# 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

- 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, Associate Degrees, 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

Contact Hours: 3 per week

#### ■ 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 Prerequisite: AAB125 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.

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

Designated Unit. 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. Course; AA11

Credit Points: 16 Contact Hours: 7.5 per week



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#### AAB122 CONTEMPORARY TECHNIQUE 2

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

Course: AA11Prerequisite: AAB121Credit Points: 16Contact Hours: 7.5 per week

#### AAB123 CLASSICAL TECHNIQUE 1

Designated Unit. 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. **Course:** AA11

Credit Points: 16 Contact Hours: 6 per week

#### AAB124 CLASSICAL TECHNIQUE 2

Designated Unit. 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.

Course: AA11Prerequisite: AAB123Credit Points: 16Contact 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: AA11Prerequisite: AAB100Credit Points: 16Contact 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 Contact Hours: 4.5 per week

AAB152 CONTEMPORARY TECHNIQUE 2 Continuation of AAB102. Basic combinations of movements; analysis of dance sequences.

Course: AA11Prerequisite: AAB121Credit Points: 12Contact Hours: 4.5 per week

#### 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: AA11Prerequisite: AAB106Credit Points: 12Contact Hours: 2 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: 2 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 Credit Points: 8 Co-requisite: AAB155 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

Co-requisite: AAB156 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 ap-

design; a major individual project that involves the application and integration of a range of technology. Course: AA11 Prerequisites: AAB158, AAB159 Course: Technology 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

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

Courses: AA21, ED22Prerequisite: AAB202Credit Points: 12Contact 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: 3 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 Renaissance; 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, reenactment 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

# An introduction to writing text for performance and appraising scripts; the main qualities of dramatic writ-

ing are identified; the working environment for dramatic writers in Australia is considered.

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 Prerequisite: AAB217 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

Course: AA21

Credit Points: 12 Contact Hours: 3 per week

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

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

#### AAB226 PRACTICUM 2

See AAB225. Course: AA21 Credit Points: 12

Prerequisite: AAB225

Credit Points: 12



#### AAB227 PRACTICUM 3

See AAB225. Course: AA21 Prerequisite: AAB226 Credit Points: 12

#### AAB233 VOICE & MOVEMENT 3

Designated Unit. 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.

Course: AA21 Credit Points: 12

Prerequisite: AAB205 Contact Hours: 6 per week

#### AAB234 VOICE & MOVEMENT 4

Designated Unit. 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.

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: 4 per week

#### AAB247 ACTING 3

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

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 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

Introduction to basic accounting practices; 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 the arts; planning, research and analysis, targeting, costing and presenting to the client. 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

Philosophical and practical issues confronting the modern day arts manager. 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

Researching and producing either strategic, operational or human resource management plans; confronting practical and philosophical issues in arts planning. 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.

Prerequisites: AAB206, AAB207 Course: AA21 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

Prerequisite: AAB289 Course: AA21 Credit Points: 12 Contact Hours: 6 per week

#### AAB291 PRODUCTION TECHNIOUES 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.

Prerequisites: AAB206, AAB207 Course: AA21 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.

Prerequisites: AAB206, AAB207 Course: AA21 Contact Hours: 6 per week Credit Points: 12

#### 🖬 AAB294 STAGE MANAGEMENT 3

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

Course: AA21 Credit Points: 12



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

#### 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

Contact Hours: 3 per week Credit Points: 12

#### AAB321 ADVANCED DESIGN 1

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

Course: AA21 Credit Points: 12 Prerequisite: AAB215

#### AAB322 ADVANCED DESIGN 2

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

Course: AA21 Credit Points: 12 Prerequisite: AAB321

#### 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 Credit Points: 12

Prerequisite: AAB213

#### 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 Credit Points: 12 Prerequisite: AAB324

#### AAB327 ADVANCED PLAYWRIGHTING 1

Workshops to develop skills in writing and appraising texts for performance. A folio of work is completed and selections developed in rehearsed readings. Input from guest practitioners.

Course: AA21 Credit Points: 12

Prerequisite: AAB216

#### AAB328 ADVANCED PLAYWRIGHTING 2

In association with a mentor, and dramaturgical input from colleagues, students prepare a folio of text for performance and develop it to a format that could be presented for production or publication. Contacts are made with professional writers and writing contexts. 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 playwriting.

Credit Points: 24 Course: AA21 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, ED54

Prerequisites: 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, ED54 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, ED54

Prerequisites: 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, ED54 Credit Points: 12

Prerequisite: AAB414 Contact Hours: 3 per week



# ONAS

#### 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 nonwestern art forms.

Courses: AA71, ED26, ED50

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.

Courses: AA71, ED22, ED26, ED50

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 2D and 3D image generation. manipulation and output through the critical study of systems, software, procedures and applications. Students develop a core understanding of the current characteristics and potentialities embedded in the technology.

Courses: AA71, ED22, ED26, ED5

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.

Courses: AA71, ED22, ED26, ED50, ED51, ED52 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, ED22, ED26

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, ED22, ED26

Credit Points: 12 Contact Hours: 3 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

#### 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 nonwestern 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

#### **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.

Prerequisite: AAB519 Course: AA51 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

AAB522 MUSIC ELECTIVE 2 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

AAB523 MUSIC ELECTIVE 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 nonwestern music, studio recording techniques. Course: AA51

Credit Points: 12

#### AAB524 MUSIC ELECTIVE 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. Credit Points: 12 Course: AA51

#### AAB525 MUSIC ELECTIVE 5

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 nonwestern music, studio recording techniques. Course: AA51

Credit Points: 12

#### AAB526 MUSIC ELECTIVE 6

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: 12

#### AAB527 AURAL MUSICIANSHIP 1

Training the ear to recognise and notate intervals, diatonic chords, imitative and sequential passages in diatonic music. Recognition and notation of complex rhythms. Development of skills in sight-singing in monophonic, homophonic and contrapuntal textures. Course: AA51

Credit Points: 12 Contact Hours: 2 per week

#### AAB528 WRITTEN MUSICIANSHIP 1

Harmonic and melodic writing techniques of the Baroque and Classical periods, with primary emphasis on diatonic harmony including figured bass, chorale harmonisation and harmonising of given melodies. Techniques of modulation, contrapuntal devices.

Course: AA51

Credit Points: 12 Contact Hours: 2 per week AAB554 POPULAR MUSIC

COMPOSITION 4

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

Course: AA51 Credit Points: 12

Prerequisite: AAB553 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 Credit Points: 12

Prerequisite: AAB051 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 directed ensemble. Improvisation (Jazz & Popular Music strand only).

Course: AA51

Credit Points: 12 Contact Hours: 6 per week AAB562 PRACTICAL STUDIES A2

Designated Unit. Continuation of AAB561 with added emphasis on interpretation, analysis and appropriate public presentation in performance. Improvisation (Jazz & Popular Music strand only)

Course: AA51 Prerequisite: AAB561 Credit Points: 12 Contact Hours: 6 per week

#### AAB566 PRACTICAL STUDIES B1

Membership of 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 may undertake studies on a second instrument or voice in a small group tutorial situation.

Course: AA51

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

#### 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 may undertake new or continuing studies in a second instrument or voice in small group tutorials.

Course: AA51 Credit Points: 12

Prerequisite: AAB566 Contact Hours: 5-6 per week

#### AAB569 COMPOSITION & TECHNOLOGY 1

Introduction to music computers, synthesisers, MIDI sequencing, music publishing and keyboard musicianship on midi keyboard. 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

Designated Unit. 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 directed ensemble.

Course: AA51 Credit Points: 24

Prerequisite: AAB562 Contact Hours: 6 per week

#### AAB572 PRACTICAL STUDIES A4

Designated Unit. Consolidation and extension of studies in AAB571 leading to a solo public recital in Semester 2. Performance seminar, concert attendance and directed ensemble.

Course: AA51 Credit Points: 24

Prerequisite: AAB571 Contact Hours: 6 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.

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

#### **AAB574 AURAL & WRITTEN** MUSICIANSHIP 4

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

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

#### 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

Credit Points: 12 Contact Hours: 4 per week

AAB577 TWENTIETH-CENTURY MUSIC 1 A detailed study of the history and literature of jazz and popular music together with associated writing techniques in a range of selected styles.

Course: AA51

Credit Points: 12 Contact Hours: 4 per week

#### AAB578 TWENTIETH-CENTURY MUSIC 2

A detailed study of Western music history and literature encompassing the period 1950 to the present day. Course: AA51

Credit Points: 12 Contact Hours: 3 per week

#### AAB579 PRACTICAL STUDIES B3

Group tuition on an orchestral instrument as a second study; development of performing technique; membership of 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. Course: AA51 Prerequisite: AAB579 Credit Points: 12 Contact Hours: 5-6 per week

#### AAB581 PRACTICAL STUDIES B5

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

Course: AA51 Prerequisite: AAB580 Credit Points: 12 Contact Hours: 5-6 per week

#### AAB582 PRACTICAL STUDIES B6

Continuation of AAB581 Course: AA51 Prerequisite: AAB581 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 Credit Points: 12

Prerequisite: AAB583 Contact Hours: 3 per week

AAB585 COMPOSITION & TECHNOLOGY 5

Examination of compositional techniques including algorithmic composition and timbral collage. Exploration of digital sampling techniques and signal processing and their applications to contemporary compositional forms.

Course: AA51 Credit Points: 12

Prerequisite: AAB584 Contact Hours: 3 per week

AAB586 COMPOSITION & TECHNOLOGY 6 Individual composition project (in consultation with the lecturer) with a view to presenting a multi-media performance piece utilising live and pre-recorded computer-based performance in concert.

Course: AA51 Prerequisite: AAB585 Credit Points: 12 Contact Hours: 3 per week

#### AAB587 MUSIC IN WESTERN CIVILISATION

The place of music in Western civilisation 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

AAB700 FOUNDATION MEDIA STUDIES 1 Designated Unit. 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: 24 Contact Hours: 12 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.

Courses: AA71, ED50 Credit Points: 12

Contact Hours: 4 per week

AAB703 FOUNDATION MEDIA STUDIES 2

Designated Unit. 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. Courses: AA71, ED50

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

Designated Unit. Students are expected to research their own personal directions, formulate and develop selfgenerated 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 threedimensional areas or a combination of these.

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

AAB708 ADVANCED MEDIA STUDIES 2

Designated Unit. 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 Credit Points: 24

Prerequisite: AAB707 Contact Hours: 12 per week

#### AAB709 ADVANCED MEDIA STUDIES 3

Designated Unit. 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: 12 per week

#### AAB710 ADVANCED MEDIA STUDIES 4

Designated Unit. 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 neightened.

Courses: AA71, ED26, ED50

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 Contact Hours: 3 per week

#### 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 practical studio units of core media studies or elective studio units. (Note: contract approval by the unit coordinator is required.)

Courses: AA71, ED22, ED26, ED50, ED51, ED52 Credit Points: 12 Contact Hours: 3 per week

#### AAB721 EXTENDED MEDIA STUDY 2

Extension of practical studio units of core media studies or elective studio units.

Course: AA71, ED22, ED26, ED50

Prerequisite: AAB720

Credit Points: 12 Contact Hours: 3 per week

#### AAB722 EXTENDED MEDIA STUDY 3

Extension of practical studio units or core media studies or elective studio units.

Prerequisite: AAB721 Course: AA71 Credit Points: 12 Contact Hours: 3 per week

#### AAB724 RENAISSANCE STUDIES

An investigation of aspects of western European art between 1300 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. Courses: AA71, ED50

Contact Hours: 3 per week Credit Points: 12

#### 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.

Courses: AA71, ED50

Contact Hours: 3 per week Credit Points: 12

#### 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

Contact Hours: 3 per week Credit Points: 12

#### AAB728 SPECIAL TOPICS IN ART THEORY

Topical investigation into the social, cultural and philosophical attitudes and influences of art.

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 AAB730 CERAMIC MATERIALS IN A 622

#### CONTEMPORARY CONTEXT

Investigation of the aesthetic qualities of ceramic materials, processes and products; development of an understanding and appreciation of the role of ceramic materials in contemporary artistic and design practice. Emphasis will be placed on artistic decision-making skills appropriate to these processes.

Course: AA71

Credit Points: 12 Contact Hours: 2 per week AAB731 INTRODUCTION TO DRAWING: LOOKING INTO SEEING

An investigation into ways of thinking and drawing. A transition from looking to seeing. Different materials and methods are utilised to assist students to develop observational skills in describing phenomena through the multi-faceted activity of drawing. Where appropriate, experimentation and risk-taking will be encouraged. Course: AA71

Credit Points: 12 Contact Hours: 2 per week

#### AAB732 COMPUTER IMAGING

An introduction to 2D and 3D image generation, manipulation and output through the critical study of systems, software, procedures and applications. Two-dimensional imaging deals with image construction, capture and processing to meet student-determined artistic objectives such as presentation, simulation, authoring, desktop publishing, 2D animation and photo-editing. Studies in three-dimensional imaging explore construction techniques, manipulation, surface mapping, 3D animation, procedural modelling and video output. Course: AA71

Credit Points: 12

Contact Hours: 2 per week



# UNIT SYNOPSES

#### AAB733 MODELLING IN THREE-DIMENSIONAL SPACE

Examination of the spatial constructs and their interrelated objects with an emphasis on developing the viewer's understanding of the three-dimensional environment. Studies will be undertaken as a group and individually in various media including the drawing and rendering of form, traditional sculpture media and other experiential/temporal or time-based media.

Courses: AA71

Credit Points: 12 Contact Hours: 2 per week

#### AAB734 APPLIED SURFACE AND PATTERN DESIGN

The specialised discipline of putting artwork into continuous repeat for industrial production. Potential applications include wall and floor coverings, upholstery, paper products, apparel, furnishing and woven fabrics. This unit is particularly relevant to artist/designers, interior designers and architects.

Courses: AA71

Credit Points: 12 Contact Hours: 2 per week

### The application of photography as documentation and

The application of photography as documentation and research tool, extending beyond technical processes into questions of visual decision making. The unit will incorporate studio, darkroom, laboratory and field work. **Course:** AA71

Credit Points: 12 Contact Hours: 2 per week ■ AAB910 PERFORMING ARTS 3

### The performance of a major choral work; analysis in-

terpretation, 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 Prerec Credit Points: 12 Contact He

Prerequisite: AAB909 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

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 Credit Points: 12 Prerequisite: AAB911 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, music writing techniques and music technology skills are developed. 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

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 AAN001 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 He

oints: 12 Contact Hours: 3 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: AA24, AA40, AT22

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:** AA40, AT22

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.

Credit Points: 24 Course: AT22 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 re-quires a minimum of 6,000 - 10,000 words, or equivalent if other media/reportage is used.

Course: AA40 Credit Points: 12 AAN011 ADVANCED PROFESSIONAL PRACTICE 1

An investigation of the student's professional practice through observation and research in consultation with supervisor.

Course: AA24 Credit Points: 12

#### AAN012 ADVANCED PROFESSIONAL PRACTICE 2

Extension and elaboration of student's professional practice through evaluation and analysis in consultation with supervisor.

Course: AA24 Credit Points: 12 AAN013 ADVANCED PROFESSIONAL

PRACTICE 3 A significant artistic outcome as part of student's skills development including research, rehearsal and preparation for an exhibition or performance. Course: AA24

Credit Points: 24

#### 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

#### 27 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

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, ED37 Prerequisite: AAP420

	A rerequisites ment 720
Co-requisite: EDP451	-
Credit Points: 12	Contact Hours: 3 per week
AAP422 DRAMA (	CURRICULUM STUDIES 1
See AAP421.	
Course: ED32, ED37	Prerequisite: AAP420
Co-requisite: EDP451	

Contact Hours: 3 per week

AAP423 MUSIC CURRICULUM STUDIES 1 See AAP421. Course: ED32, ED37 Prerequisite: AAP420 Co-requisite: EDP451 Credit Points: 12 Contact Hours: 3 per week



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#### AAP424 VISUAL ARTS CURRICULUM STUDIES 1

See AAP421.

Course: ED32, ED37 Prerequisite: AAP420 Co-requisite: EDP451

Credit Points: 12 Contact Hours: 3 per week

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, ED37 Credit Points: 12 Contact Hours: 3 per week

AAP431 MUSIC CURRICULUM STUDIES 2 See AAP430.

Course: ED32, ED37 Co-requisite: EDP451 Credit Points: 12 Contact Hours: 3 per week

AAP432 VISUAL ARTS CURRICULUM STUDIES 2

See AAP430. Course: ED32, ED37 Credit Points: 12

Co-requisite: EDP451 Contact Hours: 3 per week

AAP433 MUSIC CURRICULUM STUDIES 2A

Extension studies in methods of teaching and curricula relevant to specialist teachers of instrumental, secondary or primary music.

Course: ED37 1 Co-requisite: AAP431 Credit Points: 12 Conta

Prerequisite: AAP428

Contact Hours: 3 per week

■ AAP434 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

#### 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, ED26 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.

Courses: ED22, ED26, ED51Prerequisite: 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, ED51, AA71 Credit Points: 12 Contact Hours: 3 per week

#### AAP505 FIBRE 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, ED51, AA71

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, ED51, AA71 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, ED51, AA71

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.

graphic stencils; presentation of prints. Courses: ED22, ED26, ED50, ED51, AA71

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: AA09 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: AA09, AA10 Prerequisite: AAX101 Credit Points: 8 Contact Hours: 2 per week

#### AAX103 MUSIC 1

Musical basics through aural and written theories. Course: AA09, AA10

Credit Points: 8 Contact Hours: 1.5 per week

ALIGNMENT

Principles governing human stability and motion; ways muscles work to produce dance movement; machines of the body; movement and dance injuries. Course: AA09

Credit Points: 12 Contact Hours: 3.5 per week

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: AA09

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: AA09, AA10

Credit Points: 8 Contact Hours: 3 per week AAX111 REPERTOIRE & PRACTICE

PERIOD 1

Designated Unit. 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.

Course: AA09 Credit Points: 12

#### AAX112 REPERTOIRE & PRACTICE PERIOD 2

Designated Unit. Continuation of studies initiated in AAX111.

Course: AA09 Prerequisite: AAX111 Credit Points: 16 AAX113 REPERTOIRE & PRACTICE

PERIOD 3

Designated Unit. Continuation of AAX112.

Course: AA09, AA10 Prerequisite: AAX112 Credit Points: 16

#### AAX114 REPERTOIRE & PRACTICE PERIOD 4

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

Course: AA09, 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: AA09

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Credit Points: 8 Contact Hours: 1.5 per week

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

Course: AA09, AA10 Credit Points: 8 Contact Hours: 2 per week

#### AAX117 BALLET TECHNIQUE 1

Designated Unit. 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. **Course:** AA09

Credit Points: 8 Contact Hours: 9 per week

#### AAX118 BALLET TECHNIQUE 2

Designated Unit. Continuation of study initiated in AAX117.

Course: AA09	Prerequisite: AAX117
Credit Points: 8	Contact Hours: 7.5 per week

#### AAX119 BALLET TECHNIQUE 3

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

Course: AA09, AA10Prerequisite: AAX118Credit Points: 8Contact Hours: 9 per week

#### AAX120 BALLET TECHNIQUE 4

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

Course: AA09, AA10 Prerequisite: AAX119 Credit Points: 8 Contact Hours: 7.5 per week

AAX121 CONTEMPORARY TECHNIQUE 1

Designated Unit. 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. **Course:** AA09

Credit Points: 8 Conta

Contact Hours: 9 per week

AAX122 CONTEMPORARY TECHNIQUE 2 Designated Unit. Continuation of study initiated in AAX121.

Course: AA09Prerequisite: AAX121Credit Points: 8Contact Hours: 7.5 per week.

AAX123 CONTEMPORARY TECHNIQUE 3 Designated Unit. 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.

Course: AA09, AA10 Prerequisite: AAX122 Credit Points: 8 Contact Hours: 7.5 per week

AAX124 CONTEMPORARY TECHNIQUE 4 Designated Unit. Advanced technique classes incorporating difficult exercise combinations with rapid changes of weight, level, direction; performance quality and style.

Course: AA09, 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 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: B\$50, ED50 Prerequisite: ALB107 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 Prerequisites: ALB110 or ALN103 Credit Points: 12 Contact Hours: 3 per week



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#### ALB104 INDUSTRIAL LAW

The system of law in Australia; industrial aspects of the Australian constitution; the system of industrial law in Australia; the development and role of law in industrial relations; industrial relations legislation federal and state; common law; industrial torts; industrial actions; industrial disputes; settlement of disputes; sanctions; unions.

Course: BS50 Prerequisite: HRB131 Credit Points: 12

#### Contact Hours: 3 per week

ALB105 INTERNATIONAL BUSINESS LAW Examination of 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 Prerequisites: ALB110 or ALN103 Contact Hours: 3 per week Credit Points: 12

#### ALB107 LEGAL ENVIRONMENT OF BUSINESS

Consumer protection - State and Commonwealth legislation; trade regulation; restrictive trade practices; consumer credit laws; business finance options; use of a business name; choosing a business structure; establishing a business; starting, buying or franchising a business in Oueensland.

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: B\$50, ED50, IF56, IT20, 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 Prerequisites: 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, trusts, companies and voluntary associations. A focus on companies: incorporation requirements, classification, share capital and management issues.

Courses: BS50, BS81

Prerequisites: ALB110 or ALN103

Credit Points: 12 Contact Hours: 3 per week

#### ALB130 INDIRECT TAXATION

Examination of taxes 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 and excise duties, and the 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 the capital gains tax regime, a discrete area of taxation law that is complex in nature and has farreaching commercial ramifications. The focus is on specific issues that have significant practical relevance. 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, consumer protection 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: BS78, BS81

Credit Points: 12 Contact Hours: 3 per week ALN104 COMMERCIAL LAW HONOURS

The law, policy and practice of financial disclosure; detailed examination 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. 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

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 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 & RECEIVERSHIP

The law and practice of bankruptcy and corporate insolvency; comparisons between deeds of company arrangement, 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

#### ALN110 TAXATION POLICY HONOURS

A study of the Australian taxation system as it has evolved under the policy-making powers of the Australian Government. The system is critically assessed using generally accepted criteria governing the formation of taxation policy. Detailed examination of matters on the current reform agenda.

Courses: BS60, BS70, BS87

Credit Points: 12 Contact Hours: 3 per week

ALN300 INSOLVENCY & RECONSTRUCTION (PY)

Examination of the law and practice of bankruptcy and corporate insolvency; comparisons between deeds of company arrangement, 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 1B (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 Prerequisite: ALN305 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

#### ALN303 LEGAL ENVIRONMENT OF BUSINESS

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

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Credit Points: 0 Contact Hours: 3 per week

#### ALN305 TAXATION 1A (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.

Course: 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

#### ARB001 ARCHITECTURAL DESIGN 1

Introduction to design theory and methodology; Design as an integrative process; aesthetic perceptions, graphic/presentation skills. Strategic Learning at University. Introductory design exercises: simple elements and small scale urban spaces.

