34

**Prerequisites:** Successful completion of units totalling not less than 85 hours of weekly contact time.

**Credit Points:** 8

**Contact Hours:** 1 per week

**■ SVB684 MAP PRODUCTION PLANNING**

Planning of photogrammetric projects, specifications, control, costs accuracy; critical path method.

**Course:** SV34

**Prerequisites:** SVB412, SVB443

**Co-requisite:** SVB643

**Credit Points:** 5

**Contact Hours:** 3 per week

**■ SVB685 PROJECT**

Undertaking of a substantial mapping project utilising knowledge gained in photogrammetric, traditional and computer-assisted methods. The project may be topographic or thematic.

**Course:** SV34

**Prerequisites:** SVB311, SVB412

**Co-requisite:** SVB443

**Credit Points:** 16

**Contact Hours:** 4 per week



#### ■ SVB688 PROFESSIONAL PRACTICE A

Preparing surveyors for professional practice either as employer or employee.

Course: IF51, IF52

**Prerequisites:** Successful completion of units totalling not less than 100 hours of weekly contact time including SVB573.

**Credit Points:** 4      **Contact Hours:** 2 per week

#### ■ SVB694 GEODESY 2

Review of matrices, the Jacobian matrix, orthogonal matrices; transformations, coordinate transformations; rotations in three dimensions, euler angles, datum transformations, the development of datums.

Course: SV34

**Co-requisite:** SVB640

**Credit Points:** 5      **Contact Hours:** 3 per week

#### ■ SVB911 GRAPHIC DESIGN 1

Perception, development of awareness, a broad-based approach to design, including graphics, film, fabrics, industrial design. Sketching in pencil from nature, cast and other areas. Development of tones and textures using various media.

Course: SV34

**Credit Points:** 10      **Contact Hours:** 5 per week

#### ■ SVB912 GRAPHIC DESIGN 2

Identification and statement of design problems and solutions; conceptualising in design; the study of colour; the abstract tools of design; composition, perspective, projections and layout.

Course: SV34

**Prerequisite:** SVB911

**Contact Points:** 9      **Contact Hours:** 4 per week

#### ■ SVT443 PHOTOGRAMMETRY 3

The operation of stereoplotting instruments; aerial triangulation; compilation of maps.

Course: SV24

**Prerequisite:** SVT343

**Credit Points:** 8      **Contact Hours:** 3 per week

#### ■ SVT623 PROJECT MAPPING

The role of government and the private sector in project mapping; planning mapping projects.

Course: SV24

**Prerequisites:** SVT343, SVT443

**Credit Points:** 4      **Contact Hours:** 1.5 per week

#### ■ SVT642 MAP PROJECTIONS 1

Special trigonometry and its application to map projections; projections using a sphere as reference surface.

Course: SV24

**Prerequisite:** SVT115

**Credit Points:** 8      **Contact Hours:** 3 per week

#### ■ SVT742 MAP PROJECTIONS 2

Geodesy: geometry of ellipse and ellipsoid; gravity; geodesy in mapping; the traverse mercator projection, UTM and the Australian Map Grid; computations: geographic to grid and vice versa.

Course: SV24

**Prerequisite:** SVT642

**Credit Points:** 8      **Contact Hours:** 3 per week

#### ■ SVT826 CARTOGRAPHIC ADMINISTRATION

Government and public administration; theory of organisations and its application to mapping agencies.

Course: SV24

**Credit Points:** 8      **Contact Hours:** 3 per week

#### ■ SVT915 CARTOGRAPHY 3

Economics of standard mapping, sheet sizes, map specifications, map accuracy; use of orthophotos; thematic mapping; special cartographic techniques.

Course: SV24

**Prerequisite:** SVT815

**Credit Points:** 8      **Contact Hours:** 3 per week

#### ■ SVT916 CARTOGRAPHY 4

Digital methods in cartography; compilation of data for computer-assisted cartography; coordinate systems and digitising; methods of display.

Course: SV24

**Prerequisites:** SVT315, SVT991

**Credit Points:** 8      **Contact Hours:** 3 per week

#### ■ SVT945 REMOTE SENSING

Remote sensing; data and information; electromagnetic propagation; spectral sensitivity and response; remote sensing imagery.

Course: SV24

**Prerequisite:** SVT343

**Credit Points:** 8      **Contact Hours:** 3 per week

#### ■ SVT992 COMPUTER GRAPHICS 2

Data for computer-assisted mapping; programming techniques for automated drafting; HP graphics language for driving plotters.

Course: SV24

**Prerequisites:** SVT315, SVT991

**Credit Points:** 8      **Contact Hours:** 3 per week



# 5

## **QUT Campus Maps**