Courses: AR48, BN30 Credit Points:12 Contact Hours: 8 per week

ARB002 ARCHITECTURAL DESIGN 2 Development of design understanding integrating



#### ARB003 ARCHITECTURAL DESIGN

Development of design understanding and ability with emphasis on social and environmental values. Theory and methodology: activity analysis, site analysis, integration of construction and climatic studies. Design

projects generally of domestic scale. Courses: AR48, BN30 Prerec Prerequisite: ARB002 Credit Points:12 Contact Hours: 6 per week

#### ARB004 ARCHITECTURAL DESIGN 4

Development of design understanding and ability with emphasis on social and environmental values. Integration of design theory, sociological issues and technology. Design projects generally of domestic scale.

Courses: AR48, BN30 Prerequisite: ARB003 Credit Points:12 Contact Hours: 6 per week

#### ARB005 ARCHITECTURAL DESIGN 5

Development of design understanding and ability with emphasis on 'place' and design in social and physical context. Design projects aimed at developing issues of context, landscape, ethics and values and integrating building construction, climatic design and contextual studies. Projects include groups of buildings of medium scale and increasing complexity.

Courses: AR48, BN30 Prerequisite: ARB004 Credit Points:12 Contact Hours: 6 per week

#### ARB006 ARCHITECTURAL DESIGN 6

Development of design emphases introduced in ARB005. Design projects to develop contextual issues and integrate considerations of climatic design, construction and building services. Projects include groups of buildings of medium scale and increasing complexity. Courses: AR48, BN30 Prerequisite: ARB005

Credit Points:12 Contact Hours: 6 per week

#### ARB007 ARCHITECTURAL DESIGN 7

Design projects used to develop theory, critical analysis and issues of architectural quality. Integration of design science, construction, building services, codes and standards. Projects include buildings and building groups of medium to large scale.

Course: AR48 Prerequisite: ARB006 Credit Points: 24 Contact Hours: 6 per week

#### ARB008 ARCHITECTURAL DESIGN 8

Design projects used to develop individual approach and direction to architecture and to introduce urban design issues. Integration of building economics, services, technology and critical analysis. Projects include large scale civic or commercial developments in an urban context.

Course: AR48 Prerequisite: ARB007 Credit Points:24 Contact Hours: 6 per week

#### ARB011 CONTEXTUAL STUDIES 1

Human scale, anthropometry and ergonomics. Introduction to a progressive study of architectural history. Early buildings to 19th Century.

Courses: AR48, BN30

Credit Points: 6 Contact Hours: 3 per week **ARB012 CONTEXTUAL STUDIES 2** 

Human behaviour; perceptions, learning, interpersonal communication and relationships, decision making, problem solving and stress management. Progressive study of architectural history to 19th Century.

Courses: AR48, BN30 Prerequisite: ARB011 Credit Points: 8 Contact Hours: 3 per week

#### ARB013 CONTEXTUAL STUDIES 3

Human relationships: role of social and cultural variables in human environment interactions; theory of place; behaviour settings; privacy; personal space; territoriality; environmental meaning and cognition; cognitive maps and way-finding; risk perceptions; environmental stress; environmental evaluations; participatory design processes. Architectural history of the 20th Century; the modern movement; post modern and recent. Introduction to design methodology; imagining, representing, testing, the VAST lists and an heuristic design model.

Courses: AR48, BN30

Credit Points: 8 Contact Hours: 4 per week

#### ARB014 CONTEXTUAL STUDIES 4

Human organisation, theory of formal organisations, Australian government structures, social analysis and forecasting, social interest groups. History of architecture in the 20th Century, the modern movement, post modern and recent. Theories, styles and movements in architectural history.

Courses: AR48, BN30 Prerequisite: ARB013 **Credit Points: 8** Contact Hours: 4 per week

#### ARB015 CONTEXTUAL STUDIES 5

The periods of Australian architectural development and important individual architects. Urban design theory, townscape, urban spaces, city form.

Courses: AR48, BN30 **Credit Points:8** Contact Hours: 3 per week

#### ARB016 CONTEXTUAL STUDIES 6

The legal system, statutory and common Law, contract and tort, acts and regulations concerning the built environment, building codes of Australia. Queensland architectural heritage and contemporary architects. Principles for the analysis of design, factors affecting quality. Courses: AR48, BN30 Prerequisite: ARB015

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

#### ARB017 CONTEXTUAL STUDIES 7

Architectural development in the Far East, S.E. Asia, the Pacific and South America. Planning of Settlements, Indigenous architecture, materials, techniques and construction, social, cultural and other influences, modernisation, current architectural issues. Theory and methods of critical analysis, critical appraisal of major works and architects, study of ideas and aesthetics. Courses: AR48, BN30

Credit Points:6 Contact Hours: 2 per week

#### ARB018 CONTEXTUAL STUDIES 8

Contemporary theories of design and aesthetics; ethics in architectural practice, current issues in architecture, changing roles and attitudes, trends and opportunities.

Courses: AR48, BN30

Credit Points: 6 Contact Hours: 2 per week

#### ARB021 TECHNOLOGY AND SCIENCE 1 Introduction to architectural technology. Properties and

behaviour of common building materials. Principles of physics related to building construction. Basic principles of structures. Courses: AR48, BN30

**Credit Points: 8** Contact Hours: 3 per week ARB022 TECHNOLOGY AND SCIENCE 2

#### Principles of construction related to simple structures, construction systems, chemical properties and reaction

of building materials. Introduction to computing in architecture. Courses: AR48, BN30 Prerequisite: ARB021

Credit Points: 12 Contact Hours: 5 per week



#### ARB023 TECHNOLOGY AND SCIENCE 3

Domestic scale building construction. Principles of structures, climate and sun control.

Courses: AR48, BN30Prerequisite: ARB022Credit Points: 12Contact Hours: 4 per week

#### ARB024 TECHNOLOGY AND SCIENCE 4

Domestic scale building construction, timber structural members and elements, climatic design, ventilation and airflow.

Courses: AR48, BN30 Credit Points: 12

BN30 Prerequisite: ARB023 Contact Hours: 4 per week

#### ARB025 TECHNOLOGY AND SCIENCE 5

Steel construction, structures and structural elements, stairs, medium rise construction in reinforced concrete and masonry, hydraulic services, thermal behaviour of buildings.

Courses: AR48, BN30 Prerequisite: ARB024 Credit Points: 12 Contact Hours: 6 per week

#### ■ ARB026 TECHNOLOGY AND SCIENCE 6

Construction systems used in industrial and commercial buildings of medium to high rise. Reinforced concrete structures and structural elements. Curtain walls, acoustic and noise control. Building services and electricity, lifts, air conditioning.

Courses: AR48, BN30 Prerequisite: ARB025 Credit Points: 12 Contact Hours: 5 per week

#### ARB027 TECHNOLOGY AND SCIENCE 7

Complex construction systems, specialised structures, integration of complex services, tall buildings. Case studies of special aspects of architecture technology. Course: AR48 Prerequisite: ARB026

Credit Points: 6 Contact Hours: 2 per week

#### ARB031 PROFESSIONAL STUDIES 1

Building codes and regulations applied in studio exercises. Estimating, cost control, feasibility, computer software for business. Specifications: role, techniques, practical exercises.

Course: AR48 Prerequisite: Nil Credit Points: 16 (8 per semester)

Contact Hours: 3 per week

#### ARB032 PROFESSIONAL STUDIES 2

Practice management, setting up a practice, office systems, marketing. Building economics, finance, cost control, risk management, QA. Building procurement systems. Professional practice, ethics, services, liability, the building contract and contract administration. Course: AR48 Prerequisite: ARB031 Credit Points: 16 (8 per semester) Contact Hours: 3 per week

#### ARB033 PROFESSIONAL STUDIES 3

Standard contracts and contract administration. Issues in the profession, changing roles, new legislation. Course: AR48 Prerequisite: ARB032 Credit Points: 16 (8 per semester) Contact Hours: 2 per week

#### ARB041 ELECTIVE 1

Elective unit drawn from an existing range of units available within the School and approved by Course Coordinator.

Course: BN30 Credit Points: 6

Contact Hours: 2 per week

#### ARB042 ELECTIVE 2

Elective unit drawn from an existing range of units within the School and approved by Course Coordinator. Course: BN30

**Credit Points: 6** 

Contact Hours: 2 per week

#### ARB043 ELECTIVE 3

Elective drawn from an existing range of units available within the Faculty of Built Environment and Engineering or another Faculty at QUT, and approved by the Course Coordinator.

#### Course: BN30

Credit Points: 6 Contact Hours: 2 per week

#### Elective drawn from an existing range of units available within the Faculty of Built Environment and En-

gineering or another Faculty at QUT, and approved by the Course Coordinator. Course: BN30

Course: BIN50

Credit Points: 6 Contact Hours: 2 per week

#### ARB045 ELECTIVE A

Elective unit drawn from a range presented by the School, available within the Faculty, elsewhere at QUT or external units subject to approval.

Course: AR48

Credit Points: 6 Contact Hours: 2 per week

# Elective unit drawn from a range presented by the School, available within the Faculty, elsewhere at QUT or external units subject to approval.

Course: AR48 Credit Points: 6 Contact Hours: 2 per week

ARB047 ELECTIVE C

Elective unit drawn from a range available within the Faculty, subject to approval. **Course:** AR48

Credit Points: 6 Contact Hours: 2 per week

An overview of research methodology, examination of differences between research methods and products. Students will undertake a short, directed research project. Course: AR48

Credit Points: 6 Contact Hours: 2 per week

#### ARB052 ARCHITECTURAL RESEARCH 1

The establishment of appropriate research methods and their development into a study proposal for an approved elected research topic. Establishment of objectives, delineation of areas, structuring research program, reading sources, analysis and preliminary conclusions, individual proposals.

Course: AR48 Credit Points: 6 Prerequisite: ARB051 Contact Hours: 2 per week

ARB053 ARCHITECTURAL RESEARCH 2 Continued development of approved research topic com-

menced in ARB052. Definition and analysis of propositions, validation by research. Research submission.

Course: AR48Prerequisite: ARB052Credit Points: 24Contact Hours: 6 per week

ARB054 ARCHITECTURAL PROJECT

A major project selected by the student and approved by the coordinator. By the end of the semester the student should demonstrate through the project the course objectives, expressed as values and attitudes, knowledge and skills.

Course : AR48 Credit Points: 24 Prerequisite: ARB053 Contact Hours: 6 per week

#### ARB061 ARCHITECTURAL APPLICATIONS 1

Application of theory and knowledge gained in co-requisite units and development of graphic skills in studio exercise.

Course: BN30

Co-requisites: ARB001, ARB011 & ARB021 Credit Points: 12 Contact Hours: 4 per week



#### ARB062 ARCHITECTURAL APPLICATIONS 2

Application of theory and knowledge gained in co-requisite units and development of graphic skills in studio exercise

Course: BN30

Co-requisites: ARB002, ARB012 & ARB022

Credit Points: 8 Contact Hours:4 per week

#### ARB063 ARCHITECTURAL APPLICATIONS 3

Application of theory to architectural problems, with emphasis on architectural technology and science. Studio exercises and site visits.

Course: BN30 Co-requisites: ARB003 & ARB023 Credit Points: 12 Contact Hours: 4 per week

#### ARB064 ARCHITECTURAL APPLICATIONS 4

Application of theory to architectural problems, with emphasis on architectural technology and science. Studio exercises and site visits.

Course: BN30 Co-requisites: ARB004 & ARB024 Credit Points: 8 Contact Hours:4 per week

#### **ARB065 ARCHITECTURAL** APPLICATIONS 5

Application of theory to architectural problems, with emphasis on architectural technology and science. Studio exercises and site visits.

Course: BN30 Co-requisite: ARB025 Credit Points: 12 Contact Hours:4 per week

#### **ARB066 ARCHITECTURAL** APPLICATIONS 6

Application of theory to architectural problems, with emphasis on architectural technology and science. Studio exercises and site visits.

Course: BN30 Co-requisite: ARB025 Credit Points: 8 Contact Hours: 4 per week

#### ARB071 ENVIRONMENTAL STUDIES

The global ecosystem: the atmosphere and its processes, climate, air pollution, water cycles, water pollution, human population and demographic trends, renewable and non-renewable resources, land use, urbanism, the city as an ecosystem, national resource management and conservation. Course: BN30

Credit Points: 6 Contact Hours: 2 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.

Course: 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 Co-requisite: ARB140 Credit Points: 8 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 beaming 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** 





#### 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: i 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 Credit Points: 14

Co-requisite: ARB248 Contact Hours: 5 per week

#### ARB248 INTRODUCTORY DESIGN 2

Continuation of ARB140; studio work involving threedimensional design tasks of a variety of scales; workshop and field teaching; techniques of oral and written prevention 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 helidon and artificial sky.

Courses: AR41, AR48, BN30

Credit Points: 2 Contact Hours: | 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: I 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 socio-cultural 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 Transforma-



tion 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

Contact Hours: 2 per week Credit Points: 4

ARB299 INTRODUCTION TO **COMPUTING 1** 

The computer as a tool; introduction to microcomputer 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: | 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: ARB248 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 are 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 Prerequisite: ARB248 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 **Credit Points: 4** 

Prerequisite: ARB251 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, introduction to using Windows, overview of use of graphics and CAD by industrial designers in the design process. Application of CAD for engineering drawings and as a 2D presentation tool. Introduction to 3D wireframe modelling concepts.

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 Prerequisites: ARB248, ARB140 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.

Prerequisite: ARB246 Course: BN30 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; upholstering; 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: ARB248 **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, 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, 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, BN30

Credit Points: 4 Contact Hours: 1.5 per week ARB392 BUILDING SERVICES 2

Electricity: supply and transmission systems; substations; 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

Contact Hours: 1.5 per week Credit Points: 3

#### 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, BN30Prerequisite: 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 are complemented by field studies and workshop practice.

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

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.

> Prerequisite: ARB352 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

Introduction to 3D Solid modelling concepts, 3D spatial relationships, design documentation, 3D model to 2D engineering drawings and development of skills in the use of CAD for engineering drawings. Design presentation.

Course: BN30 Credit Points: 4

Course: BN30

Credit Points: 4

Prerequisite: ARB354 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

Contact Hours: 7 per week Credit Points: 16

#### 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 economics are 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 Prerequisite: ARB361 Credit Points: 4 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: 4 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 is complemented by field work.

Prerequisite: ARB441 Course: BN30 Credit Points: 17 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 Credit Points: 4

Prerequisite: ARB452 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 Credit Points: 8

Prerequisite: ARB453 Contact Hours: 3 per week



#### ARB554 COMPUTER-AIDED INDUSTRIAL DESIGN 3

Introduction to simple 3D Surface modelling concepts, introduction to shading, development of these skills for product form evaluations. Development of the use of 3D CAD skills for production of advanced 2D engineering drawings.

Course: BN30 Credit Points: 4 Prerequisite: ARB454 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

A studio and workshop unit. 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 tennacles, 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 Credit Points: 8 Prerequisite: ARB462 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: BN30Prerequisite: ARB463Credit Points: 4Contact 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 Credit Points: 4 Prerequisite: ARB464 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

ts: 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 postoccupancy analysis.

Course: AR41

Credit Points: 20 Contact Hours: 5 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 is 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.



#### 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 Credit Points: 4

Prerequisite: ARB552 Contact Hours: 2 per week

#### 1 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**

Development of skills in complex 3D Surface modelling techniques, application in design form evaluations and form refinement. Further development of shading techniques and introduction to animation. Advanced design documentation.

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 are 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 Contact Hours: 6 per week

Credit Points: 12

#### 📕 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: 5 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.

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

Credit Points: Semester 1: 4; Semester 2: 20 Contact Hours: Semester 1: 2 ; Semester 2: 5

#### 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



Course: AR41 Credit Points: 8

#### 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 is 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

#### ARP606 ELECTIVE UNIT

A selected and approved course of study within the university or at another institution which enables students to deepen their knowledge in particular areas of interior design. All Electives undertaken shall have the prior approval of the Course Coordinator. No special timetabling arrangements will be made to cater for Electives.

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: 6 Contact Hours: 2 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: 6 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: 6 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: I per week

#### ARP654 PROFESSIONAL PRACTICE AND MANAGEMENT

A series of lectures and seminars exploring the role of professional practice management. Lectures include: meaning of design process, control and the design process, complexity of design problems, type of contracts, design management, design documentation, concept of design evaluation and management, role administration, liability, design protection, designers-client relationships. Course: AR61

Credit Points: 6 Contact Hours: 2 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: 12 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 Credit Points: 18

Prerequisite: ARP673 Contact Hours: 8 per week

#### **ARP675 INDUSTRIAL DESIGN** RESEARCH 2

This unit 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 are approved and supervised by industrial design staff.

Course: AR61 Prerequisites: ARP672, ARP674 Credit Points: 18 Contact Hours: 8 per week

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

Advanced CAD in the design process. Introduction to the interactive use of the application of CAD/CAM and SLA in the development of finalisation of design projects. Application of animation techniques to design evaluation and presentation.

Course: AR61

Credit Points: 6 Contact Hours: 2 per week

#### ARP677 ADVANCED COMPUTER-AIDED INDUSTRIAL DESIGN 2

Advanced CAD in design development, analysis and manufacturing (CNC) process. Employing CAD/CAM and SLA in the development, evaluation, finalisation, documentation and presentation of a design project. Course: AR61

Credit Points: 6 Contact Hours: 2 per week ATN001 RESEARCH PROJECT - 1 UNIT

Repeatable unit indicating the rate at which the Research Project within AT22 or AA24 is being undertaken.

Courses: AA24, AT22 Credit Points: 12 ATN002 RESEARCH PROJECT - 2 UNITS See ATN001.

Courses: AA24, AT22

Credit Points: 24

#### ATN003 RESEARCH PROJECT - 3 UNITS

See ATN001. Courses: AA24, AT22

Credit Points: 36

ATN004 RESEARCH PROJECT - 4 UNITS See ATN001. Courses: AA24, 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, costvolume-profit analysis, the nature of planning and con-

trol, and managerial decision making. Courses: AA21, BS50, ED23, IF52, IF54, IF56, IS43, NS48

Credit Points: 12 Contact Hours: 3 per week Incompatible with: AYB105, AYB110

#### 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, IF37 Prerequisite: ISB892 Credit Points: 12 Contact Hours: 4 per week Incompatible with: FNB117

#### **AYB102 ACCOUNTING DISCLOSURE &** AUDIT

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.

Prerequisite: AYB111 Course: ED50 Credit Points: 12 Contact Hours: 3 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 Credit Points: 12

Prerequisite: AYB110 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 decisionmaking.

Courses: PU48, NS48

Credit Points: 12 Contact Hours: 3 per week Incompatible with: AYB100, AYB110

#### AYB110 ACCOUNTING

Elements of 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, IF37,IT20, PU48, NS48 Credit Points: 12 Contact Hours: 4 per week Incompatible with: AYB100, AYB105

#### AYB111 FINANCIAL ACCOUNTING

An examination of the accounting concepts and procedures relevant to both partnership and company business structures within the context of both the accounting profession's conceptual framework and the relevant legal requirements. Topics include: the formation, accounting procedures and financial statement preparation for both partnerships and company business structures; the role of corporate financial statement analysis; review of cash flow statements.

Courses: BS50, ED50, IF37, 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, IF37 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, IF37 Credit Points: 12

Prerequisite: AYB112 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 environments and evaluation of EDP controls; computer-assisted audit techniques; computer fraud; sampling techniques; the audit report.

Courses: BS50, ED50, IF37 Prerequisite: AYB112 Credit Points: 12 Contact Hours: 3 per week

#### AYB211 AUDITING & PROFESSIONAL PRACTICE

Audit concepts and procedures; preparing a system based audit plan; the nature and reasoning behind audit tests of balances; implementation of specified statistical sampling techniques; EDP auditing; independence; ethics; legal liability.

Course: BS50 Credit Points: 12 Prerequisite: AYB210 Contact Hours: 4 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

#### 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, LW33, 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 reporting; analysis and interpretation of financial information; managerial accounting including simple decision models and the preparation of budgets.

Courses: BS78, BS81, IF64

Credit Points: 12 Contact Hours: 3 per week Incompatible with: AYN112

#### 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. Please contact the School of Accountancy office regarding commencement date. This unit runs outside the normal semester timetable. **Courses:** BS70, BS87

Credit Points: 12 Contact Hours: 3 per week Incompatible with: AYN300

#### 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 proportionalto-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; inde-



pendence; reporting; liability; fraud detection; audit process; risk; materiality; internal control; analytical review; ethics; 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

Credit Points: 12 Contact Hours: 3 per week Incompatible with: AYB110, AYB111

#### 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; transaction cost economics; 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 (taxeffect accounting), leases, construction contracts and the extractive industries; goodwill; acquisition and revaluation of assets; equity accounting. Please contact the School of Accountancy office regarding commencement date. This unit commences in early January. **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; ethical considerations.

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 multinational enterprises; analysis of foreign financial statements.

#### Courses: BS70, BS87

Credit Points: 12

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; ethics; the audit report. **Course: BS81 Prerequisite:** AYN113

Prerequisite: AYN113 Contact Hours: 3 per week

#### AYN300 ACCOUNTING 1 (PY)

See AYN103. Please contact the School of Accountancy office regarding commencement date. This unit runs outside the normal semester timetable.

Courses: BS70, BS87 Prerequisite: AYN117 Credit Points: 12 Contact Hours: 3 per week Incompatible with: AYN103

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

Courses: BN30, CE42, CN31, CN32, CN33, EE43, EE44, IF54, ME45, ME46, PS47

Credit Points: 2 Contact Hours: 1.5 per week BNB002 INTRODUCTION TO

ENGINEERING

Learning at university; skills and attitudes for effective learning; self management; the learning process; stress management. Introduction to the Faculty of Built Environment & Engineering; history of the engineering profession; civil, environmental, electrical, electronic, computing, mechanical, manufacturing, associated professions; architecture, industrial design, planning, landscape architecture, surveying, construction management and property economics.

Courses: CE42, EE43, EE44, ME45

Credit Points: 6 Contact Hours: 3 per week

#### BNB003 PROFESSIONAL PRACTICE IN ASIA/PACIFIC

Overview of the region; institutional and business environments; guidelines for professional practice overseas; sourcing opportunities; selected case studies. Courses: CE42, EE44, ME45

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

- BNT100 INDUSTRIAL EMPLOYMENT 1 BNT200 INDUSTRIAL EMPLOYMENT 2 BNT300 INDUSTRIAL EMPLOYMENT 3 BNT400 INDUSTRIAL EMPLOYMENT 4 BNT500 INDUSTRIAL EMPLOYMENT 5 BNT600 INDUSTRIAL EMPLOYMENT 6 ۲
- 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

Credit Points: 3 each

Contact Hours: 15 weeks 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, IF37, IF52, IF54, IF56, IS43, IT20, NS48, PU48, PU49

Credit Points: 12 Contact Hours: 3 per week

#### **BSB103 BUSINESS COMMUNICATION &** APPLICATION 3

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: 1F33, IF38, IF53, IF54, 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: BS60, BS87 Credit Points: 24

Prerequisite: AYN102

#### **BSN102 SEMINAR IN COMMUNICATION** 25 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



#### BSN104 INDIVIDUAL RESEARCH

Permits students to conduct independent research in an area not covered by a substantive unit in their program, and gives them an opportunity to study and area of personal interest or use it as a pilot study for a thesis or project. Students must formulate a topic, find a staff member to supervise the study, and write a report of about 6000+ words.

Courses: BS84, BS85

Credit Points: 12

#### 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 complete a literature review and thesis proposal before proceeding to the thesis proper.

Credit Points: 48 Course: BS84

#### BSN129 APPLIED RESEARCH PROJECT

Allows the student to demonstrate an ability to plan and execute a significant piece of applied research, or to conduct an independent study of an applied area, with a minimum of supervision. Students are individually assigned to a project supervisor and should contract with them on the nature of the project to be undertaken and the methodology to be used. The final project report, of a maximum of 15,000 words, must demonstrate an ability to identify and research a significant managerial problem area. A comprehensive literature review of the area, and an appreciation of other relevant studies in the area must be included. Course: BS83

Credit Points: 12

#### BSN141 APPLIED RESEARCH METHODS

Provides a detailed review of data collection and analysis techniques, relevant to research in accounting, finance and related disciplines. Teaches students how to develop applied research proposals. Students develop a practical understanding of survey, interview, case study and associated research techniques. Students are 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 Prerequisites: 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: IF66

Credit Points: 12

Contact Hours: 3 per week

#### BSN144 THESIS (1-4)

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 consists of a substantial written report. Honours theses of 48 credit points could be expected to contain about 20,000 words. The thesis is 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 negotiate a learning contract which stipulates 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, BS83

#### Prerequisites: BSB400 and 2 of 3 major units Credit Points: Students enrol in sequential 12 credit

point theses 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 (1-8)

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 consists 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, BS83 Prerequisite: BSN144 Credit Points: Students enrol in sequential 12 credit point theses units commencing with BSN145/1 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.

#### BSN149 PROJECT

Students undertake an analytic study of approaches to TQM implementation that forms a basis for development of an approach to implementation tailored to a particular organisation. This forms the groundwork for unit BSN150. The project report covers either (a) a detailed study of the strengths and weaknesses of the quality approach of a particular organisation or (b) a critical review of approaches to TQM reported in the literature.

Course: IF66

Credit Points: 12

#### BSN150 PROJECT

Students undertake an in-depth study of the practical requirements for implementing a TQM approach either within a specific organisation or across a range of organisations. By integrating this practical study with the theoretical content of other units, students develop skills that enable them to take a leading role in developing and implementing an organisational strategy based on quality. The project report covers either (a) a



critical analysis of the approaches used in a particular organisation for the implementation of a quality program, together with a detailed plan for future developments of (b) a research-based report on the applicability and implementability of TQM. This may focus on broad theoretical issues or on a particular industry. The precise scope is developed in consultation with the Course Coordinator.

Course: IF66

Credit Points: 24

#### BSN151 RESEARCH DISSERTATION

All students undertake a research dissertation, Each student is assigned to a superviser, subject to the approval of the Course Coordinator, in consultation with the relevant Head of School. In general, the supervisor provides guidance in relation to the choice, preparation and submission of the dissertation. Supervisors are appointed when students commence the research seminar unit. The supervisor shall not be an examiner of the dissertation. The dissertation is examined by an examining committee of at least three, appointed by the Dean, and consist of at least two examiners, one of whom may be external to the university, plus the Course Coordinator, who acts as chair of the committee. Course: IF64 Credit Points: 48

#### BSN803 THESIS 1

The first stage in the culmination of the Masters degree for students in the part-time course. Students begin to apply the theory and research material covered in earlier units to a chosen thesis topic in consultation with an approved supervisor. Students are expected to complete a thesis proposal and give a seminar presentation. Course: BS84 Credit Points: 12

#### BSN804 THESIS 2

The second stage for part-time students in the preparation of the thesis. Students consolidate the preparatory work begun in Thesis 1 by preparing drafts of two chapters of their dissertation under structured supervision. Course: BS84 Credit Points: 12

#### BSN805 THESIS 3

Completes the sequence of thesis units in the part-time course. Students complete the drafting of their thesis and revise to a final copy for submission under supervision. Minimum length is 30,000 words.

#### Course: BS84 Credit Points: 24

Contact Hours: 3 per week

#### BSP100 DISSERTATION

The culmination of the Honours degree in that students apply the theory and research material covered in earlier units to explore in some depth an applied or theoretical topic in their chosen discipline. The dissertation is normally based on information from secondary sources and consists of a written report of approximately 10,000 words. Courses: BS61, BS84

Credit Points: 48

#### BSP101 ADVANCED COMMUNICATION SEMINAR

Designed to prepare students for writing their thesis; group instruction in techniques of thesis writing and what is involved in preparing a literature review and thesis proposal. Students choose a topic, have it approved and choose a supervisor under whose guidance they then undertake a literature review. Unit coordinator assists with selection of supervisor. Courses: BS61, BS84

Credit Points: 12 Contact Hours: 3 per week

#### BSP102 COMMUNICATION SEMINAR

Designed to prepare students for writing their

dissertation; group instruction in techniques of dissertation writing and what is involved in preparing a literature review and thesis proposal. Students choose a topic, have it approved and choose a supervisor under whose guidance they then undertake a literature review. Unit coordinator assists with selection of supervisor. Course: BS61, BS84

Credit Points: 12 Contact Hours: 3 per week

#### BSP104 DISSERTATION 1

The first unit in the culmination of the Honours degree. Students begin to apply the theory and research material covered in earlier units, to a chosen dissertation topic in consultation with an approved supervisor. Students are expected to complete a dissertation proposal and give a seminar presentation. Courses: BS61, BS84 Credit Points: 12

BSP105 DISSERTATION 2

This unit is the second stage in the presentation of the Honours dissertation. Students consolidate the preparatory work begun in Dissertation 1 by preparing drafts of two chapters under structured supervision. Courses: BS61, BS84 Credit Points: 12

#### BSP106 DISSERTATION 3

Completes the sequence of dissertation units. Students complete the drafting of their dissertation and revise to a final copy for submission under supervision. Length will be 12,000 to 15,000. Courses: BS61, BS84

Credit Points: 24

#### CEB001 ENGINEERING MECHANICS A

Introduction to statics, forces, moments and couples; resolution and resultant of forces acting on a particle or rigid body; equilibrium of particle or rigid body under forces and/or moments; analytical and graphical methods for plane truss analysis; shear force and bending moment in beams; the properties of sections. Course: CE42 Credit Points: 7

Contact Hours: 21 per week over 4 weeks

#### CEB002 ENGINEERING MECHANICS B

Principles of structural mechanics, stress, strain and elasticity; indeterminate structures and compatibility; simple beam theory including the flexure formula and the shear stress formula; torsion of circular sections; stresses in thin-walled pressure vessels; shear force and bending moment diagrams; hydrostatics.

Course: CE42 Co-requisite: CEB184 Credit Points: 7

Contact Hours: 21 per week over 4 weeks

#### CEB102 CIVIL ENGINEERING 1

An introduction to the profession of civil engineering, its scope and variety, and its many branches. Courses: CE42, EE43, EE44, ME45

Credit Points: 2 Contact Hours: 1 per week

#### CEB184 ENGINEERING MECHANICS 1 See CEB001.

Courses: CE42, EE43, EE44, IF56, ME45, ME46 Contact Hours: 3 per week Credit Points: 6

#### CEB185 ENGINEERING MECHANICS 2 See CEB002.

Courses: CE42, EE43, IF53, ME45, ME46 Co-requisite: CEB184

Credit Points: 6 Contact Hours: 3 per week

#### CEB192 INDUSTRIAL EXPERIENCE 1 Students should engage in at least five weeks employment, approved by the Head of School. For details see

the School's Industrial Experience Handbook. Course: CE42 Contact Hours: 5 weeks



#### CEB201 STEEL STRUCTURES

Structural behaviour and limit state design of steel structures, first as structural elements such as beams, columns, beam-columns and ties, then their connections (bolted and welded) and simple assemblies. Practical details and economy are discussed. Site visit and laboratory testing may be included.

Course: CE42 Prerequisite: CEB185 Co-requisites: CEB281, CEB282

Credit Points: 8 Contact Hours: 3.5 per week

#### CEB202 CONCRETE STRUCTURES 1

Basic principles involved in the limit state design of reinforced concrete structures. The determination of size and reinforcement to resist shear and bending in beams. Anchorage and detailing of reinforcement. Deflections in concrete structures and the analysis of long and short columns in uniaxial bending.

Course: CE31, CE42 Prerequisite: CEB185 Co-requisites: CEB281, CEB282

Credit Points: 8 Contact Hours: 3.5 per week

#### CEB211 HIGHWAY ENGINEERING

Highway geometry including vehicle performance and human factors as they relate to road geometry, geometric design, geometric co-ordination and use of computer aided design. Highway pavements including pavement materials and construction processes, pavement cross sections and drainage, pavement theory and pavement analysis methods. Construction sites will also be visited.

#### Course: CE42

Prerequisites: CEB293, MAB193, PSB907

Co-requisites: CEB240, MAB493 Credit Points: 8 Contact Hours: 4 n

Credit Points: 8 Contact Hours: 4 per week

#### CEB220 CIVIL SYSTEMS 1

Computer applications in civil engineering science; hardware and software integration within the data logging environment are discussed.

Course: CE42

Prerequisites: CSB191, MAB187, MAB188

Co-requisites: CEB253, CEB260,

Credit Points: 6 Contact Hours: 3 per week

#### CEB221 ENGINEERING INVESTIGATION ANALYSIS AND REPORTING

Recording, analysing and presenting data are important facets of modern civil engineering practice. Not only do engineers use rapidly changing, microcomputer-based technology to access and analyse data, but they must be able to explain the results of their work in clear reports to their peers and to the public. Skills are developed in these aspects of engineering practice, emphasising the use of microcomputers. Microcomputers and their application in civil engineering; investigation and reporting, and the use of wordprocessors, spreadsheets, databases and computer graphics; development of student confidence and ability in keeping up with this changing technology. Verbal and written presentation techniques of civil engineering investigation topics. Skills taught in this unit will also aid students in most units taught in the curriculum.

Courses: CE42, CE31

Prerequisites: CSB191, COB163

Credit Points: 8 Contact Hours: 4 per week

#### CEB224 COMPUTER APPLICATIONS

The applications of computers in civil engineering will be studied with emphasis on software packages. This unit will establish the tools essential for the ensuring subjecting. Civil Projects A & B.

Course: CE31 Credit Points: 8

Contact Hours: 3 per week

#### CEB225 CIVIL PROJECTS A CEB226 CIVIL PROJECTS B

These units will integrate the skills and knowledge developed in earlier units by applying the basic engineering science and technology to complete specific engineering design projects. The objectives of this problem-based learning include both the development of specific design skills and the development of generic skills such as professional problem solving, group management, presentation and communication and professional practice issues such as ethics and social effects.

Course: CE31 Credit Points: 8

s: 8 Contact Hours: 4 per week

**CEB227 CIVIL INVESTIGATION PROJECT** This will involve a small investigation of an area of civil engineering technology. The unit is designed to develop a student's ability to learn independantly and to compile and present verbal and written reports on the results of their investigation.

Course: CE31

Credit Points: 8 Contact Hours: 4 per week

#### CEB231 CONCRETE TECHNOLOGY

Materials: cement, aggregates, water quality, pozzolans, chemical admixtures and special materials. Testing: materials and concrete including quality control. Characteristics of concrete: plastic and hardened properties and influences of environment. Mix design: design for standard and special requirements. **Course:** CE42

Credit Points: 7 Contact Hours: 3 per week

#### CEB240 SOIL MECHANICS 1

Description and classification of soil for engineering purposes; moisture/density relationships; compaction; pore pressure, effective stress and suction; shear strength of cohesionless and cohesive soils; lateral earth pressure; earth retaining structures design.

Course: CE42 Prerequisite: CEB185 Credit Points: 8 Contact Hours: 3.5 per week

#### CEB241 SOIL MECHANICS 2

Bearing capacity of shallow foundations; permeability and seepage; surface loading on an elastic medium; pore pressure parameters; consolidation; settlement and design of shallow foundations; computer applications in seepage and consolidation.

Course: CE31, CE42 Prerequisite: CEB240 Credit Points: 8 Contact Hours: 3 per week

#### CEB253 STRUCTURAL ENGINEERING 1

The calculation of deflections for determinate beams, frames and trusses and the analysis of indeterminate structures by the method of superposition; and computer-based analytical procedures.

Course: CE42 Prerequisite: CEB185 Co-requisites: CEB282, MAB493

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

**CEB254 STRUCTURAL ENGINEERING 1** 

Determination of forces and/or bending moment distribution in simple determinate structures, stress distributions and transformation of stresses, strain and second moments of area, deflections of beams by the virtual work method and unsymmetrical bending.

Course: CE42 Prerequisite: CEB185 Co-requisite: MAB493

Credit Points: 8 Contact Hours: 3.5 per week

#### CEB255 STRUCTURAL ENGINEERING 2

Analysis of simple determinate structures by moment distribution and sway settlement and temporary affect, plastic analysis of beams, influence line diagram



for beam frames and trusses, tension on members and deflections of frames and trusses by virtual work method.

Course: CE42 Prerequisites: CEB254, MAB493 Credit Points: 8 Contact Hours: 3.5 per week

#### CEB260 FLUID MECHANICS

Fluid mechanics; its relationship to civil engineering practice; fluid properties; fluid statics, pressure, forces, buoyancy and stability; continuity, energy and momentum applied to steady one-dimensional flows; viscosity, turbulence, boundary layers and fluid dynamics forces; dimensional analysis.

Course: CE42

Prerequisites: CEB185, MAB187, MAB188 Credit Points: 8 Contact Hours: 3.5 per week

#### CEB261 HYDRAULIC ENGINEERING 1

The applications of fluid mechanics to pipe and open channel flow, flow measurement and hydraulic machinery. Topics include: steady flow in pipes, networks, flow measurement, uniform flow in open channels, pump and turbines.

Courses: CE42, CE31 Prerequisite: CEB260 Co-requisite: MAB493

Credit Points: 8 Contact Hours: 3.5 per week CEB270 ENVIRONMENTAL SCIENCE

An introduction to the basic principles of ecology and natural systems. To give an appreciation of the adverse consequences of various types of pollution.

Courses: CE42, CE31 Prerequisite: SEB246 Credit Points: 8 Contact Hours: 3 per week

#### CEB281 STRENGTH OF MATERIALS

Extension of elastic theory from engineering mechanics into more complex states of stress and shape; composite beams; stress and strain transformations; combined loading; unsymmetrical bending; shear flow; shear centre; torsion; theories of failure; stress concentrations and fatigue.

Course: CE42 Credit Points: 6

Prerequisite: CEB185 Contact Hours: 2 per week

#### CEB282 STATICS

The structural behaviour of trusses, beams and frames. Qualitative evaluation of deflected shapes, shear force and bending moment diagrams. Load paths and structural idealisation of real structures.

Prerequisites: CEB184, CEB185 Course: CE42 Credit Points: 2 Contact Hours: 1 per week

#### **CEB291 CIVIL ENGINEERING** MATERIALS

Physical, chemical and engineering properties of common civil engineering materials. Ferrous and nonferrous metals and alloys, timber, bitumen, cladding materials, polymers, corrosion of materials and protective measures. Selection of materials. Role of quality control in engineering units.

Course: CE42 Prerequisites: MEB133, MEB171 Credit Points: 7 Contact Hours: 3 per week

#### CEB292 INDUSTRIAL EXPERIENCE 2

Students should engage in at least five weeks employment, approved by the Head of School. For details see the School's Industrial Experience Handbook. Course: CE42

Contact Hours: 5 weeks

#### CEB293 ENGINEERING SCIENCE

This will be designed to strengthen the engineering science background of associates. It will allow for some students to be exempt from parts of the subject in which they have a strong background.

Prerequisite: MEB133 Course: CE31, CE42 Contact Hours: 4 per week Credit Points: 8

#### CEB304 CIVIL ENGINEERING DESIGN 1

Design project work involving the use of steel and reinforced concrete, geotechnical and highway designs; the influence of construction method to design; students prepare design calculations and sketches with the help of design aids and computer software; problem solving skills using projects.

#### Course: CE42

Prerequisites: CEB201, CEB202, CEB220, CEB240, CEB253

Co-requisites: CEB231, CEB241, CEB312, CEB354 Credit Points: 16 Contact Hours: 3.5 per week

#### **CEB305 CONSTRUCTION PLANNING &** ECONOMICS

Manual and computer based methods for the planning and programming of projects. The principles of economic and financial analysis pertaining to the planning and execution of engineering projects.

Course: CE31, CE42 Prerequisite: CEB307 Credit Points: 8 Contact Hours: 3 per week

#### CEB306 CONCRETE STRUCTURES 2

Principles involved in the serviceability limit state and ultimate limit state design of prestressed concrete structures. Stress blocks and equivalent loads due to prestress, losses, serviceability limit states of cracking and deflection, ultimate limit states of bending and shear, evaluation of deflections and design.

Course: CE42 Prerequisite: CEB202 **Credit Points: 8** Contact Hours: 3 per week

#### CEB307 CONSTRUCTION PRACTICE

Basic procedures of civil engineering construction; provides a foundation for further construction studies; gives a practical perspective to later theoretical units. Course: CE31, CE42

Prerequisites: CEB231, CEB281

Credit Points: 8 Contact Hours: 3.5 per week

#### **CEB308 CONSTRUCTION PLANNING &** ECONOMICS 2

The basic requirements of effective management and the relevance of teamwork within any organisation. Basic understanding of planning, organising, controlling and leading is developed with an emphasis on personal interaction and teamwork.

Course: CE42 Prerequisite: CEB307 Credit Points: 4 Contact Hours: 2 per week

#### CEB312 HIGHWAY ENGINEERING

Highway geometry including vehicle performance and human factors as they relate to road geometry, geometric design, geometric coordination and use of computer-aided design. Highway pavements including pavement materials and construction processes, pavement cross sections and drainage, pavement theory and pavement analysis methods.

Course: CE42

Prerequisites: CEB291, MAB193, PSB907 Co-requisites: CEB240, MAB493

Credit Points: 6 Contact Hours: 3 per week

#### CEB313 TRAFFIC ENGINEERING

Traffic theory: traffic behaviour, models; traffic management analysis: unsignalised and signalised intersections, street lighting, signs, markings, barriers, parking. Traffic studies and transport planning.

Course: CE31, CE42 Prerequisite: MAB493 Co-requisite: CEB312

Credit Points: 8 Contact Hours: 3 per week

#### CEB341 GEOTECHNICAL ENGINEERING 1

Soil slope stability analysis by limit equilibrium,



UNIT

drained and undrained conditions. Rock mechanics: rock properties and shear strength. Application to simple slope stability models. Pile foundations: vertical load soil capacity and settlement. Site investigation and in situ determination of soil properties.

Course: CE42Prerequisite: CEB241Credit Points: 8Contact Hours: 3 per week

#### CEB354 STRUCTURAL ENGINEERING 2

The analysis of indeterminate structures using moment distribution and matrix structural analysis techniques. Analysis of simple cable structures.

Course: CE42 Prerequisites: CEB253, MAB493 Credit Points: 7 Contact Hours: 3 per week

#### CEB355 STRUCTURAL ENGINEERING 3

Structural analysis of determinate structures under moving loads using influence lines for beams and trusses. The application of plastic analysis techniques to the analysis of beam, frame and slab structures.

Course: CE42 Prerequisite: CEB281

Co-requisites: CEB354, MAB893

Credit Points: 8 Contact Hours: 3 per week

#### CEB359 PRINCIPLES OF STRUCTURES 1

Terminology, forces and reactions; loading on structures, equilibrium and stability; coplanar and non coplanar forces; resolution of forces; mechanism of structural components under load: compression, tension, bending, shear, deflection. Connections.

Courses: AR41, AR48, BN30

Credit Points: 2 Contact Hours: 1 per week

#### CEB360 HYDRAULIC ENGINEERING 1

The applications of fluid mechanics to pipe and open channel flow, flow measurement and hydraulic machinery. Topics include: steady flow in pipes, networks, flow measurement, uniform flow in open channels, pump and turbines.

Course: CE42 Prerequisite: CEB260 Co-requisite: MAB493

Credit Points: 6 Contact Hours: 3 per week

#### CEB361 HYDROLOGY

An introduction to hydrology and urban drainage design; hydrologic cycle, rainfall and runoff; groundwater evapotranspiration, statistical concepts, urban drainage design; unit hydrograph methods; flood studies; data generation, storage estimation.

Course: CE42 Prerequisite: CEB260 Co-requisite: CEB360

Credit Points: 6 Contact Hours: 3 per week

#### CEB362 HYDRAULIC ENGINEERING 2

Hydraulics: unsteady flow, movable boundary hydraulics, hydraulic models and hydraulic design of structures. Topics include: steady flow compound open channels with variable roughness; unsteady flow in pipes; unsteady flow in open channel flow; design of hydraulic structures such as transitions, culverts, crests, chutes, etc; mobile boundary hydraulics; the theory and practice relating to fixed and mobile boundary, natural scale and distorted models.

Course: CE42

Co-requisite: MAB893

Prerequisite: CEB261

Credit Points: 8 Contact Hours: 3 per week

#### CEB364 ENGINEERING SCIENCE 2

Hydraulic engineering for surveyors. Fluids and fluid flow in pipes and channels. Flow measurement. Hydraulic models. Pumps and pump characteristics. **Courses:** CE42, PS47, SV34

Prerequisites: MAB199, MEB221

Credit Points: 6 Contact Hours: 3 per week

#### CEB370 PUBLIC HEALTH ENGINEERING 1

The principles of public health engineering. Causes and effects of water pollution, principles of unit processes and operations of water quality control. An introduction to air pollution, its causes and control.

Course: CE31, CE42 Prerequisite: CHB346 Credit Points: 8 Contact Hours: 3.5 per week

#### CEB371 WATER AND WASTEWATER SYSTEMS

With CEB370 this unit provides a basic understanding of public health engineering practice and an introduction to design in the area of water and wastewater systems. This is a major application area for both generalist civil engineers and environmental engineers.

Course: CE31, CE42 Prerequisite: CEB370 Credit Points: 8 Contact Hours: 3 per week

#### CEB372 ENVIRONMENTAL TECHNOLOGY

An introduction to resource management and pollution control. The effects of technological processes on the environment. Concept of sustainable development. **Courses:** CE42, CE31

Prerequisites: CEB270, SEB246 Co-requisite: CEB370

Credit Points: 8 Contact Hours: 3 per week

#### CEB375 ENVIRONMENTAL SCIENCE & TECHNOLOGY

An introduction to the basic principles of ecology and natural systems. To give an appreciation of the adverse consequences of various types of pollution.

Course: CE42 Prerequisite: CHB346 Credit Points: 7 Contact Hours: 3 per week

#### CEB392 INDUSTRIAL EXPERIENCE 3

Students should engage in at least five weeks employment, approved by the Head of School. For details see the School's Industrial Experience Handbook.

Course: CE42 Contact Hours: 5 weeks

#### CEB393 ENGINEERING INVESTIGATION & REPORTING 1

The appropriate techniques of investigation and reporting on civil engineering processes.

Course: CE42Prerequisite: COB163Credit Points: 3Contact Hours: 2 per week

#### CEB401 DESIGN PROJECT

Students will work in groups to produce initial studies and outline designs of typical civil engineering projects. Students are required to define problems, establish goals for the project, identify and collect necessary information, generate alternative solutions and optimise some of these solutions. Students are to develop an awareness of the possible impact of civil engineering projects on ecosystems. Students will prepare and present reports on aspects of selected projects, including feasibility studies, environmental and economic assessment. Compulsory site visits.

Course: CE42

Prerequisites: CEB305, CEB313, CEB361 Co-requisites: CEB341, CEB470

Credit Points: 8 Contact Hours: 3 per week

#### CEB403 PROFESSIONAL PRACTICE

Engineering organisations, project initiation, documentation, form of contract, contract administration, arbitration, safety and insurances, legal responsibilities, ethics. Preparation in job applications and interview techniques.

Course: CE42 Co-requisite: CEB305 Credit Points: 8 Prerequisite: CSB191

Contact Hours: 3 per week



#### CEB404 FIELD TRIP

Site visits to several civil and structural projects (generally under construction in South East Queensland). The practical inspections are supervised by lecturing staff and engineers associated with the project, and allow valuable consolidation of the theoretical aspects of other units.

Course: CE42

Co-requisites: CEB201, CEB202, CEB312, CEB360 Credit Points: 3 Contact Hours: 1.5 per week

#### CEB405 CIVIL ENGINEERING DESIGN 2

Continuation of CEB304, with topics covering structural and civil engineering design, ie. municipal civil/ structural projects. Field visits are required. More general problem solving skills are developed so graduates can successfully complete projects other than those covered in the course.

Course: CE42

Prerequisites: CEB231, CEB304, CEB341

Co-requisites: CEB460, CEB470

Contact Hours: 3 per week Credit Points: 16

#### CEB406 STRUCTURAL APPLICATIONS

Analysis, design, supervision of construction and performance of structures. Topics include: structural systems, modelling, sketching, civil engineering structures, designing for construction, detailing and lessons from structural failures, timber structures and the role of testing, controlling vibrations in structures.

Course: CE42

Prerequisites: CEB291, CEB354, CEB355 Credit Points: 8 Contact Hours: 3 per week

#### CEB422 CIVIL SYSTEMS 2

Civil engineering systems: understanding and applying advanced civil engineering software, methods of error checking and model validation. Experimental instrumentation and data logging. Financial systems: financial statements for civil engineering enterprises, measurement of assets and liabilities, depreciation rates, interpretation of published financial statements. Course: CE42

Prerequisites: CEB220, CEB241, CEB355, CEB460 Credit Points: 5 Contact Hours: 2 per week

#### CEB430 BUILDING CONSTRUCTION

Provides a broad appreciation of building techniques and principles: including details of building construction from footings to fitting out for low and high-rise structures including appropriate building regulations. Course: CE42 Prerequisite: CEB305

Credit Points: 2 Contact Hours: 1 per week

#### CEB459 PRINCIPLES OF STRUCTURES 2

Loading on buildings. Foundations and footings. Timber, construction, floor, wall and roof framing cladding, fastening and connections. Structural stability. Masonry: brickwork and blockwork, loadbearing construction, continuity, stiffening. Codes.

Courses: AR41, AR48, BN30

Prerequisite: CEB359

Contact Hours: 2 per week Credit Points: 4

#### CEB460 HYDRAULIC ENGINEERING 2

Hydraulics: unsteady flow, movable boundary hydraulics, hydraulic models and hydraulic design of structures. Topics include: steady flow compound open channels with variable roughness; unsteady flow in pipes; unsteady flow in open channel flow; design of hydraulic structures such as transitions, culverts, crests, chutes, etc. mobile boundary hydraulics; and the theory and practice relating to fixed and mobile boundary, natural scale and distorted models.

#### Course: CE42 Co-requisite: CEB361

Credit Points: 7

Prerequisite: CEB360

Contact Hours: 3 per week

#### CEB464 ENGINEERING SCIENCE 3

Rainfall intensity duration frequency relating in Australia; hydrographs, annual rainfall; stream flow hydrographs, rainfall-runoff relations, including the rational formula; frequency analysis; open channel flow, pipelines and culverts; design of stormwater drainage systems, including major and minor systems; water supply and sewerage - descriptive treatment of sources and treatment processes.

Course: PS47 Prerequisite: CEB364 Credit Points: 6 Contact Hours: 3 per week

CEB470 PUBLIC HEALTH ENGINEERING 2 Development of principles taught in CEB370 to enable functional design of treatment units to be undertaken. An introduction to sewerage and water reticulation. On completion, the student should be able to proceed to simple design exercises in water supply and sewerage and treatment processes.

Prerequisite: CEB370 Course: CE42 Credit Points: 5 Contact Hours: 3 per week

#### 滚 CEB471 ENVIRONMENTAL DESIGN PROJECT

Intended to combine material covered in a number of disciplinary areas into a realistic environmental engineering project where the overall scope of a "real world" environmental engineering problem is investigated. A general approach to problem definition and solution is to be emphasised and the identification and study of environmental impacts is illustrated by application to a specific project. Course: CE42

Prerequisites: CEB362, CEB305, CEB313 Co-requisite: CEB341 Credit Points: 8 Contact Hours: 3 per week

#### CEB475 ENVIRONMENTAL ENGINEERING DESIGN

Continues on from Civil Engineering Design 1 with the emphasis shifting to design of projects involving water quality management, waste management, land management and other environmental engineering applications. More general problem solving skills are to be developed so that graduates can successfully complete projects other than those covered in the course. There is special emphasis on the appropriate use of computers for engineering analysis and design and on the potential use of computers for monitoring and control of engineering processes.

#### Course: CE42

Prerequisites: CEB304, CEB270, CEB372

Credit Points: 16 (8 per semester)

Contact Hours: 4 per week in Semester 1; 3 per week in Semester 2

#### CEB491 PROJECT (CIVIL)

Students undertake a relatively difficult task in an area of civil engineering practice requiring research and development. Each project will include: a literature review; problem definition; organisation and execution of a program of investigation; critical analysis of investigation; presentation of a seminar on the work and presentation of a written report.

#### Course: CE42

Prerequisites: Completion of at least 250 credit points of the course including an appropriate combination of units.

Co-requisites: CEB393, CEB492

Credit Points:	16	Contact	Hours:	3 per w	/eek
#### ■ CEB492 ENGINEERING INVESTIGATION & REPORTING 2

Verbal and written presentation techniques of civil engineering investigation topics.

Course: CE42 Prerequisite: CEB393 Credit Points: 3 Contact Hours: 1 per week

#### CEB501 CIVIL ENGINEERING PRACTICE 1

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: 8 Contact Hours: 3 per week

#### CEB502 PROJECT CONTROL

The planning and management of engineering developments of significance requires a range of project management skills relating to the interactions required with other professional disciplines, clients, government and the community. This subject provides training and experience in the application of these inter-disciplinary skills.

Course: CE42 Prerequisite: CEB305 Credit Points: 8 Contact Hours: 3

#### CEB503 ADVANCED CONSTRUCTION METHODS

Examination of existing practice and technology in the construction industry and insights into current and future developments in construction techniques and plant. Site visits are included.

Course: CE42 Prerequisites: CEB305, CEB307 Credit Points: 8 Contact Hours: 3 per week

#### CEB504 ENGINEERING SCIENCE 3

Hydrology; rainfall, stream flow measurement; hydraulic design of drainage. Soil mechanics; definition, properties and grading of soils; roadwork, foundation and retaining wall design; soil stability. Concrete technology; properties, manufacture and testing of concrete; elementary reinforced concrete design.

Courses: CE42, SV34 Credit Points: 5 Contact Hours: 3 per week

#### CEB505 PROJECT MANAGEMENT & ADMINISTRATION

Using case studies and 'role playing' techniques, students are required to develop solutions to a variety of project management problems, submit reports and make presentations regarding these exercises.

Course: CE42Prerequisite: CEB305Credit Points: 8Contact Hours: 3 per week

#### 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 advertized by the Head of School.

Course: CE42

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

Credit Points: 8 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: 8 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: CE42Prerequisite: CEB313Credit Points: 8Contact Hours: 3 per week

## CEB520 FINITE ELEMENT METHODS

techniques. Theoretical and modelling considerations are covered in the context of case studies in structures, soil mechanics and hydraulics.

Course: CE42Prerequisite: CEB220Credit Points: 8Contact 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: 8 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 Credit Points: 8 Prerequisite: CEB341 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 Prerequisite: CEB341

Course: CE42	Prerequisite: CEB341
Credit Points: 8	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: CE31, CE42Prerequisite: CEB341Credit Points: 8Contact 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



#### Prerequisites: CEB201, CEB306, CEB354 Co-requisite: CEB405 Credit Points: 8

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.

Prerequisites: CEB361, CEB460 Course: CE42 Contact Hours: 3 per week Credit Points: 8

#### 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: 8 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 fitments and testing; roads - earthworks, pavements, surfacing, etc.; stormwater - trenching, bedding and backfilling; water/sewer - trenching, bedding, testing and backfilling; other services - conducts, 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.

Prerequisites: CEB364, MED221 Course: PS47 Co-requisite: CEB464

Credit Points: 6 Contact Hours: 3 per week

#### CEB570 WASTE MANAGEMENT

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: 8 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: 8 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

Contact Hours: 2 per week Credit Points: 4

#### 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 dowm 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 Credit Points: 4

Prerequisite: CEB701 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

Contact Hours: 2 per week Credit Points: 8

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 pave-

ment 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, IF64

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: 8

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 are 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 are 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 Credit Points: 7

Prerequisite: MET120 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 Prerequisites: CET365, PST901 Co-requisite: CET775

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** ЗŻ. 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 Contact Hours: 3 per week Credit Points: 7

#### 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.

Prerequisite: CET286

Co-requisite: CET565 Credit Points: 7 Contact Hours: 3 per week

#### CET598 PROJECT 2

Course: CE21

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: CE21Prerequisite: CET190Credit Points: 7Contact 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 Credit Points: 7 C

#### Prerequisite: CET365 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 rectilinear 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: CE21Prerequisites: 72 credit points.Credit Points: 7Contact 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 are 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: CE21Co-requisite: PST901Credit Points: 3Contact 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, SC12

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, SC12

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, SC12 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, SC12 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 orbitales, orbital shapes and quantum numbers; radioactive breakdown and applications; banding, molecular orbitales; 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, SC12 Credit Points: 4 Con

Prerequisite: CHA145 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, SC12 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, SC12 Prerequisite: CHA145 Credit Points: 8 Contact Hours: 3 per week

#### CHA270 PHYSICAL CHEMISTRY 1

The first part of an integrated syllabus of physical chemistry; the fundamental aspects of chemical energetics, solution chemistry, equilibria; practical applications. **Course:** SC10, SC12 **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, SC12 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 features the analysis of commercial materials with emphasis on sample dissolution techniques.

Course: SC10, SC12Prerequisite: CHA218Credit Points: 6Contact 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, SC12 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, SC12 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, SC12

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: chemical kinetics, surface chemistry and elementary electrochemistry.

Course: SC10, SC12 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 are included.

Course: SC10, SC12 **Credit Points: 8** 

Prerequisite: CSA259 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, SC12

Credit Points: 4 Contact Hours: 2 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, SC12 Prerequisite: CHA350 Credit Points: 8 Contact Hours: 3 per week

#### CHA610 INDUSTRIAL ANALYSIS

A course involving the use of both qualitative (semimicro) and quantitative techniques in the analysis of commercially important materials, including ores, cement, fertiliser, fats, oils and sugar products.

Course: SC10, SC12 Prerequisites: CHA318, CHA319

Credit Points: 8 Contact Hours: 3 per week

#### CHA670 PHYSICAL CHEMISTRY 3

The third part of the integrated syllabus of physical chemistry: covers the areas of applied electrochemistry, corrosion, distillation and extraction. Practical applications are emphasised.

Course: SC10, SC12 Prerequisite: CHA370 **Credit Points: 8** 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: CE31, CE42, EE43, ME45

Credit Points: 2 Contact Hours: 1 per week CHB142 CHEMISTRY 1

Atomic theory and chemical bonding. Inorganic chemistry: classification of inorganic compounds; nomenclature and chemical reactions of selected inorganic compounds; safety and material safety data sheets; equations and calculations. Chemical analysis: acidimetry and alkametry, indicators, redox, precipitimetry, accuracy, precision. Physical chemistry: aqueous solutions and biological systems; colloids and body fluids; redox processes and their application to life science. Organic chemistry: introductory organic chemistry including the essential function of organic compounds in biological systems, concepts of frameworks and functional groups, naming organic compounds, the principle types of reactions in organic chemistry.

Courses: LS36, OP42, PU42, PU44, PU45, SC30 Credit Points: 12 Contact Hours: 6 per week

#### CHB149 PRINCIPLES OF CHEMISTRY

For students without a pass in senior chemistry this unit combines introductory chemistry with an introduction to laboratory techniques and practice in the manipulation of common elementary laboratory apparatus, equipment and reagents. Course: PU49

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, Schroinger equation, translational, rotational and vibrational motions; atomic spectra and structure, quantum numbers and orbitales, electron spin.

#### Course: CH32

Prerequisites: Year 12 Chemistry - Sound Achievement or 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

Prerequisites: Year 12 Chemistry - Sound Achievement or CHB001.

Credit Points: 12 Contact Hours: 6 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; acids, 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 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.

Courses: CH32, ED50, SC30

Prerequisites: CHB173 or CHB182

Contact Hours: 5 per week Credit Points: 12

#### CHB242 CHEMISTRY 2

Physical chemistry: Calorie counting - the underlying principle, first and second laws of thermodynamics; gases and respiration, Boyle's Law and the breathing process, Charles' Law, Henry's Law and oxygen hyperbaric therapy, Graham's Law; Speed control of chemical and biochemical processes. Inorganic chemistry: biologically important inorganic compounds, salts, co-ordination compounds and phosphate esters. Organic chemistry: the chemistry of hydrocarbons, stereochemistry, functional group chemistry, polyfunctional compounds, biologically important organic compounds including sugars, polycarboxylic acids, lipids, peptides and proteins, heterocyclic compounds.

Courses: LS36, OP42, PU42, PU44, SC30 Prerequisite: CHB142

Credit Points: 12 Contact Hours: 6 per week Incompatible with: CHB182

#### 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 Contact Hours: 5 per week Credit Points: 12

#### 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; thermo-dynamics; 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 Credit Points: 12

Prerequisite: CHB182 Contact Hours: 6 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

Physical chemistry: Calorie counting - the underlying principle, first and second laws of thermodynamics; gases and respiration, Boyle's Law and the breathing process, Charles Law, Henry's Law and oxygen hyperbaric therapy, Graham's Law; Speed control of chemical and biochemical processes. Organic chemistry: the chemistry of hydrocarbons, stereochemistry, functional group chemistry, polyfunctional compounds, biologically important organic compounds including sugars, polycarboxylic acids, lipids, peptides and proteins, heterocyclic compounds.

Prerequisite: CHB142 Course: PU45 Credit Points: 8 Contact Hours: 4 per week Incompatible with: CHB242, CHB282

#### CHB292 APPLIED SCIENCE FOR **DESIGNERS 2**

Chemistry for environmental design; basic chemical properties of common materials, natural and artificial; chemical processes in buildings and artefacts.

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

#### CHB313 ANALYTICAL CHEMISTRY 3

Analytical techniques including volumetric glassware, basic laboratory equipment, laboratory balances (toppan and analytical), sampling, sample dissolution principles; neutralimetry; redoximetry; precipitimetry; compleximetry; gravimetry; treatment of results; instrumental methods.

Courses: CH32, ED50, SC30

Prerequisites: CHB253, CHB282 or CHB283 Contact Hours: 5 per week Credit Points: 12

#### 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 actimides; chemistry of selected nonmetals; chemistry of precious metals.

Courses: CH32, ED50, SC30

Prerequisites: CHB282 or CHB283

Contact Hours: 5 per week Credit Points: 12

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

Prerequisites: 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 Prerequisites: 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. 1H 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: orbitales and energies of the hydrogen atom; many electron atoms, molecular orbitales; spectroscopy: interaction of radiation with matter. Principles, instrumental design and applications of rotational, vibrational and electronic spectroscopy. **Courses:** ED50, SC30

Prerequisites: 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 Prerequisites: 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

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.

Courses: ED50 only

Prerequisites: CHB001 or equivalent

Credit Points: 12 Contact Hours: 5 per week

## CHB411 ENVIRONMENTAL ANALYTICAL CHEMISTRY

Lectures and practicals 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, SC3

Prerequisites: CHB242 or CHB282

Credit Points: 8 Contact Hours: 4 per week Incompatible with: A major in Chemistry or CHB313

#### 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

Credit Points: 12 Contact Hours: 5 per week

#### CHB453 ORGANIC CHEMISTRY 4

A critical analysis of the chemistry of five and sixmembered 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

Prerequisites: CHB352 or CHB353 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

Prerequisites: 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

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

A variety of chemical problems reflecting teaching, research and consultancy interest of the staff.

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 voltametry, 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 converters, 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

The emerging importance of secondary plant metabolites in medicine; the main biosynthetic pathways leading to secondary plant metabolites; mechanistic aspects of enzyme reactions and the importance of phosphate; a detailed study of a selection from the main biosynthetic pathways; structural determination and synthesis of selected secondary metabolites.

Prerequisite: CHB553 Courses: CH32, SC30 Credit Points: 12 Contact Hours: 5 per week

#### CHB663 ENVIRONMENTAL CHEMISTRY

Toxicology; water quality, its assessment; modelling reactions in water bodies; air quality; criteria pollutants and health effects; indoor pollutants; monitoring; dispersion of pollutants; control techniques.

Courses: CH32, ED50, SC30

Prerequisites: CHB372 or CHB373

Contact Hours: 5 per week Credit Points: 12

#### CHB693 MATERIALS CHEMISTRY

Properties of materials; metals and alloys; metallic corrosion; crystalline materials; cements, ceramics and glasses; polymers.

Courses: CH32, ED50, SC30Prerequisite: CHB473 Contact Hours: 5 per week Credit Points: 12

#### 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 is 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

#### CHB740 ELECTIVE STUDIES 1

Advanced studies on a topic of particular relevance to the student's research project; topics studied are normally in specific areas of physical chemistry, analytical chemistry, inorganic chemistry or organic chemistry. A supervised reading program is involved and the unit may also include a formal lecture program. Relevant material from other accredited courses may be included as part or all of the requirement for this unit

as directed by the Course Coordinator and Head of School.

Course: SC60 Credit Points: 6

#### CHB780 ADVANCED TOPICS IN CHEMISTRY 1

See CHB880. Course: SC60 Credit Points: 24

Contact Hours: 6 per week

Contact Hours: 2 per week

#### CHB840 ELECTIVE STUDIES 2

Provides students with a further opportunity to undertake advanced studies on a topic of particular relevance to their research project; tailored to suit individual students but the topics studied would normally be in specific areas of physical chemistry, analytical chemistry, inorganic chemistry or organic chemistry but may be in a different area from that chosen in CHB740. A supervised reading program is involved and the unit may also include a formal lecture program. Relevant material from other accredited courses may be included as part or all of the requirement for this unit as directed by the Course Coordinator and Head of School.

Course: SC60 Credit Points: 6

Contact Hours: 2 per week CHB880 ADVANCED TOPICS IN

#### **CHEMISTRY 2**

A selection of advanced topics in the areas of physical, organic and inorganic chemistry. The topics offered reflect the expertise of the academic staff as well as the needs of the students. Both units are assessed at the end of the year.

Course: SC60

Credit Points: 24 Contact Hours: 6 per week CHN701 TOPICS IN ADVANCED 

CHEMISTRY 1

A series of lectures and/or a 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 CHEMOMETRICS

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; bio-reactors; and scale-up. Other topics are selected from animal cell culture, protein biotechnology, downstream processing and bio-process economics.

Courses: L\$65, L\$70, \$C60, \$C80

Contact Hours: 5 per week Credit Points: 12

#### **CHP220 PRINCIPLES OF** BIOPROCESSING

The principles and practices necessary for the optimum and safe production of bioogicals and biological chemicals (eg organic chemicals, pharmaceuticals, proteins, etc) derived from biological systems. An emphasis is placed on utilising recombinant organisms (microbial, plant, animal and insect cells). Such systems create special technical problems and challenges in bioprocessing and these are examined at the productive (fermentation and induction) and bioseparations levels in an integrated way. Where appropriate, such bioprocess analyses consider polssivle alternatives on a cost- effectiveness basis.

Course: LS70

#### Credit Points: 12 Contact Hours: 4 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, electro-chemical 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

#### **CHP420 BIOPROCESS ENGINEERING** LABORATORY

This laboratory based unit provides instruction and training of bioprocess operations through experimental work linked to explanatory tutorials. Experiments focus on fermentation operations utilising microbial, plant, animal and insect cells (eg cell kinetics, product formation, mas transfer problems), applied enzymolgy, and bioseparations (cell disruption and separation, membrane and chromatographic techniques). In the case of recombinant organisms an intergrated approach is taken for fermentation, protein induction, and bioseparation. There is the opportunity for either a small project or a process plant design.

#### Course: LS70 Credit Points: 12

## Contact Hours: 4 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, sulp.





Course: CE63, CE74

Prerequisites: Year 12 Chemistry - Sound Achievement or CHB001.

Contact Hours: 5 per week Credit Points: 8

#### CHP920 TECHNOLOGY ASSESSMENT & FORECASTING

Technology assessment processes and strategies; comprising of: problem definition; technology analysis; societal, economic, and environmental description and impact analysis; legal and regulatory requirements and consequences and policy implications and analysis. Technological forecasting, substitution and change. This includes the use of quantitative planning models, optimisation techniques and simulation methods; scenario portrayal; case study analysis.

Course: IF64

Credit Points: 12 Contact Hours: 3 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

#### CNB001 PROFESSIONAL PRACTICE 1A CNB002 PROFESSIONAL PRACTICE 2A

The wide range of experiences and responsibilities will provide for the student a greater understanding of the material they are exposed to in the course. It is not possible to detail for each semester the experience required due to the varied employment opportunities available to quantity surveyors in the professional offices and in the construction industry. Approved employment could be with a professional quantity surveying firm. Approved experience with other employers must be under the supervision of a qualified quantity surveyor. This could be with a building/civil engineering contractor, property developer, building or project management consultant, public authorities or major corporate bodies.

Course: CN43

Prerequisites: In final 3 part-time years Credit Points: 9 Contact Hours: 3 per week

#### **CNB003 PROFESSIONAL PRACTICE 1A** CNB004 PROFESSIONAL PRACTICE 2A

The wide range of experiences and responsibilities whilst in approved employment will provide for the student a greater understanding of the material they are exposed to in the course. It is not possible to detail for each semester the experience required due to the varied employment opportunities in the construction industry. Approved employment would be with a building/civil engineering contractor; property developer; building and project management consultant; contracting sub-contractor or supplier; building research; tertiary education; local, state and federal government control and supervisory positions; corporate bodies involved in property maintenance and management. Course: CN41

Prerequisites: In final 3 part-time years Contact Hours: 3 per week Credit Points: 9

#### 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

Contact Hours: 3 per week Credit Points: 6

#### 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.

Prerequisite: CNB005 Courses: CN31, CN33 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;

Prerequisite: CNB253 Courses: CN31, CN33 Co-requisite: CNB254 Contact Hours: 2 per week

Credit Points: 4

**CNB021 PROFESSIONAL PRACTICE 1** 

- **CNB022 PROFESSIONAL PRACTICE 2**
- 195 CNB023 PROFESSIONAL PRACTICE 3
- CNB024 PROFESSIONAL PRACTICE 4

The wide range of experiences and responsibilities whilst in approved employment will provide for the



student a greater understanding of the material they are exposed to in the course. It is not possible to detail for each semester the experience required due to the varied employment opportunities in the construction industry. Approved employment would be with a building/civil engineering contractor; property developer; building and project management consultant; contracting sub-contractor or supplier; building research; tertiary education; local, state and federal government control and supervisory positions; corporate bodies involved in property maintenance and management. Course: CN41

Prerequisites: In final 3 part-time years

Credit Points: CNB021: 12; CNB022: 12; CNB023: 9; CNB024: 9

Contact Hours: 3 per week

- CNB031 PROFESSIONAL PRACTICE 1
- CNB032 PROFESSIONAL PRACTICE 2
- CNB033 PROFESSIONAL PRACTICE 3

CNB034 PROFESSIONAL PRACTICE 4

The wide range of experiences and responsibilities will provide for the student a greater understanding of the material they are exposed to in the course. It is not possible to detail for each semester the experience required due to the varied employment opportunities available to quantity surveyors in the professional offices and in the construction industry. Approved employment could be with a professional quantity surveying firm. Approved experience with other employers must be under the supervision of a qualified quantity surveyor. This could be with a building/civil engineering contractor, property developer, building or project management consultant, public authorities or major corporate bodies.

Course: CN43

Prerequisites: In final 3 part-time years

Credit Points: CNB031: 12; CNB032: 12; CNB033: 9; CNB034: 9

Contact Hours: 3 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 CNB111 CONSTRUCTION 1

Materials, methods and construction in single and two storey domestic structures with part of ground floor below ground level, site information and investigation, foundations including strip and beam footings and slab on ground, light timber framing code for walls, roofs and suspended floors taking into account the environmental, structural and aesthetic requirements. Accounting for costs, dimensional requirements, statutory regulations, life and adaptability and manufacturing and erection requirements.

Courses: CN41, CN43

Co-requisites: CNB113, CNB115

Credit Points: 8 Contact Hours: 4 per week

#### CNB112 CONSTRUCTION 2

A continuation of Construction 1 covering masonry buildings including cavity brick, brick veneer, single skin masonry block construction, external cladding and internal linings, all types of roof covering including Super 6 C.F.C., concrete and clay tiles, corrugated and steel tray roof sheetings, slates and shingles, flashings, gutters and downpipes, function and construction of timber and metal windows, doors, stairs, fireplaces, light steel framed construction and pole houses, applied rendered finishes. Environmental science, comfort situations in varying climatic zones and their effect on building construction. Draughting typical details and working drawings.

Courses: CN41, CN43 Prerequisite: CNB111 Co-requisite: CNB114

#### Credit Points: 12 Contact Hours: 5 per week

#### CNB113 BUILDING TECHNOLOGY 1

A study of the structural materials used in construction - timber, stone, brickwork, concrete, steel and aluminium through an understanding of the basic properties of each. The bias is towards those characteristics which affect the user rather than to the needs of a designer. Particular emphasis is given to the problems which arise through the manufacturing, storage and installation processes. Significance of subject to 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 for member sizing, tiedown and timber connection.

Courses: CN41, CN43 Co-requisite: CNB111 Credit Points: 8 Contact Hours: 4 per week

#### CNB114 BUILDING TECHNOLOGY 2

The materials covered in Building Technology 1 are investigated to greater depth through theoretical study and testing. Laboratory work is conducted during the latter part of the subject to reinforce the theoretical concepts and to demonstrate testing procedures. Concepts of masonry design; design theory for reinforced concrete; design of simple concrete footings, slabs on ground, beams, columns, suspended slabs; design of ground slab for Construction subject project; concept of psc design.

Courses: ČN41, CN43 Prerequisite: CNB113 Co-requisite: CNB112

Credit Points: 8

Contact Hours: 4 per week

#### CNB115 GRAPHICS

Instruction in various types of drawings and mapping used in offices. Methods of setting out office drawings for sketch presentation, geometric, perspective and working drawings and details. Freehand drawing and sketching. Lettering, linework, material indication. Use of instruments, scales and drawing materials. Reproduction techniques. Introduction to CAD and information retrieval. Setting up drawings and details in line with progress in Construction 1.

Courses: CN41, CN43 Co-requisite: CNB111 Credit Points: 6 Contact Hours: 2 per week

#### CNB116 MEASUREMENT 1

Introduction to Quantity Surveying including the work of a Quantity Surveyor and his relationship with other members of the building industry. Introduction to the methodology of "taking off", investigating the various systems with particular emphasis on the one step method. A study of mensuration and formulae involved in the calculation of length and volume. Detailed study of "Introduction" to SMM and detailed study and instructions in the process and methods of taking off and billing quantities in the trades finishes, roofing, doors, windows, hardware, glazing and painting.

Courses: CN41, CN43 Prerequisite: CNB111 Co-requisite: CNB112 Contact Hours: 3 per week

Credit Points: 6

#### CNB117 PROFESSIONAL STUDIES A

An introduction to the theory and practice of management, laying a foundation on which to build managerial knowledge and techniques. Functions of management, planning, organising, motivating, leading and controlling, presented in the framework of a systems approach to decision making. The institution of the law: the Courts, Parliament and the Judiciary: the doctrines and methodology of the law including the doctrine of precedence, interpretation of statutes and regulations. The role of manufacturing in the Australian economy; modern concepts in manufacturing systems design; the interrelationship between design, materials selection, manufacturing technologies in relation to product quantity and quality.

Courses: CN41, CN43

Credit Points: 6 Contact Hours: 3 per week

#### CNB118 BUILDING SERVICES 1

A study of macro services to the community including water supply, sewerage, power, gas, telephone and other public services. Requirements of headwork 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: CN41, CN43 Prerequisite: CNB111 Co-requisite: CNB112

Credit Points: 6 Contact Hours: 2 per week

#### CNB124 PROFESSIONAL STUDIES 1

The syllabus is project based and student centred, with the student undertaking major pieces of work individually within a group. The student is encouraged to make use of all sources both within and outside the University and to communicate with the community, professionals, practitioners and government officials etc. The integrated study project work programme will provide a framework with a clear statement of aims and objectives for each part of the program. The projects suggested here for Professional Studies 1-3 relate to construction projects/processes whose emphases progress from Technology to Building Economics to Management experience/problems. The project in the first year will draw together mainly rudimentary technology subjects, centred around cottage construction. The project will indicate how related materials from the year's subjects will be developed by student groups and individuals.

Courses: CN41, CN43

Prerequisites: ITB270, CNB117, CNB111, CNB113, COB165

Co-requisites: CNB112, CNB114, CNB116, CNB118, PSB910

Credit Points: 8 Contact Hours: 3 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 twostorey 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.

Prerequisite: CNB161 Courses: CN31, CN32 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 twostorey 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, 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 Prerequisite: CNB171 Credit Points: 8 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 Co-requisite: CNB171 Credit Points: 4 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 Prerequisite: CNB173 Credit Points: 4 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 Prerequisite: CNB175 Credit Points: 4 Contact Hours: 2 per week

#### CNB211 CONSTRUCTION 3

Study of materials, methods and construction of low rise residential, commercial and industrial projects, including equipment handling and site management requirements. Such structures to be examined with regard to the environmental, structural and aesthetic requirements taking account of constraints such as costs, dimensional requirements, statutory regulations, life, adaptability, manufacturing and erection requirements. Low Rise Commercial: structural elements including foundations, retaining walls, load bearing masonry construction, reinforced concrete suspended slabs, and walls: structural steel roof trusses etc, parapet, balconies and balustrades. Sheet metal and built up roofing, rainwater goods. Fire and sound resistant materials, components and construction. Suspended, fire and spray finish ceiling. Fittings and built in furniture etc. Light Industrial: Raft, pier and pile foundations and earthworks, including equipment. Structural steel systems including portal frames, girder, trusses etc. Roof lights. Sheet external wall cladding. Industrial horizontal, vertical, sliding, folding and roller shutter doors. Special floor finishes. Handling equipment. Formwork Design: Objectives in building formwork, understanding quality, safety and control. Formwork planning, reuse, erecting and stripping schedules. Types of facing material, hardware and fasteners. Loads and pressures on forms and use of design tables. Formwork drawing, detailing, building and erecting. Special techniques and prestressing/post tentioning. Proprietary formwork and falsework.

Courses: CN41, CN43

Prerequisites: CNB113, CNB111, CNB112, CNB114 Co-requisite: CNB213

Credit Points: 12 Contact Hours: 4 per week

#### CNB212 CONSTRUCTION 4

Building Construction: A study of the construction techniques peculiar to multi-storeyed buildings and the implications of working on a major city site. The scope covers site investigation, deep basement excavation, dewatering and construction, structural frame construction, cladding, outfitting and finishes and the significance of services on the construction process. Evolution of Building: A study of civilisations from prehistoric to modern times examining systems of construction and their relationship to building techniques and economic value.

Courses: CN41, CN43

Prerequisites: CNB211, CNB213, CNB221

Credit Points: 9 Contact Hours: 5 per week

#### CNB213 BUILDING TECHNOLOGY 3

A study of the non-structural materials used to enclose and decorate buildings, building boards, plaster, glass, asphalt, plastics, non-ferrous metals, concrete products and paint. The behaviour of materials in service will be examined which includes the effect of ageing, incompatibility, repair and cleaning techniques, and the effects of fire on structural materials. Implications of maintenance and quality inspection. Portal behaviour; design of simple steel connections, 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 multi-storeyed buildings; loading and design of simple retaining structures. Concrete practice wind load conditions on high rise structures. Multi-rise framed structures.

Courses: CN41, CN43

Prerequisites: CNB113, CNB114 Co-requisite: CNB211

Credit Points: 6

Contact Hours: 4 per week



#### CNB214 BUILDING CONTRACTS/ ARBITRATION LAW

Basic principles, elements, formation and discharge of a contract. Elements of Contract, offer, acceptance, certainty and consideration. Content of a valid contract, misrepresentation, collateral contract, implied terms. Formal requirements and part performance. Contract documents and their interpretations. Remedies for breach of contract. Recovery of payment of work done, concept of entire contract, substantial performance and Quantum Meruit. With particular reference and consideration of the major provisions in Standard Forms of Building Contract. Aspects covered include, tenders, subcontractors, role of the Architect, variations, time for completion and extension of time, claims and payments, determination & Arbitration. Arbitration - the agreement, comparison with actions at law, reference by consent, appointment of an arbitrator, Conduct of an arbitration, powers and duties, rules of evidence, enforcement of an award, costs

Courses: CN41, CN43 Credit Points: 6 Co-requisite: CNB220 Contact Hours: 3 per week

#### CNB215 MEASUREMENT 2

Detailed study and instruction in the process and methods of taking off and billing quantities in the SMM trades, groundworks 4.1 to 4.3, concrete 6.1 to 6.4, masonry, woodwork, partitions for simple buildings having a single storey having both suspended and slab on ground construction.

Courses: CN41, CN43

Prerequisites: CNB116, CNB111, CNB112

Co-requisite: CNB211 Credit Points: 6 Contact Hours: 3

Points: 6 Contact Hours: 3 per week

#### CNB216 MEASUREMENT 3

Detailed study and instruction in the process and methods of taking off and billing quantities in the SMM trades, groundworks 4.4, piling 5.2.2., concrete 6.1 to 6.8, structural steel, suspended ceilings, membrane and asphalt roofing, demolition, stonework in multi storey buildings having minor basements, underpinning and reinforced concrete and steel frame with built up roofing systems.

Courses: CN41, CN43 Prerequisite: CNB215 Co-requisite: CNB212

Credit Points: 6 Contact Hours: 3 per week

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; principles of refrigeration; air-conditioning systems, composition, cost, application, construction and installation; heating, fuel types, efficiency, capital and annual costs; effect of building ordinances. Mechanical estimating: types, tenders, preliminaries, trade awards and wage rates. Take off procedure, costing and estimating make-up calculations. System costs in relation to building floor area, operating and maintenance costs, builder's allowance for each system.

Courses: CN41, CN43Co-requisite: CNB211Credit Points: 6Contact Hours: 3 per week

#### CNB 218 BUILDING SERVICES 3

Electrical terminology and formula, three phase concept. Supply Authority Distribution System, line diagrams, high voltage transfer, transformers, load profile, Authority Requirement, Light and Power Acts. Tariffs and metering, energy management, electrical safety. SAA Wiring Rules, maximum demand, diversity, tables, cable sizing and voltage drop, points per circuit, fault levels, fuses, breakers and switchboards. Wiring types, busbars, wiring systems, space required, computer and data systems, fibre optics, accessories. Security, computer power supplies. Lighting, types, design methods, emergency and evacuation systems. Building Supervisory System, justification, hardware, software. Electrical plans, specifications, symbols, CAD, Lightning Protection System. Contractor Licensing, testing, tools and appliances. Energy management, solar energy, ice storage, control systems and energy audits. Electrical estimating: types, tenders, preliminaries, trade award and wage rates. Take off procedure, costing and estimating make-up calculations. System costs in relation to building floor area, operating and maintenance cost, builder's allowance for each system. Courses: CN41, CN43

Prerequisites: CNB118, CNB211 Co-requisite: CNB212

Contact Hours: 3 per week

#### CNB219 ECONOMICS OF THE CONSTRUCTION INDUSTRY

The economic problem, wants, resources, scarcity, choice; economic systems, features of the macro economy; supply and demand characteristics; goods market, factor markets, competitive market structures, business concentration; operations of the Construction Industry, nature of output; nature of firms, revenue analysis via pricing mechanisms, sales forecasting; production function; break even analysis; business cycle and fluctuations in the Construction Industry, failure of construction firms; government stabilisation policies and effect on the construction industry; structure change in the Australian and world economies. **Courses:** CN41, CN43

Credit Points: 6

Credit Points: 6

Contact Hours: 2 per week

#### CNB220 CONSTRUCTION MANAGEMENT 1

Industry participants and their roles. Basic management principles - planning, leading, organising and controlling. Forms of project delivery, reviewing contract documentation. Site management skills including site organisational structure, site controls, site communications, reporting, project engineering and negotiation skills as applied to subcontractors and suppliers, commissioning and handing over the site. Company marketing and negotiating skills. An analysis of project design and construction technique on project buildability and their effect on site management and organisation. Stress management techniques.

Courses: CN41, CN43 Prerequisites: CNB117, CNB219 Co-requisite: CNB212 Credit Points: 6 Contact 1

## Points: 6 Contact Hours: 2 per week

#### CNB221 BUILDING LEGISLATION

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 of building works in Queensland; emphasis on Building Codes in the By Laws; a study of the Acts Interpretation Act, and Town Planning Acts. The study of the Workplace Health and Safety Act 1989/ 90, the regulations that apply and Codes of practice. The application of the requirements of this legislation to the production of a Site Safety Management Plan incorporating a "systems" approach in minimising exposure of the individual or Company to prosecution. Practical demonstrations in good scaffolding practice. Case Studies in addressing safety on building sites.

Courses: CN41, CN43 Co-requisite: CN8211 Credit Points: 6 Contact Hours: 4 per week



## UNIT SYNOPSES

#### CNB222 ESTIMATING 1

A study of the techniques used in the preparation of detailed estimates of cost for simple structures covering the trades of concreter, carpenter, joiner, bricklayer, plumber, drainer, tiler, plasterer and painter. The industrial overheads applicable to labour are discussed and labour costs are calculated from current awards. The subject draws heavily on the student's knowledge of construction and on the sequencing of tasks.

Courses: CN41, CN43 Prerequisite: CNB215 Co-requisites: CNB212, CNB216

Credit Points: 6 Contact Hours: 2 per week

CNB223 APPLIED COMPUTING 1

A further study of the computer software programs which can be used in the construction and property development processes. Designed to co-ordinate the practical aspects of the lecture material presented each semester so that students both develop essential practical skills and benefit from cross fertilisation of the individual subjects. The programs used include spreadsheet and data base software packages. Applied material is drawn from statistics, quantitative operation research methods, and other current subject matter in years 1 & 2 of the course.

Courses: CN41, CN43Prerequisite: ITB270Credit Points: 6Contact Hours: 2 per week

#### CNB224 PROFESSIONAL STUDIES 2

The project in the second year will draw together more advanced but mainly Technology type subjects but added breadth is provided with Measurement, Estimating, Building Law and Management subjects. The project will be a medium high rise residential or commercial project (10 storey) situated in a commercial zone close to the inner city.

Courses: CN41, CN43

Prerequisites: CNB124, CNB211, CNB213, CNB221, CNB215, CNB217, CNB219, CNB223

Co-requisites: CNB212, CNB216, CNB218, CNB220, CNB222, CNB214

Credit Points: 9 Contact Hours: 3 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

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

Prerequisites: CNB131, CNB151, CNB154 Co-requisite: CNB253

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 asphalter, built-up roofing, demolisher, mason, structural steel and precast concrete.

Courses: CN31, CN33 Prerequisites: CNB146, CNB245, CNB253 Co-requisite: CNB254

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, porsity, plasticity, elasticity, deterioration, optical, electrical, thermal and acoustic properties

cal, electrical, thermal and acoustic properties. Courses: CN31, CN33 Prerequisites: CNB103, CNB104 Co-requisite: CNB253

Credit Points: 4

#### 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.

Contact Hours: 2 per week

Courses: CN31, CN33

Prerequisites: CNB103, CNB104, CNB154

Co-requisites: CNB247, CNB259 Credit Points: 10 Contact Hours: 5 per week

#### CNB254 CONSTRUCTION 4

An extension of CNB253, dealing with multi-storey commercial buildings.

Courses: CN31, CŇ33Prerequisite: CNB253Credit Points: 12Contact 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

Prerequisites: CNB103, CNB104, CNB145, CNB146 Co-requisite: CNB253

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: CN32Prerequisite: CNB162Credit Points: 9Contact 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, outgoings. Course: CN32

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 PM1 - 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.

Courses: CN31, CN33

Prerequisites: CNB341, CNB254 Co-requisite: CNB440

Credit Points: 4 Contact Hours: 2 per week

#### CNB311 CONSTRUCTION 5

Civil Engineering Construction (Building): A study of those aspects of civil engineering construction which impinge on building and land development. The emphasis is placed on an understanding of the efficacy of competing methods including plant selection rather than on a quantified solution. The areas covered are bulk excavation, detailed excavation, dewatering, foundations, pipelines, tunnels, roadworks, bridges and marine structures. Basic weather prediction and the organisation of work in remote locations. Building Services - Lifts, Acoustics etc.: 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 sprinklers, detectors, alarms, extinguishers; communication systems; intrusion alarm systems. Building acoustics: external noise propagation, calculations and control for complex source/environment integration. External noise control by insertion, absorption and transmission loss. The management of noise in the built environment.

#### Courses: CN41, CN43 Prerequisite: CNB212 Credit Points: 9 Contact Hours: 5 per week

#### CNB312 MEASUREMENT 4

Detailed study and instruction in the process and methods of taking off and billing quantities in: The SMM trade groundworks 4.4 and 4.5, piling, concrete 6.5 and 6.7 for the more complex basements and foundation stabilisation systems as encountered in inner city projects and innovative structural systems for columns, floors and walls. Hydraulics and drainage, electrical and mechanical installations, external elements. Course: CN43

Prerequisites: CNB212, CNB311, CNB118, CNB216, CNB217, CNB218 Credit Points: 9

Contact Hours: 4 per week

#### CNB313 TIME MANAGEMENT 1

The subject is designed to develop skills in construction planning and control techniques. The planning techniques studied include bar charts, critical path networks, (arrow, precedence and time scale formats). Updating; control and reporting techniques. Line of Balance planning method.

Courses: CN41, CN43 Prerequisites: CNB212, CNB216, CNB214, CNB220 Co-requisite: CNB323

Credit Points: 9 Contact Hours: 4 per week

#### CNB314 CONTRACT ADMINISTRATION 1

Contractual arrangements and delivery systems. Contract planning and control. Reporting and control systems, contract documentation. Risk allocation and planning to avoid disputes. End cost budgeting, forecasting and control techniques.

Course: CN43

Prerequisites: CNB323, CNB319, CNB327, CNB313, CNB214, CNB315, CNB321

Credit Points: 6 Contact Hours: 3 per week **CNB315 CONSTRUCTION BUSINESS** 國

#### MANAGEMENT

Accounting process to trial balance, preparation of end of period reports, accounting systems and data collection, accounting for cash, credit, fixed assets and payroll, final company accounts. Management versus financial, cash versus accruals accounting, profit versus taxable income. Factors impacting on profit and intangible assets, concepts of capitalised expenditure. Building plant depreciation. Cost coding and cash flow. Cost analysis and control, salary allocation and overheads. Accounting period ratios, balance sheet, impact on turnover. Statements of sources and application of funds, accounting report and sources of business funding.

Courses: CN41, CN43 Prerequisite: CNB220 Credit Points: 6 Contact Hours: 3 per week

#### **CNB316 VALUATIONS & INVESTMENT** THEORY

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; capital investment theory of NPV and IRR choice of discount rates, uncertainty and decision theory and financial cashflows

#### Courses: CN41, CN43

Prerequisites: 2nd half of course Contact Hours: 3 per week

Credit Points: 6

CNB317 CONSTRUCTION MANAGEMENT 2 Control and control systems, cost planning, cost reporting and forecasting, administration of the financial requirements of the Head Contract, preparation of cash flows. Purchasing (including tender preparation and the letting of subcontracts, placing of orders and subsequent administration of both). Project liquidity, working capital and turnover and general site administration. Insurances. Finalising subcontracts, archiving and final accounts. Overview of standard contracts and administration of variations, delays, time extensions and prolongation costs, progress claims etc. Contract drafting for sub and main contracts including contract specification. Principles and application of Rise and Fall. Courses: CN41, CN43

Prerequisites: CNB220, CNB214

Co-requisites: CNB313, CNB315, CNB323, CNB321 Credit Points: 6 Contact Hours: 3 per week



# UNIT SYNOPSES

#### CNB318 COMMERCIAL LAW

Sale of goods. Hire Purchase. Negotiable Instruments. Insurance law. Partnership Law, General principles of Company Law. Bankruptcy and Liquidation. Courses: CN41, CN43

Prerequisites: CNB321, CNB214, CNB315

Credit Points: 6 Contact Hours:2 per week

#### CNB319 PROFESSIONAL MANAGEMENT

The concepts of specifications complementing architectural documents; definitions, objectives of a specification; specification as a contract and working document; reference material and specification writing; use of Master specifications; outright and performance specification writing; and preparation of specified bills of quantities. Introduction to computer specification software. Scale of fees and professional charges; code of ethics; letters of engagement; law involving the quantity surveyor and the client; professional indemnity; professional image and status; office management and procedures.

Course: CN43

Prerequisites: CNB212, CNB213, CNB223, CNB214 Co-requisite: CNB321

Credit Points: 6 Contact Hours: 3 per week CNB320 BUILDING ECONOMICS 2

Case studies covering the following fully worked examples: Tax depreciation schedule on an office and a hotel; Value management study of an office development; Replacement insurance valuation both on office and retail development; Elemental analysis of a number of commercial developments. Hands on experience, by students to use related computer software to calculate the above studies and analyses.

Course: CN43 Prerequisite: CNB327 Co-requisite: CNB314

Credit Points: 6 Contact Hours: 3 per week

#### CNB321 TORTS & PROPERTY LAW

Law of Tort - negligence, professional negligence, duty of care, liability, occupier liabilities, nuisance, fraud and conversion. Law of property - ownership and possession, estates and interests in land, easements, rights and restrictive covenants. Party walls, boundary walls, fences and encroachments.

Courses: CN41, CN43

Prerequisites: 2nd half of course

Credit Points: 6 Contact Hours:2 per week

#### CNB322 CONSTRUCTION MANAGEMENT CASE STUDY

The students undertake client negotiations, sub-contractor negotiations, technical decisions, administration of contracts, report writing and the resolution of disputes.

Course: CN41 Prerequisite: CNB311 Co-requisites: CNB200, CNB214

Credit Points: 6 Contact Hours: 3 per week

#### CNB323 ESTIMATING 2

The subject builds on the procedures covered in Estimating 1 to assess the cost of more complex work and to introduce more advanced methods of pricing. The work includes deep basement excavation, foundations, concrete framing, suspended floors, steel erection, precast and prestressed concrete erection. Later lectures cover the preliminary items and the development of a tender submission from the base estimate. The problems of obtaining and assessing sub contract prices and the evaluation of variations are discussed, together with the consequences of unbalanced rates. The subject concludes with an introduction to the methods used to produce preliminary estimates from concepts and early designs. Demonstration of computer estimating software. Courses: CN41, CN43

Prerequisites: CNB216, CNB212, CNB222 Credit Points: 6 Contact Hours: 2 per week

#### CNB324 PROFESSIONAL STUDIES 3A

The third year project will deal mainly with Building Economics subjects. The project will be a low rise commercial building in the inner city area. The students will be provided with preliminary and working drawings and specification.

Course: CN43

Prerequisites: CNB224, CNB311, CNB313, CNB315, CNB319, CNB323, CNB327, CNB321 Co-requisites: CNB312, CNB320, CNB314, CNB332,

CNB316, CNB318

## Credit Points: 9 Contact Hours: 3 per week

#### CNB325 BUILDING ECONOMICS

History and need for cost control, comparisons between cost planning and approximate estimating. NPWC cost control system. Effects of height, shape and building efficiency upon cost and value. Functional requirements and cost implication of construction methods. Influence of site and market conditions and economics of prefabrication and industrialisation. Building cost data bases and indices, cost checking and analysis. Value management and life cycle costing. Introduction to tax depreciation and tax effective design.

Course: CN41

Prerequisites: CNB216, CNB118, CNB217, CNB218, CNB220

Co-requisites: CNB323, CNB311

Credit Points: 6 Contact Hours:2 per week

#### CNB326 TIME MANAGEMENT 2

Understanding of resources and their importance in the planning process. High rise repetitive, production planning and the importance of material and resource handling in this process. Legal problems associated with CPM. Planning and control of various types of projects. **Course:** CN41

Prerequisites: CNB313, CNB118, CNB217, CNB218, CNB317, CNB323

Credit Points: 8 Contact Hours:4 per week

#### CNB327 BUILDING ECONOMICS 1

History and need for cost control, comparisons between cost planning and approximate estimating. NPWC cost control system. Effects of height, shape and building efficiency upon cost and value. Functional requirements and cost implication of construction methods. Influence of site and market conditions and economics of prefabrication and industrialisation. Building cost data bases and indices, cost checking and analysis. Value management and life cycle costing. Introduction to tax depreciation and tax effective design.

Course: CN43

Prerequisites: CNB216, CNB118, CNB217, CNB218, CNB311, CNB220

Co-requisites: CNB323, CNB313

Credit Points: 6 Contact Hours:2 per week

CNB328 CONSTRUCTION MANAGEMENT 3 Management principles - planning, goal setting, strategic, operational and tactical planning. Controllingprocess, budgets, audits. Organising-organisational structures, job design, specialisation, departmentalisation. Developing company business plans, safety management plans and quality management plans with emphasis on the application of these planning techniques to the construction industry. Decision making and problem solving. Code of ethics, professional image, status and indemnity.



#### Prerequisites: CNB317, CNB221 Course: CN41 Co-requisites: CNB326, CNB318, CNB322 Credit Points: 8 Contact Hours: 3 per week

#### CNB330 APPLIED COMPUTING 2

Computer software programs which can be used in the construction and property development processes. The unit is designed to co-ordinate the practical aspects of the lecture material presented each semester so that students both develop essential practical skills and benefit from cross fertilisation of the individual subjects. The programs reinforce the applied subjects which are taken in the course and may include software packages covering; construction business management; construction administration and cost control; estimating, cost planning and billing etc;

Course: CN41

Prerequisites: CNB315, CNB317, CNB323, CNB325 Co-requisites: CNB328, CNB316

Credit Points: 6 Contact Hours:3 per week

#### CNB332 APPLIED COMPUTING 2A

Computer applications for the preparation of bills of quantities using software packages; hands-on experience in setting 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; use of computer in measurement of non-traditional contractual systems; specification and preamble development.

Course: CN43

Prerequisites: CNB327, CNB319, CNB323, CNB216 Co-requisites: CNB312, CNB316

Credit Points: 6 Contact Hours: 3 per week

#### CNB334 PROFESSIONAL STUDIES 3

The third year project will deal mainly with Building Economics and Management subjects. The project will be a high rise building in the inner city area. The students will be provided with Working Drawings, Specification, Bills of Quantities and Contract Conditions. Estimating and Building Economics: Prepare an estimate to erect the building. Carry out a bulk check and prepare a preliminary network to determine time related overheads and completion date for the tender. Submit tender. Prepare Basic Critical Path Network etc & prepare cost plan for project.

#### Course: CN41

Prerequisites: CNB224, CNB311, CNB313, CNB315, CNB317, CNB321, CNB323, CNB325

Co-requisites: CNB326, CNB322, CNB328, CNB330, CNB316, CNB318

Credit Points: 8 Contact Hours: 3 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 Credit Points: 4

Prerequisite: CNB254 Contact Hours: 2 per week

#### CNB342 LAW 2 – PRINCIPLES & 22 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

UNI SYNOPSE

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 Credit Points: 8 Prerequisite: CNB367 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 Prerequisite: CNB403 Credit Points: 4 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, man-

agement responsibilities. Course: CN31 Co-requisite: CNB254 Credit Points: 4 Contact Hours: 2 per week

#### CNB411 DEVELOPMENT PROCESS 1

Development sectors covering commercial offices (high and low rise, CBD and suburban), retail (CBD, secondary, regional, strip and festival), industrial, infrastructure, short term accommodation and leisure (3-5 star hotels, integrated resorts, motels, golf courses and marinas). Residential land subdivisions both small (under 20 Ha) and large, medium and high density housing including a systematic critique of AMCORD (Australian Model Code of Residential Development) and its effects on lot yields and service efficiencies. Development of building approval process, rezoning, political influences in the development process, changing social needs and the effects on development, feasibility studies, development budget control, taxation, development financing and the development process, legal development structures, marketing and selling, commissioning leading development teams, planning for client satisfaction and development sensitivities. Courses: CN41, CN43

Prerequisites: CNB313, CNB316, CNB318, CNB315 CNB325, CNB311, CNB327, CNB321

## Credit Points: 9 Contact Hours: 3 per week

Case Studies on the following type of developments: CBD office, suburban office, hotels, integrated resorts, motels, golf courses, marinas, retail centres (CBD, regional, secondary, strip and festival), medium and high density housing, infrastructure and industrial, small and large residential sub-divisions, retail and retirement villages.

Courses: CN41, CN43 Credit Points: 6

Prerequisite: CNB411 Contact Hours:2 per week

#### CNB414 CIVIL ENGINEERING QUANTITIES

Introduction to the measurement of civil engineering works based on the study of the SMM of Civil Engineering Quantities. Detailed study of methods, plant, specification and measurement of: earthworks, (clearing, compaction and dredging); roadworks, (survey, bulk excavation and filling, pavement construction, kerbing, culverts); and bridges, (foundations, abutments, superstructure, approach embankments, safety structures); Study of dam construction (earthworks storage volumes etc). A brief introduction to computer applications such as earthwork calculations, etc. An investigation into the method of measuring the quantity of materials involved in major industrial complexes such as: Refinery and processing plant, including pipework, vessels, tanks, instrumentation, electrical, commissioning, scaffold, shut down maintenance; pipelines, etc., Mining, plant and equipment, conveyors, processing plant etc; Oil and Gas, offshore platforms, fabrications etc. Introduction to cost engineering and cost control on major engineering projects. Estimating procedures used for this type of construction.

Course: CN43 Credit Points: 12 Prerequisite: CNB311 Contact Hours:4 per week

#### CNB415 CONTRACT ADMINISTRATION 2 Nominated sub-contractors and supplier; Adjustment of PC and Provisional Sums; Variations; Rise and fall; Progress claims and payments. Retentions and Bank guarantees. Delays and extensions of time; prolongation costs and liquidated damages; practical completion; completion. Final certificate. Insurances.

Course: CN43 Prerequisites: CNB314, CNB318 Credit Points: 9 Contact Hours: 3 per week



#### CNB416 CONSTRUCTION MANAGEMENT 4

Basis of employment (common law and statutory), construction industry infrastructure, conciliation and arbitration, the awards, alternative systems, negotiation with unions, ancillary legislation (Workplace Health and Safety, Equal Employment Opportunity etc.). Interpersonal skills, roles, expectations. Group interaction and dynamics, social motives and sources and resolution of conflict. Practical application of behavioural studies through case studies drawn from the building industry. Communications. Working with others. Team roles and work groups. Assertiveness, motivation.

Course: CN41 Credit Points: 12 Prerequisite: CNB328 Contact Hours:4 per week

#### CNB417 RESEARCH PROJECT 1 CNB418 RESEARCH PROJECT 2

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 on any topic within the ambit of construction management.

Courses: CN41, CN43

Prerequisites: Final Year Subject

Credit Points: 12 Contact Hours: 4 each per week

#### CNB419 APPLIED COMPUTING 3

Computer software programs which can be used in the construction and property development processes. The unit is designed to co-ordinate the practical aspects of the lecture material presented each semester so that students both develop essential practical skills and benefit from cross fertilisation of the individual subjects. The programs reinforce the applied subjects which are taken in year 3 of the full-time course and may include software packages covering: time and resource management; financial investment; project management. **Course:** CN41

Prerequisites: CNB326, CNB328, CNB316 Co-requisite: CNB411

Credit Points: 9 Contact Hours: 3 per week

#### CNB421 ELECTIVE 1

CNB422 ELECTIVE 2

The student will chose Elective units to extend and expand an area of knowledge or experience to develop in depth a particular professional expertise. These subjects may be drawn from any relevant faculty within the QUT. The Electives are to be approved by the Course Coordinator prior to enrolment.

Course: CN43 Prerequisites: Final Year Subjects Credit Points: 9 Contact Hours: 3 per week

CNB431 ELECTIVE 1

#### CNB432 ELECTIVE 2

The student will chose Elective units to extend and expand an area of knowledge or experience to develop in depth a particular professional expertise. These subjects may be drawn from any relevant faculty within the QUT. The Electives are to be approved by the Course Coordinator prior to enrolment.

Course: CN41 Prerequisites: Final Year Subjects Credit Points: 9 Contact Hours: 3 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 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

Credit Points: 6Contact Hours: 2 per week in Semester 1, 1 per week in Semester 2

#### 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 Co-requisite: CNB253 Credit Points: 5 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

Prerequisites: CNB006, CNB245

Co-requisite: CNB246

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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

#### CONSTRUCTION 5

Methods of taking off and billing quantities in complex basement and foundation work in the trades underpinning, excavator, concreter, pilling systems, structural systems in suspended slabs and walls.

Course: CN33 Prerequisites: CNB246, CNB254 Co-requisite: CNB341

Credit Points: 3 Contact Hours: 1.5 per week

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.

Courses: 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 Credit Points: 3 Prerequisite: CNB254 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

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

Prerequisites: CNB246, CNB254, CNB404, CNB446 Co-requisite: CNB540

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 Credit Points: 8

Prerequisite: CNB545 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 techniques, 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.

Prerequisite: CNB261 Course: CN32 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 submarkets: Residential and non-residential markets. Significance of tenure. Impact of government policies, sources of data; analysis of ABS data. Applied 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, CN81, 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 prestressing; propriety formwork systems, simple falsework design.

Courses: CN31, CN81 Co-requisite: CNB253 Credit Points: 4

Prerequisite: CNB146

Contact Hours: 2 per week

CNB603 BUILDING MANAGEMENT 5 The construction labor market, supply and demand,



UNIT SYNOPSES

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 Credit Points: 4 Prerequisite: CNB623 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: CN31, CN32, CN33

Prerequisite: CNB623 Credit Points: 4 Co

Credit Points: 4 Contact Hours: 2 per week

## CNB626 LAND DEVELOPMENT STUDIES See CNB606.

Courses: CN32, CN81 Co-requisite: CNB623 Credit Points: 4 Contact Hours: 2 per week

#### CNB642 APPLIED COMPUTER TECHNIQUES

Evaluation of a range of commercial computer programs designed for the construction industry.

 Course: CN31
 Prerequisite: CNB548

 Credit Points: 6
 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

## CONTROL 2

Continuation of CNB647. Course: CN33

Course: CN33 Prerequisite: CNB647 Co-requisite: CNB452

Credit Points: 4 Contact Hours: 2 per week CNB653 POST CONTRACT SERVICES 2

Continuation of CNB526.

Course: CN33Prerequisite: CNB526Credit Points: 5Contact 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.

Courses: CN31, CN33 Prerequisites: Final year Credit Points: 18 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

See CNB663. Course: CN32 Credit Points: 6

Prerequisite: CNB663 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 Credit Points: 8

Prerequisite: CNB363 Contact Hours: 3 per week

CNN441 DISSERTATION

See CNN442. Courses: CN77

Credit Points: 48

#### CNN442 DISSERTATION

The dissertation may be of a research or investigative nature on any approved area related to project management or property development. Suitable topics will be discussed and arranged with students each year. Each student will need to negotiate a suitable topic with 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: CN77

Credit Points: 48

#### CNP400 MANAGEMENT OF TECHNOLOGY

Introduces key concepts in management of technology and shows how these can be implemented. Furthers the understanding of the role of technology and its efficient management to build and maintain a competitive edge in business. Management of technology links engineering, science and management principles to identify, choose, and implement the most effective means of attaining compatibility between internal skills and resources of an organisation and its competitive, economic and social environment. Course covers: technology and competitive advantage, technological trends and forecasting, acquisition of technology, and managing the technical function.

Courses: CN64, CN77, CN81

Credit Points: 6 Contact Hours: 2 per week

#### **CNP401 MANAGEMENT OF** TECHNOLOGY

Introduces key concepts in management of technology and shows how these can be implemented. Furthers the understanding of the role of technology an its efficient management to build and maintain a competitive edge in business. Management of technology links engineering, science and management principles to identify, choose, and implement the most effective means of attaining compatibility between internal skills and resources of an organisation and its competitive, economic and social environment,. Course covers technology and competitive advantage, technological trends and forecasting, acquisition of technology, and managing the technical function. Advanced use of industry case studies and assignments. Courses: BS81

Credit Points: 12 Contact Hours: 2.5 per week

#### CNP402 PRINCIPLES OF VALUATION

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, outgoings. Course: CN64, CN77, CN81

Credit Points: 6 Contact Hours: 2 per week

#### **CNP403 PROPERTY MAINTENANCE &** ASSET MANAGEMENT

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: CN64, CN77, CN81

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

#### **CNP404 ADVANCED LAND** DEVELOPMENT

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. Advanced assessment.

Courses: CN64, CN77, CN81

Credit Points: 6 Contact Hours: 2 per week

#### **CNP406 INTERNATIONAL PROJECT** 2 MANAGEMENT

Examines international trends in project management from the perspective of the Australian project manager. Compares technical, managerial, economic and cultural concepts and issues related to project management in the global marketplace. Discusses emerging opportunities and misconceptions, with particular reference to the Asia-Pacific region. Provides the opportunity for international and local students to exchange ideas through the use of applied case studies and discussion groups. Lectures supported by a series of specialist industry lecturers.

Courses: CN64, CN77, CN81 Credit Points: 6

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: 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: CN64, CN77, CN81

Credit Points: 6 Contact Hours: 2 per week



# SANOPSES

#### CNP426 PROJECT DEVELOPMENT

Site selection and 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:** 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: CN64, CN77, CN81

Credit Points: 6 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, case studies, computer applications and selection, technology, simulation exercises (Arousal, Bicep), recent developments, change management, ethics, panel discussions, research presentations. Some of these topics will be covered by guest speakers from industry or presented in seminars. **Courses:** CN64, CN77, CN81

Credit Points: 12 Contact Hours: 2 per week

#### CNP431 PROJECT MANAGEMENT

Introduction to theory of project management 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. A series of case studies will be used to integrate the issues.

Courses: 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: CN64, CN77, CN81

Credit Points: 12 Contact Hours: 2 per week

#### CNP434 TIME MANAGEMENT

Use of planning techniques for project control; effective planning; PERT; CPM; bar charts and line of balance; arrow networks; precedence networks; time and cost control; resource control and levelling; computer software; control and reporting techniques. Emphasis is on the development of practical skills, based on established theory, immediately applicable to the project management or development industry

Courses: CN64, CN77, CN81

Credit Points: 6 Contact Hours: 2 per week

#### CNP437 FIELD TRIP

An experiential field trip of four days duration in an adventure-style environment. The emphasis is 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. Students are required to contribute towards the cost of this externally offered unit. **Courses:** CN64, CN77, CN81 **Credit Points:** 6 **Contact Hours:** 4 days

#### Credit Points: 6 Contact Hours: 4 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: CN64, CN77, CN81

Credit Points: 6 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: 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, project management and investment.

Courses: CN64, CN77, CN81

Prerequisite: CNB363 Credit Points: 6

Credit Points: 6 Contact Hours: 2 per week

#### 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, BS78

Prerequisites: 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

## 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, IT20

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 Credit Points: 12

Prerequisite: COB129 Contact Hours: 3 per week

#### COB104 DRAMATURGY FOR PROFESSIONALS

This unit concentrates on the relational level of communication. It looks at structure and style of message with special emphasis on the non-verbal languages. It is based on dramaturgical and experiential models. The theoretical perspectives of semiotic message analysis and action research informs the practical exercises used. Drama is the base from which life scripts are examined.

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. Interpersonal and group communication theory is a theoretical base for analysing communication performance. Students practice problemsolving strategies by rehearsing vocational situations. **Courses:** BS50, BS72, IT20 **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 emerging 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 business; strategic positioning; editorial concepts and steps in production.

#### Course: BS72

Prerequisites: COB138 for undergraduate students; Nil for postgraduate students.

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 on government and business.

Course: 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. Functionalist, interpretive, and critical perspectives provides a focus for this exploration.

#### Courses: BS50, BS72, BS78

Prerequisites: 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; socio-technical 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 Boints: 12

#### 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, business 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. Courses: 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

Communication technology and its impact on functions



#### **COB138 WRITTEN COMMUNICATION:** THEORY & PRACTICE

The principles of expository and persuasive writing in academic and business contexts.

Courses: BS50, BS72, IT20

Credit Points: 6

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. Designed for journalism and professional writing students especially.

Courses: BS50, IF52, IF54, 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 and editing; problems of publishing and marketing as a professional writer are considered, especially for the professional communicator.

Course: BS50 Prerequisite: COB138 Contact Hours: 3 per week Credit Points: 12

COB154 ORGANISATIONAL SOCIOLOGY Organisations in the public sector; builds upon the Introduction to Sociology and Theory and Administration units to provide a detailed understanding of organisation theory.

Course: BS50

Prerequisites: Eight units in the Bachelor of Business degree

Credit Points: 12 Contact Hours: 3 per week

#### **COB156 ADVANCED SECRETARIAL** 182 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 & 19**2 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)

This unit is based on the semiotic perspective and uses practical drama as the tool for learning. It explores communication theory i.e. verbal structure, paralanguage, proxemics, kinesics etc. The concepts learned are applied to the development of expressive self-presentation skills in the business environment.

Course: BS50 Prerequisite: COB134 Credit Points: 12 Contact Hours: 3 per week

and operational procedures in offices. 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.

Courses: B\$50, 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 the technology.

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

#### COB128 SUPERVISED PROJECT

An individual research project investigating an approved aspect of communication technology. Course: ED50

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

This unit uses the theoretical perspective of rhetoric as a base. It examines verbal, non verbal and visual modes of communication. The concepts learned are applied to the development of clear and expressive self-presentation skills for speaking in professional situations, such as (a) proposals to committees, eg management or peers; (b) presentations to clients; (c) business interview situations; (d) persuasive presentations to large groups eg the public, large company meetings, etc. Courses: BS50, IF52, IF54, IS43, IT20

Credit Points: 12 Contact Hours: 3 per week

#### **COB136 PROFESSIONAL**

COMMUNICATION

Communicating successfully orally and in writing 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.



#### 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 (BUSINESS)

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, IF56, PU49

Credit Points: 12 Contact Hours: 3 per week Incompatible with: The completion of both COB134 and COB138

#### 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: BS50Prerequisites: 8 unitsCredit Points: 12Contact Hours: 3 per week

#### COB162 COMMUNITY BASED ORGANISATION: STRUCTURE & PROCESSES

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 Credit Points: 12 Prerequisite: COB129 Contact Hours: 3 per week

#### COB163 PROFESSIONAL WRITING

The principles of, and strategies for, writing effective technical documents. Practical understanding of written language: organising ideas, and presenting those ideas in a cohesive text using generic features appropriate to the technical professions.

Courses: AR41, AR48, BN30, CN41, CE42, CN32, CN43, EE43, EE44, IF23, ME45, PS47

Credit Points: 6 Contact Hours: 1.5 per week

#### COB164 INTERPERSONAL COMMUNICATION

The principles of, and strategies for, effective interpersonal communication.

Courses: ME35, PU48

Credit Points: 8 Contact Hours: 2 per week ■ COB165 PROFESSIONAL WRITING &

#### LEARNING AT UNIVERSITY

The principles of, and strategies for, writing effective technical documents. Practical understanding of written language, organising ideas, presenting ideas cohesively using appropriate generic features. Developing effective learning strategies. Planning and controlling knowledge acquisition effectively.

#### Courses: CN41, CN43

Credit Points: 8 Contact Hours: 2.5 per week

#### COB166 TECHNICAL & SCIENTIFIC WRITING

The development of writing skills for scientists and technological professionals, based on a practical and theoretical understanding of scientific and technical discourse.

Courses: IT20, SC30 Credit Points: 12

Contact Hours: 3 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:

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 are used to explore planned and unplanned changes currently occurring, particularly as these relate to possible futures; emphasis is on the strategies and skills required to initiate and participate in effective change management. Course: BS78

Credit Points: 12

Contact Hours: 3 per week



# UNIT SYNOPSES

## COP115 PROFESSIONAL COMMUNICATION

Oral and written presentation. Planning and organising ideas. Structuring reports and oral presentations. Improving cohesion, clarity and style. Integrating written and oral communication.

Course: PS67

Credit Points: 4 Contact Hours: 2 per week

#### COP118 MANAGING HUMAN SERVICES 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: BS78

Credit Points: 12 Contact Hours: 3 per week

#### COP119 MANAGING HUMAN SERVICES 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: BS78 Prerequisite: COP118 Credit Points: 12 Contact Hours: 3 per week

■ COX194 COMMUNICATION TECHNIQUES Techniques of technical writing appropriate to applied science vocations; technical report writing, writing for non-technical audiences; application of communica-

tion priciples in technical writing; application of communication principles to non-written communications; individual and group speaking; speech writing; oral delivery of technical papers; formal meeting procedures. Course: LS12

Credit Points: 4 Contact Hours: 2 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, ED54

Credit Points: 12 Contact Hours: 3 per week

#### ■ CPB331 ASIAN CULTURE & EDUCATION

Provides 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, ED54

Credit Points: 12 Contact Hours: 3 per week

#### CPB332 SCHOOL – COMMUNITY RELATIONS

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, ED54

Credit Points: 12 Contact Hours: 3 per week

CHANGING SCHOOL PRACTICES

The relevance of contemporary policy initiatives for

classroom and school practices; how policy may be used strategically to enhance professional practice and to provide skills in critical policy analysis. 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, ED54 Credit Points: 12 Contact Hours: 3 per week

#### CPB334 POWERFUL TEACHERS, POWERFUL STUDENTS

Thematic questions about teaching: understanding 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, ED54 Credit Points: 12 Contact Hours: 3 per week

#### CPB335 TEACHER AS RESEARCHER

The role that research can play in improving their everyday practice. 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, ED54 Credit Points: 12 Contact Hours: 3 per week

#### CPB336 EDUCATION & CULTURAL DIVERSITY

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, ED54

Credit Points: 12 Contact Hours: 3 per week

#### CPB337 GENDER & EDUCATION

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, ED54 Credit Points: 12 Contact Hours: 3 per week

#### CPB338 IDENTIFYING & RESPONDING TO STUDENT DIFFERENCES

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, ED54 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, ED54 Credit Points: 12 Contact Hours: 3 per week



#### CPB340 CONTEXT OF ADULT AND WORKPLACE EDUCATION

The impact of major social, economic, cultural, environmental and technological trends on education, work, and citizenship. A range of interpretations and perspectives presented. Participants evaluate and relate these to the practical contexts of their work as adult and workplace educators.

Course: ED54

Credit Points: 12

#### Contact Hours: 3 per week CPB341 COMMUNITY, LEADERSHIP AND CITIZENSHIP

Contemporary issues and factors impacting on communities and creating special needs for community education, leadership and organisational capacities, improved cultural awareness, and revitalised practices of active and informed citizenship.

Course: ED54

Credit Points:12 Contact Hours: 3 per week

#### CPB342 EDUCATION IN CONTEXT

Education and change in a post-modern 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, ED54

Credit Points: 12 Contact Hours: 3 per week

#### CPB343 UNDERSTANDING EDUCATIONAL PRACTICES

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. Critical reflection by students is encouraged, allowing them to engage with others as co-theorists in pedagogical work. Courses: ED50, ED51, ED52, ED54

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 education 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

An analysis of schools and classrooms within a social context; students 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

The community context in which schools operate; examination of examples of successful community-school linkages such as school advisory councils and the development of 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

Contact Hours: 3 per week Credit Points: 12

#### **CPB443 COMPARATIVE &** INTERNATIONAL EDUCATION

Australia's identity in the international community has significant implications for education. The major international issues in education are introduced 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

#### **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

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

The meaning of leadership in a world of change and dilemma, where, for example, corporate managerialism has to be reconciled with democratic, collaborative, gender and equity policy considerations. Contemporary differing approaches to the study of leadership are examined, including organisation theory, women and leadership, ethics and leadership, cultural analysis and critical theory.

Courses: ED13, ED11, ED73 Credit Points: 12

#### **CPN604 EQUITY AND EDUCATION** MANAGEMENT ISSUES AND STRATEGIES

An examination of the theory and practice of equity policies at all levels of educational management. Particular emphasis on issues of gender and educational leadership, disability, race and ethnicity.

Courses: ED13, ED11, ED73, IF64Credit Points: 12

#### CPN605 ORGANISATIONAL CULTURES AND EDUCATION LEADERSHIP

An investigation of the dimensions of culture in educational organisations undergoing change through examining key issues that are covered with economic rationalism and social justice, strategic planning/management and leadership, cultural analysis and design and particularly, devolution and accountability.

Courses: ED13, ED11, ED73 Credit Points: 12

#### **CPN606 EDUCATIONAL LEADERSHIP,** POWER AND CAREERS

Issues in the changing nature of work relating to class, race and gender as determined by the power structure within society and organisations. A personal understanding of the concept of career that encourages individuals to proactively reconsider their own life stream in the discontinuous, changing world of the 1990s is the focus. Courses: ED13, ED11, ED73 Credit Points: 12

#### CPN607 GLOBAL CHANGE, DIVERSITY AND EDUCATION

An introduction to policy approaches in education used in post-colonial nation-states, especially those in the 3rd World and in the Asian-Pacific region. It asserts that many of these nation-states are 'dependent cultures' and that education is frame by Western models. Alternative modes of education and policy in the international setting are explored.

Courses: ED13, ED11, ED71, IF64 Credit Points: 12

#### CPN608 GENDER EOUITY AND EDUCATION POLICY

Gender-equity is an important component of recent educational reform. The theories and policies underlying its adoption in educational systems and the socio-cultural contexts which has shaped its adoption. Courses: ED13, ED11, ED71, IF64Credit Points: 12

#### CPN609 POLICY FOR PRACTITIONERS

Policy analysis is an important component of contemporary educational practice. No change to schooling practices are contemplated when undergirded with a policy shift. Introduces students to skills of policy writing and analysis, and places these skills in the socioeconomic and cultural context in which they arise. Courses: ED13, ED11, IF64 Credit Points: 12

CPN610 YOUTH POLICIES AND POST-

## COMPULSORY EDUCATION

Post-compulsory education, a feature of recent policy formation, has brought into renewed focus the nature of youth as a category of concern. The degree to which 'youth' as a category as understood in the new postcompulsory policies (Finn, Carmichael and Mayer) is examined.

Courses: ED13, ED11, ED71, IF64Credit Points: 12

#### CPN611 POLICIES AND PRACTICES FOR INCLUSIVE EDUCATION

The socio-cultural, organisational, curriculum and pedagogical contexts of child care and education with a focus on the ways in which special needs are socially constructed and the ways in which this is manifest in educational settings. Identification of procedures conducive to the formation, articulation and implementation of inclusive educational policies and practices in a range of educational and child care settings. Children's disruptive and challenging behaviours. Courses: ED13, ED11

Credit Points: 12

#### **CPP411 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

#### **CPP412 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

#### 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, 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 interrelationship between these facts. Emphasis is on demystifying computers and providing an understanding of the abilities of computers and their role in health science.

Courses: LS12, LS15, SC10, SC12

Credit Points: 8 Contact Hours: 2 per week CSB087 PROGRAMMING LANGUAGES

FOR TEACHERS This unit includes further software development; techniques of program development; top-down design and modularity; computer programming using appropriate

languages. Course: ED50 Prerequisite: ISB095 or equivalent Credit Points: 12 Contact Hours: 3 per week

CSB155 INTRODUCTION TO COMPUTING

Examination of the computer as a processor of information and provides 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; and 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; and 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 CSB192 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 PAS-CAL programming language.

Courses: CE42, EE43, EE44, IF56, ME45, ME46 Co-requisites: MAB193, CEB184

Credit Points: 8 Contact Hours: 3 per week CSB263 COMPUTING

An introduction to computer programming and covers 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, VPPlanner and dBaseIII Plus.

Courses: CH32, SC10, SC30

Credit Points: 12 Contact Hours: 4 per week

#### CSB491 UNIX & C

Examination of the 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; and engineering problems using C.

Course: IF56, ME46

Credit Points:4 Contact Hours: 2 per week

#### **CSB860 COMPUTER SYSTEMS FOR** TEACHERS

Examination of 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, 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, the student(s) and supervisor must agree on the topic and the scope of the work to be attempted. Course: IF23

Co-requisites: This unit must be taken in the final year of the course.

Credit Points: 30

#### CUB330 EDUCATION LAW AND THE 緫 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, ED54

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,

Courses: ED50, ED51

Credit Points: 12 Contact Hours: 3 per week

#### **CUB332 ADULT EDUCATION IN THE** WORKPLACE AND COMMUNITY

The nature of all common forms of adult education, with particular emphasis on workplace and community settings; analyses key concepts and views of leading adult educators, and relates them to current attempts in Australia to provide effective forms of post compulsory education and training.

Course: ED54 Credit Points: 12 Contact Hours:3 per week

#### CUB333 FIELD EXPERIENCE 1

Synthesises knowledge of research, needs analysis, and current issues to facilitate a self-directed learning contract aimed at preparing a case study of the placement site. Elements include typology, programs, key personnel, management, legal aspects. The prior learning goals of participants are examined and redefined in light of their practical experiences.

Course: ED54 Credit Points: 12 Contact Hours: 10/20 day placement; pre- and posttutorials

#### CUB334 FIELD EXPERIENCE 2

Through appropriate resourcing, participants are pre-



pared for achieving mutually agreed learning goals related to facilitating modules of existing courses. Log entries include reflections of experiences gained in matching strategies with learning styles and program outcomes. Evaluations of relevant aspects are also entered.

Course: ED54 Prerequisites: CUB333 Credit Points: 12

Contact Hours: 20 day placement; pre- and post-tutorial

#### CUB335 FIELD EXPERIENCE 3

Extends the resourcing of participants' contracted learning goals. These aim at an advanced level of competence in: planning, facilitating, managing and assessing a complete program; a situational analysis of the new placement site; self and program evaluation. Preparations occur for the internship project in Year4, Semester 2.

Course: ED54 Prerequisites: CUB334 Credit Points: 12

Contact Hours: 20 day placement; pre- and post tutorials

#### CUB336 FIELD EXPERIENCE 4

Brings together the university, the world of work and/ or communities, and the totality of the course within the framework of the National Training Reform Agenda. Participants are offered an internship program that has relevance to their career development and future employment. This involves solving a real problem in a functioning organisation. Participants prepare the contract; describe their position; identify steps in conducting the project; provide criteria for quality control and for their assessment.

Course: ED54

Prerequisites: CUB335

Credit Points: 12 Contact Hours: 20 day placement; pre- and post-tutorials

#### CUB337 ORIENTATION TO ADULT AND WORKPLACE PROGRAMS

Basic concepts in curriculum and curriculum processes for contemporary adult, workplace and community education. The nature of programs; investigating needs, competencies and outcomes; planning learning opportunities; participant assessment and program evaluation. Course: ED54

Credit Points: 12 Contact Hours: 3 per week

#### CUB338 THE GROUP IN ADULT AND WORKPLACE EDUCATION

Introduction to the theory relating to groups and explores processes which occur in adult groups. Participants deal with practical applications for educational settings, with special emphasis on developing facilitating skills.

Course: ED54

Credit Points: 12 Contact Hours: 3 per week

#### CUB339 INSTRUCTIONAL STRATEGIES FOR ADULT AND WORKPLACE EDUCATORS

Exploration of theories and practices related to effective instructional strategies in diverse settings; introduction to skills and concepts required by competent practictioners in formal and non-formal teaching and learning settings within workplaces and communities. Course: ED54 Prerequisites: CUB337

Credit Points: 12 Contact Hours: 3 per week

#### CUB340 PROGRAMMING IN ADULT AND WORKPLACE EDUCATION

Important aspects of responsive programing for adult and workplace education. Covers the planning, implementation, evaluation and reflection components of program development, design and delivery

Course: ED54 Prerequisites: CUB339 Credit Points: 12 Contact Hours: 3 per week

#### CUB342 LAW IN THE ADULT AND WORKPLACE ENVIRONMENT

Recent legal and legislative developments mean that employers and employees require greater awareness of their legal responsibilities in all workplace environments. This unit provides a level of legel literacy appropriate to sound legal risk management in workplace settings.

Course: ED54 Credit Points: 12

Contact Hours: 3 per week

#### **CUB343 OPEN LEARNING AND FLEXIBLE** DELIVERY

Deals with the concepts and research relating to 'open' and 'distance' learning as well as 'flexible' and 'workplace' delivery using a range of communications and information technologies. Experience in the use of the technology and educational design, strategies and techniques is developed.

Course: ED54 Credit Points: 12

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Contact Hours: 3 per week

**CUB350 EARLY CHILDHOOD** PRACTICES 1

Within the focus of the teacher and children learning together, the following topics are 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 Credit Points: 12

Prerequisite: CUB365 Contact Hours: 2.5 per week

CUB351 EARLY CHILDHOOD PRACTICES 2

Continuing the interactive focus there will be further development of Year 2, Semester 1 topics in order to deepen understanding and extend teaching strategies. Prerequisite: CUB350 Course: ED52 Credit Points: 12 Contact Hours: 2.5 per week

CUB352 EARLY CHILDHOOD PRACTICES 3

Within the focus of teacher/child decision making, emphasis is placed on: observing social interactions 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: CUB351 Credit Points: 12 Contact Hours: 2.5 per week

#### CUB353 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: CUB352 Credit Points: 12 Contact Hours: 2.5 per week

#### CUB354 EARLY CHILDHOOD PRACTICES 5

Within the focus of negotiation, teacher-child-parentcommunity, this unit reviews and analyses 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: CUB353

 Credit Points: 12
 Contact Hours: 2.5 per week

#### CUB355 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 Credit Points: 12

Prerequisite: CUB354 Contact Hours: 2.5er week

#### CUB356 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

#### CUB357 PROFESSIONAL PRACTICE 2

This program consists of a 25 day block session with pre-placement on-campus tutorials. It concentrates on the development of those skills needed in teaching effectively units of work that are planned by cooperating teachers. It challenges students to cater for the learning styles of their pupils by incorporating a rich variety of teaching strategies and classroom organisational skills. Students are expected, through analysis and reflection, to promote praxis between their university studies, their teaching and other school experiences. **Course:** ED50

Prerequisites: Curriculum Studies X/Y, CUB356 Credit Points: 12

#### CUB358 PROFESSIONAL PRACTICE 3

This program of 20 days(ED54)/ 25 days (ED50) aims at extending confidence and competence in teacher roles to a level commensurate with that of a beginning teacher. Preservice teachers assume full responsibility for implementing units of work. They draw upon their teaming and other professional skills in fulfilling teachers' day to day responsibilities. Emphasis is placed upon self-evaluation and critical reflection.

Courses: ED50, ED54

Prerequisites: CUB357 (ED50), CUB356 (ED42) Co-requisites: Curriculum Studies X/Y (ED50) Credit Points: 12

#### ■ CUB359 PROFESSIONAL PRACTICE 4: THE BEGINNING TEACHER

This unit is structured so that integration is achieved across all strands of the course in preparation for the students' transition from 'tertiary student' to 'beginning teacher', and the career development processes which this entails. Students are encouraged to conceptualise their final practice teaching experience as a trial at beginning teaching, with opportunities to collect primary data (eg interviews, reports) and the progressive application of selected educational frameworks, derived from the theory and research on beginning teaching. **Course:** ED50 **Prerequisite:** CUB357

#### Co-requisite: CUB358 Credit Points: 12

#### CUB360 TEACHERS AS COMMUNICATORS & PROFESSIONAL PRACTICE 1

This unit 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 operated in a 1 hour/week class on campus and 15 single days (1 introduction and 1 day/week) in schools.

Course: ED51 Prerequisite: CUB365 Credit Points: 12

Contact Hours: I hour per week and I day per week in Schools plus I day of initial

#### CUB361 TEACHERS AS MANAGERS & PROFESSIONAL PRACTICE 2

The management of planning; implementation and evaluation in the classroom; the relationship of management and classroom climate and control.

Course: ED51 Prerequisite: CUB360 Credit Points: 12

**Contact Hours:** 1 hour per week and 1 day per week in schools plus 1 day of initial

#### CUB362 TEACHERS AS CURRICULUM DECISION MAKERS & PROFESSIONAL PRACTICE 3

Examination of aspects of curriculum decision making 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 unit provides opportunities to design, test and refine personal decision-making models, approaches, strategies and programs.

Course: ED51 Prerequisite: CUB361 Credit Points: 12

Contact Hours: 1 per week and 3 week block

#### CUB363 TEACHERS AS RESPONSIVE PRACTITIONERS & PROFESSIONAL PRACTICE 4

This unit 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.

#### Prerequisite: CUB362

Course: ED51 Credit Points: 12

**Contact Hours:** 1 hour per week and 3 week block in schools following Easter vacation.

#### CUB364 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 unit 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 Credit Points: 12

#### Prerequisite: CUB363

Contact Hours: 1 hour per week and 3 week block in schools following September vacation.
# UNI SYNOPSE

#### ■ CUB365 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, ED54 Credit Points: 12 Contact Hours: 3 per week

# CUB366 LEARNING/TEACHING ENVIRONMENTS

The environmental context for learning/teaching: the range of learning environments in education; how people interact in different learning environments; the design of learning experiences for people in non-formal learning contexts.

Courses: ED37, ED50, ED51, ED52, ED54

Credit Points: 12 Contact Hours: 3 per week

# CUB367 MANAGING LEARNERS

Reviews and extends knowledge about managing learners to meet their needs in purposive and responsive learning environments. A reflective and research oriented evaluation of topics is encouraged, including 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, ED54 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; 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

HAPPEN AT SCHOOL

Implementing curriculum programs in specific school settings; indepth 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 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: 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; trends in research methodologies specific to the field of curriculum are reviewed; issues raised in the curriculum research literature; the impact on curriculum of approaches such as action research and teacher as researcher.

Courses: ED13, ED11

Credit Points: 12



# CUN602 PROFESSIONAL DEVELOPMENT

Designed for individual educators as they seek to be both proactive and responsive to the challenge of curriculum change, this unit cultivates their uniqueness and virtuosity, is guided by the individual's judgment, and leads to increased personal understanding and awareness. It thereby informs and supports professional action at a higher level and in a more integrated way. Courses: ED13, ED11 Credit Points: 12

# **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 provide a theoretical framework for considering issues related to power and empowerment at the macro and micro level. Courses: ED13, ED11 Credit Points: 12

#### **CUN604 COLLABORATIVE SUPERVISION** IN CURRICULUM PRACTICE

The collaborative approaches to supervision. Supervision is defined; models of supervision are critically evaluated; and collaborative approaches are studies in depth and applied to teaching/learning environments in a variety of professional contexts Courses: ED13, ED11

Credit Points: 12

# CUN605 ADULT AND WORKPLACE EDUCATION: PRINCIPLES AND PRACTICES

The ethical basis, the contextual basis and the expert knowledge of adult and workplace education are explored through the themes of conceptualisation, teaching adults, change, flexible delivery, assessment and legal risk management. This will provide an extensive basis for further work, including research, in the area. Courses: ED13,ED11 Credit Points: 12

# CUP405 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

#### CUP406 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: ED37 (Part-Time)

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: 3 per week

#### <u>98</u> 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. Course: ED42

Credit Points: 8

#### 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 personnel; evaluation of individualised programs and teaching strategies; management of behaviour; family dynamics and parental needs.

Courses: ED42, NS48

Credit Points: 8

# 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. 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



# UNIT SYNOPSES

# 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

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 from birth to 8 years of age; language acquisition and communication; interrelationships 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 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 practice and the earlier unit; 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, inquiry 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

The 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 inter-generational and family literacy, including clients from English and Non-English speaking backgrounds; planning and implementing an inter-generational 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 Aborigines 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

Students examine dilemmas arising when teachers plan to negotiate the curriculum with children and parents in child care, preschool/kindergarten and primary school settings. Critical analysis of 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

The development of skills and understandings of drama in education; in-depth 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

Contemporary issues facing families such as changing employment patterns, changing family forms, ethnic and cultural diversity and new technologies; indepth 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 EAB320; 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 or 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 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

Contact Hours: 3 per week Credit Points: 12 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 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 20

# 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; introduction 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 routines for daily living in kindergartens, preschools, child care centres and primary schools; the creation of 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 The identification and exploration of 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 鬫 CHILDHOOD CONTEXTS

Students undertake 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

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. Credit Points: 16

Course: ED42

#### 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 SOCIO-CULTURAL 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. Credit Points: 16

# Course: ED42

# 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

# EAN601 EARLY CHILDHOOD TEACHERS' KNOWLEDGE IN ACTION

Critical reflection on knowledge in action as teachers work in early childhood programs; history of the development of key ideas influencing early childhood curriculum and teaching; methods for studying teachers at work in different early childhood programs; analysis of research which examines issues related to teaching in early childhood programs.

#### Courses: ED13, ED11 Credit Points: 12 EAN602 EARLY CHILDHOOD SERVICES AND POLICIES

Examination is made of the processes of policy development and sources of influence on policies in the area of early childhood services. Critical analyses are undertaken of selected early childhood policies. Courses: ED13, ED11 Credit Points: 12

# UNIT SYNOPSES

Development of skills for critical evaluation of current developmental issues in early childhood within an ecological framework; knowledge of a broad range of developmental and methodological issues of research in early childhood including infant development, family, educational and care contexts; the processes and patterns of symbolic development in young children; critical discussion of developmental research and the implications of this knowledge for early childhood education. **Courses:** ED13, ED11 **Credit Points:** 12

# EAN604 YOUNG CHILDREN, FAMILIES AND COMMUNITY

Aspects of family diversity; the interactions between young children, families and the wider social and cultural community; key issues facing families within community contexts; the analysis of transactions involving professionals, young children, families and community. **Courses:** ED13, ED11 **Credit Points:** 12

#### EAN605 EDUCATION MANAGEMENT PROCESSES AND STRATEGIES

The management processes in educational and other professional settings; the identification of various leadership skills and effective communication styles. The understanding and facilitation of change is explored. Consulting, advocacy and empowerment strategies are identified in terms of the students' particular work sites. **Courses:** ED13,ED11 **Credit Points:** 12

# EAN606 MANAGING EDUCATION PERSONNEL

Human resource management; staff selection, staff supervision and appraisal, staff development and the importance of developing evaluation and facilitation skills. Strategies for including professional development in a range of educational and professional settings are explored.

Courses: ED13,ED11

Credit Points: 12

# ■ EAN607 CONSULTATION AND TEAMWORK

Analysis of typical professional consultancy and teamwork contexts within education and early childhood services, including contributions from other disciplines (eg. medicine, psychology, therapies, social welfare, law) and agencies (eg. health, community services, police); theoretical and practical understanding of intraand interpersonal qualities which affect consultancy and teamwork; theory and application of group development processes related to effective task accomplishment. Factors impinging on the quality of interdisciplinary and interagency teamwork; strategies for reviewing and improving consultation and teamwork.

Courses: ED13,ED11 Credit Points: 12

# 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: 4 per week

# EAP412 THINKING & PROBLEM SOLVING 1

The processes of interest in active learning, inquiry and problem solving; environments and strategies which promote the development of active learning and inquiry by young children; monitoring progress. Course: ED35

Credit Points: 12

Contact Hours: 4 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: 4 per week

#### EAP417 THINKING & PROBLEM SOLVING 2

The child as explorer, problem solver and meaning maker; organising for active learning, inquiry and problem solving; linking home and early childhood educational environments.

Course: ED35

Credit Points: 12 Contact Hours: 4 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

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

# EAP512 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 EAP513 EDUCATIONAL SERVICES

#### EAP513 EDUCATIONAL SERVICES MANAGEMENT

Focuses on leadership roles by identifying various leadership skills and effective communication styles; development of an understanding and facilitation of change; consulting, advocacy and empowerment strategies are identified.

Courses: ED23, ED65

Credit Points: 12 Contact Hours: 3 per week EAP515 HUMAN RESOURCE

# MANAGEMENT IN EDUCATION

Staff supervision and appraisal; staff development planning, implementation and evaluation; facilitative skills. **Courses:** ED23, ED65

Credit Points: 12 Contact Hours: 3 per week

# EAP518 MANAGING THE CURRICULUM

This unit helps students understand the elements of curriculum management. The problematic nature of managing curriculum is explored by considering ideological approaches.

Credit Points: 12 Course: ED23, ED26

#### 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.

Credit Points: 12 Course: ED20

#### 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

## **EAP528 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

Credit Points: 12

# EAP529 EARLY CHILDHOOD EDUCATION 1 & 2

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; analysis of teaching strategies.

Course: ED20

Credit Points: 12

## **EAP530 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

Credit Points: 12

# **EAP531 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 Credit Points:12 Prerequisite: EAP528

## EAP532 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.

Prerequisite: EAP530

Course: ED20 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. Courses: ED22, ED26

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.

Courses: ED22, ED26

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.

Courses: ED22, ED26

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 experience 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 Credit Points: 12 Prerequisite: EDB254

# EDB336 ABORIGINAL & TORRES STRAIT ISLANDERS, PAST & PRESENT

This introductory unit is designed to give students a basic understanding and awareness of Murri and Torres



UNIT SYNOPSES

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 continues to develop students' knowledge about Murri and Torres Strait Islander people, historically, socially and culturally in relation to these changes and gives 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

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 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, ED54, ED37

# Credit Points: 12

# EDN601 MAJOR ISSUES IN EDUCATION

Students draw on their educational experience and current educational debates to develop skills in academic analysis. That analysis is informed by selected conceptual frameworks – well-documented theoretical and critical perspectives. This unit will lead students to critical insights into their own educational practice. The teaching approach emphasises the development of advanced skills in academic reading and writing. **Courses:** ED13, ED11, ED61, ED71

Credit Points: 12

# EDN602 ADVANCED SEMINARS

This unit provides for the special needs and interests of students. Small groups of students interact at an advanced level with specialists or visiting scholars in seminars, conferences and research projects.

Courses: ED13, ED11 Credit Points: 12

# EDN603 INDEPENDENT STUDY

This unit allows individual students to follow their own particular needs/interests and/or to take advantage of specialised lecturer expertise through working autonomously on relevant topics of interest under the supervision of individual lecturers.

Courses: ED13, ED11 Credit Points: 12

# EDN608 PROJECT/DISSERTATION (STAGES 1 AND 2)

A minor research project that provides students with an opportunity to extend, synthesise and analyse knowledge from core and elective units through, for example, a critical literature review, the development of appropriate educational resources, or a project of change in their workplace.

Courses: ED13, ED14

Prerequisites: EDN611, EDN601 Credit Points: 24

#### EDN611 UNDERSTANDING EDUCATIONAL RESEARCH

The foundation unit for studying research methods in education. It focuses on reading, understanding and evaluating educational research both within and across different paradigms used in educational research. **Courses:** ED13, ED11, ED61, ED71 **Credit Points:** 12

# EDN612 CONDUCTING EDUCATIONAL RESEARCH

Building on the understandings developed in EDN611, this unit focuses on developing the skills and knowledge necessary to design and conduct educational research. Structured to enable students to pursue in-depth studies in selected designs and methods with a view to producing an initial research proposal.

Courses: ED13, ED11, ED12, ED61

Prerequisites: EDN611 OR equivalent OR permission of coordinator

Credit Points: 12

# EDN620 DISSERTATION

Designed to enable students to develop their research potential through following up a research design developed in the unit 'Advanced Research', to produce a significant piece of written research in the form of a dissertation.

Courses: ED13

Prerequisites: EDN611, EDN601, EDN602 Credit Points: 36

#### EDP508 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

# Credit Points: 6

#### EDP509 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: ED508 Credit Points: 6

# 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

# 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 occurs. The Extended Field Project includes a research report with greater breadth and depth than the 12 credit point field project.



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

The theory and practice of teaching adults; 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 C

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

2 Contact Hours: 3 per week

# EDP604 PROGRAM DESIGN & EVALUATION IN HIGHER EDUCATION

Identifies and describes the major theoretical underpinning 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 Prerequisites: 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 understandings 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, IF56, ME23, ME45, ME46

Contact Hours: 3 per week

## EEB107 AERONAUTICAL INDUSTRIAL EXPERIENCE 1

Credit Points: 6

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, ÉE44, IF23 Prerequisite: EEB101 Credit Points: 6 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.

Courses: IF56, ME45, ME46

Credit Points: 6 Contact Hours: 3 per week

#### EEB270 DIGITAL DESIGN PRINCIPLES

Binary variables, number systems; signed numbers and codes; Boolean algebra; logic functions, minimisation; implementation of combinational logic by gates, PROMs and GALs; binary arithmetic, adders and subtractors, overflow conditions; synchronous and asynchronous sequential logic; flip-flops, counters and



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shift registers; state diagrams and transition tables, implementation of sequential machines using feedback, flip-flop, PROMs, GALs; TTL, MOS and CMOS logic families.

Courses: EE43, EE44, IF23, IF56

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

## EEB271 BASIC ELECTRONIC DEVICES

Passive electronic components; basic semiconductivity and semiconductor junction theory; range and application of semiconductor diodes; bipolar transistors and field effect transistors - theory of operation, biasing, use in amplification at mid frequencies and use in logic circuitry; metal on oxide field effect transistors - theory and applications. Complementary MOS logic; power switching devices -SCR. Triac and applications.

Courses: EE43, EE44, IF23

Credit Points: 8 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 1

Magnetic circuits, magnetic materials, transformers and electromagnetic 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: 6 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 Co-requisite: EEB371

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

#### EEB374 ELECTRONIC CIRCUIT ANALYSIS

Intorduce basics of electronics with emphasis on low and high-frequency responses and feedback structure of amplifiers. Differential and multistage amplifiers; low and high-frequency responses of amplifiers; feedback structure of amplifiers; power amplifiers; switching characteristics.

Courses: EE43, EE44, IF23 Prerequisite: EEB271 Credit Points: 6 Contact Hours: 3 per week

#### EEB380 ENGINEERING MANAGEMENT SKILLS

Writing style, preparation of written documents for engineering and management; spoken English. Oral presentation and speechwriting. Political and technical speeches. Theory of argument and discourse; assertion training, aggressive and passive behaviour. Interpersonal relationships; organisational change and the management of change; professional ethics for engineers and in a wider context; industrial relations; negotiation.

Courses: EE43, EE44, IF23

Credit Points: 8 Contact Hours: 3 per week

#### EEB390 ENGINEERING COMPUTING 1

Students will understand principles and use of C syntax and data structures, program structuring and design, programming style and organisation, and program development in an engineering context. Exposure to Unix in a typical engineering workstation environment will be obtained. Experience will be acquired in programming solutions to important electrical engineering problems and applications, particularly numerical techniques, statistical techniques and circuit/signal techniques.

Courses: EE43, EE44 Prerequisite: CSB191 Co-requisite: MAB493

Credit Points: 8 Contact Hours: 3 per week

#### EEB400 ELECTROTECHNOLOGY 2

Introduction to electrical power systems calculations; technology of overhead lines and cables; elementary electrical engineering economics.

Course: EE44 Prerequisite: EEB302 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; nonlinear 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 Contact Hours: 3 per week Credit Points: 6

# 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.

Contact Hours: 5 weeks Course: EE44

#### 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: EÊ43

Contact Hours: 5 weeks

# EEB420 CONTROL SYSTEMS 1

This is a first course in feedback control for engineers. It introduces the student to basic control theory, analysis and synthesis. Hardware is introduced through sensors and activation system. Mathematical Modelling of Dynamical Systems; Sensors and Actuation Systems; Characteristics and Performance of Feedback Control Systems: Linear System Stability.

Prerequisite: EEB101 Courses: EE43, EE44 Co-requisites: EEB401

Credit Points: 6 Contact Hours: 3 per week.

# 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 and an understanding of integrated circuit amplifiers.

Courses: EE43, EE44, IF23 Prerequisite: EEB371 Credit Points: 8 Contact Hours: 3 per week

# EEB473 INTEGRATED ELECTRONICS

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: 8 Contact Hours: 3 per week

#### EEB474 MICROPROCESSORS

Microprocessor architecture, instruction sets, assembly language programming; memories, input/output devices and interrupt systems.

Courses: EE43, EÊ44, IF23, IF53

Prerequisites: EEB372 or EEB373

Credit Points: 6 Contact Hours: 3 per week

# EEB475 MICROPROCESSOR SYSTEMS

To give students a good grounding in the basic principles and practical use of embedded microprocessor/ microcontroller systems, with particular regard to the hardware and software. Parallel data transfer, memory decoding, and Centronics interface; Synchronous and asynchronous serial data communications RS232, RS422 etc; DACs and ADC; Instruction sets, machine

and assembly language programming; Input/output devices, and timers; Real time clocks and interrupt driven systems; Application of C to the programming of embedded systems.

#### Courses: EE43, EE44

Prerequisites: EEB270, EEB390

Credit Points: 6 Contact Hours: 3 per week

#### EEB520 CONTROL ENGINEERING

Measurement transducers, amplifiers, signal processors and final control elements; system components; application of microcomputers 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

#### EEB530 ENGINEERING ELECTROMAGNETICS

The aim of this subject is to develop the students' understanding of the basic theory leading to the development and solution of Maxwells Equations. An objective is to develop his intuitive as well as his theoretical understanding and leave the development of more advanced concepts of the theory till later in the course. Course: EE44

Prerequisites: MAB493, EEB400, PHB234 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 sequence methods; power system harmonics; transients due to switching; transmission plant parameters.

Course: EE44 Prerequisite: EEB400 Credit Points: 6 Contact Hours: 3 per week

# EEB532 POWER SYSTEMS 1

Transmission line parameters, power system modelling and the pu method. Symmetrical faults in power systems. Circuit breakers selection. Generalised circuit constants. Power flow in lumped systems and the power circle diagram. Protection in electrical systems: fuse operation and selection, motor protection, MCCB, IDMT relay, discrimination.

Course: EE44 Credit Points: 6

Prerequisite: EEB400 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 Prerequisite: EB430 Credit Points: 8 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

# Modern electronic devices and circuits with particular

emphasis on industrial application.

Courses: EE44, IF23Prerequisite: EEB471Credit Points: 6Contact Hours: 3 per week

# EEB580 AEROSPACE DESIGN 1

Study of the environmental factors affecting the design of aerospace equipment particularly in relation to USA and Australian standards and specifications (eg US Mil Specs, FAQA requirement such as FAR 23, 25 and Technical Service Orders, Australian certification requirements both civil and military). Examination in detail of the operating regime for avionics 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: 8 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 Credit Points: 6 Prerequisite: EEB474 Contact Hours: 3 per week

#### EEB593 SOFTWARE SYSTEMS ENGINEERING

Students will learn concepts, issues, theory, techniques and practice of software engineering methodologies. They will examine and develop applications software for high level and low level (embedded) systems. They will gain experience in use of computer assisted software engineering facilities and will undertake a major team software design and construction project for an extensive electrical engineering task. Software design principles; OOP as a paradigm for SW design; Program development tools; Human-computer interaction. **Courses:** EE43, EE44 **Prerequisites:** EEB390 **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: 8 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: EV42. EV44. JE22

Courses: EE43, EE44, IF23 Prerequisites: EEB361, EEB401, MAB893

Credit Points: 8 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 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

# EEB624 CONTROL SYSTEMS 2

Analysis and design of systems using state-space method. An introduction to optimal control. Z-transform application to digital control system analysis and design using classical and modern approaches. System identification/modelling. Nonlinear system analysis and design.

Courses: EE43, EE44 Prerequisites: EEB420 Credit Points: 8 Contact Hours: 3 per week.

# EEB632 POWER SYSTEMS 2

Fault analysis (unbalanced faults) on power systems using symmetrical component techniques. Power flows in electrical networks using Gauss-Seidel and Newton-Raphson techniques. Studies of the cause and effects of travelling waves on transmission systems. Computer analysis techniques areused in all areas to reinforce understanding of each topic.

Course: EE44 Prerequisite: EEB532 Credit Points: 6 Contact Hours: 3 per week

# EEB645 REMOTE SENSING

Definitons and major systems for remote sensing; characteristic spectral relfectance 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. Course: EE43

Credit Points: 8 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; quasi-square and PWM invertors 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: EE44Prerequisite: EEB573Credit Points: 8Contact Hours: 3 per week

#### EEB661 INFORMATION THEORY MODULATION & 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: 8 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: 8 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: 8 Contact Hours: 3 per week

# EEB682 ENGINEERING BUSINESS SKILLS

To provide students with sufficient grounding in business practice, for them to appreciate the fundamental links between engineering practice and business. There should be adequate skills for young professional engineers to start or be an active partner in a small business.

Courses: EE43, EE44

Credit Points: 8 Contact Hours: 3 per week

# EEB691 AERONAUTICAL COMPUTING

Suitable languages such as ADA are used to implement embedded avionics computer systems and practical experience is gained in the application of objectoriented software design, concurrence and distributed systems used in the aerospace industry.

Course: EE43 Credit Points: 8 Prerequisite: CSB490 Contact Hours: 3 per week

# EEB692 SPACE TECHNOLOGY

Review of world launch capability; spherical trigonometry; orbits and trajectories eg. launch orbits, geostationary orbits, G.P.S. satellite orbit requirements; gravitational fields, Lagrange points, orbital dynamics and parameters; special purpose orbits; orbit determination from tracking data; payload techniques; upper atmospheric meteorology and introduction to 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

Prerequisites: MEB551, MEB553, MEB611 Co-requisite: EEB947

Credit Points: 8 Contact Hours: 3 per week

# EEB741 POWER SYSTEMS ANALYSIS

Economic operation of power systems, system stability, power system control; HVDC power transmission; advanced harmonic analysis; surge phenomena in machine and transmission lines.

Course: EE44 Credit Points: 8 Prerequisite: EEB531 Contact Hours: 3 per week

EEB742 POWER SYSTEMS ENGINEERING Substation engineering, protection of plant, substation earthing, system overvoltages, insulation coordination, HV switchgear.

Course: EE44 Credit Points: 8 Prerequisite: EEB531 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: EE43, EE44, IF23 Prerequisite: EEB661 Credit Points: 8 Contact Hours: 3 per week

#### EEB762 COMMUNICATIONS TECHNOLOGY

Introduction to three important Communication Technology areas. Study of the techniques for system design and performance analysis of Mobile and Satellite Communication systems; study of the fundamentals Optical Fibre Communication Systems.

Course: EE44 Prerequisites: EEB661, EEB967 Credit Points: 8 Contact Hours: 3 per week

# EEB780 AEROSPACE DESIGN 3

Practical design assignments consisting of detailed design and realisation of typical subsystems 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: 8 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;



UNIT SYNOPSES

it may include programming, circuit and system design.

Course: EE43

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

# EEB789 PROJECT

An individual engineering project on a specified topic is completed; the work will require design, computing, construction, experimental work and practical testing with the submission of appropriate reports; the topic is 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: 32 Contact Hours: 6 per week

# EEB791 ADVANCED ENGINEERING COMPUTING 1

An examination of underlying theory and algorithms pertaining to selected advanced computational techniques for selected areas of engineering problems. Practical experience in the use of existing software and in constructing their own implementations of some techniques, for engineering problems, is obtained. Artificial intelligence techniques; Optimisation techniques: Simulation techniques:

Course: EE44 Credit Points: 8 Prerequisite: EEB593 Contact Hours: 3 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: EE43, 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: EE43, EE44, IF23

Credit Points: 8 Contact Hours: 3 per week

# EEB822 ADVANCED CONTROL SYSTEMS

Analysis and design of optimum control technique. Variational calculus approach and Hamilton-Jacobi approach to control system design. Stochastic processes and linear and non-linear optimum state estimation. Discrete optimal control. Discrete-data control systems. Microprocessor and DSP control.

Course: EE44 Credit Points: 8

#### Prerequisites: EEB624 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, IF23 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 subsystems used in all areas of electronic systems and power systems engineering.

Courses: EE44, IF23Prerequisite: EEB788Credit Points: 8Contact 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.

Courses: 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: EE43, EE44

Prerequisites: EEB591, EEB602, MAB894

Credit Points: 8 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:** EE43, EE44, IF23

Prerequisites: EEB602, EEB968, EEB967

Credit Points: 8 Contact Hours: 3 per week

## EEB892 ADVANCED ENGINEERING COMPUTING 2

Selected basic graphic techniques and writing of simple engineering graphics software; application of graphics software libraries and interactive graphics facilities; appreciation of graphical user environments, interface, windows and graphical tools; an understanding of and ability to use 2D/3D/4D data visualisation techniques, and spatial data manipulation.

Course: EE44Prerequisites: EEB593Credit Points: 8Contact 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 INDUSTRIAL 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 Credit Points: 8 C

Prerequisite: EEB621 Contact Hours: 3 per week

# EEB932 AUTOMATIC FLIGHT CONTROL

The application of design principles to the Flight Control Systems of modern civil and military aircraft. Derivation of transfer functions for aircraft and missiles including effects of vibration and other perturbations on servo systems along with servo actuators and sensors. Use of conventional and modern control theory to analyse and design and lateral-directional stability augmentation systems and control augmentation systems. Study of autopilot design for various tasks including turn co-ordination and automatic landing, stabilisation of aircraft and adaptive control systems. **Course: EE43** 

Prerequisites:EEB723,MEB551, MEB611, MEB553 Co-requisite:EEB947

Credit Points: 8 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; infra-red 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 navigation systems; infra-red.

Course: EE43 Prerequisite: EEB947 Credit Points: 8 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

Prerequisites: EEB362, EEB562, EEB662, EEB968 Co-requisite: EEB947

Credit Points: 8 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 intermodulaton 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 altermative design methods; design parameters of various aerial systems; design of low-noise amplifiers; description of B-MAC television system.

Course: EE43Prerequisites: MEB692, MEB790Credit Points: 8Contact Hours: 3 per week

# EEB947 RADAR & RADIO NAVIGATION

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: 8 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; nondestructive testing methods, dielectric loss angle, partial discharge; voltage surge distribution in power equipment; overhead line insulation and lightning.

Course: EE44, IF23 Credit Points: 8 Co-requisite: EEB742 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, IF23 Prerequisite: EEB553 Credit Points: 8 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: 8 Contact Hours: 3 per week

# EEB956 PHOTOVOLTAIC ENGINEERING

The various aspects of photovoltaic systems including flat panel and concentrating solar cell arrays, seriesparallel connection for optimal array design, array measurements, power conditioning, load management, energy storage, system costs, and balance, of subsystems.

Course: EE43, EE44, IF23 Prerequisite: EEB587 Credit Points: 8 Contact Hours: 3 per week

#### EEB961 COMMUNICATIONS TECHNIQUES

Courses: EE44, IF23

Credit Points: 7

**3 X** 

Modern communication techniques including switched networks, broadcast, point-to-point systems; microwave and optical links; radio navigation and radar; associated electronic devices.

> Prerequisite: EEB967 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: EE43, EE44, IF23 Prerequisite: EEB662 Credit Points: 8 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: 8 Contact Hours: 3 per week

EEB968 DIGITAL SIGNAL FILTERING, DETECTION, ESTIMATION AND CLASSIFICATION

Introduction to digital signal processing; discrete Fourier transform; discrete convolution; digital filtration and spectral estimation.

Courses: EE43, EE44, IF23 Prerequisite: EEB602 Credit Points: 8 Contact Hours: 3 per week

EEB969 SIGNAL FILTERING & ESTIMATION

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, IF23Prerequisite: EEB968Credit Points: 7Contact 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: EE43, EE44, IF23 Prerequisite: EEB573 Credit Points: 8 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: EE43, EE44, IF23 Prerequisite: EEB573 Credit Points: 8 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

# EEB999 ADVANCED ELECTRICAL ENGINEERING TOPICS

Students are introduced to the current technology that is the expertise of visiting specialists or staff within the School.

Course: EE44 Prerequisites: As required Credit Points: 8 Contact Hours: 3 per week

#### EEP101 ALGORITHMS FOR CONTROL & ENGINEERING

Solution of equations using numerical analysis methods and computer algorithms; differential and difference equations, numerical approximations and computational flow diagrams. Computer control of closedloop 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 critteria, dynamic optimisation methods. Spectral analysis and digital filtering. Discrete time adaptive filters. An introduction to neural networks and to fuzzy logic.

Courses: CE74, 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 affrays, structures, input and output. Applications of C and Unix in real time signal processing and control.

Courses: CE74, 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 multitasking. Development of programming skills: structured programming techniques, modular programming techniques; documentation of programs; interrupt handling techniques. Using assembler and highlevel languages (C, Forth, Ada, Pascal, Modula-2 etc). **Courses:** CE74, 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: CE74, 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: CE74, 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: CE74, 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 is announced at the beginning of the year. **Course:** CE74, 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: CE74, 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: ČE74, 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: CE74, 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 is announced at the beginning of the year.

#### Course: CE74, 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. Coursect EEGO EEG2 EEG2

Courses: EE60, EE78, EE82

Credit Points: 4 Contact Hours: 3 per week

#### EEP202 THERMAL RATINGS & HEAT TRANSFER

Thermal conduction in simple geometrises; forced and natural convection from plates and cylinders; radiation from hot surfaces; calculation of steady-state and timevarying 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 Con

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 – ENVIRONMENTAL**

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 滴 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 developments 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 coordination 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)

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

Contact Hours: 3 per week Credit Points: 4

#### 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

Credit Points: 12

# Contact Hours: 3 per week EEP231 THESIS B

Work done in this unit and the related unit EEP230 are examined by submission of a single masters thesis. Course: EE78

Credit Points: 12 Contact Hours: 3 per week

#### 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: CE74, EE75

Credit Points: 12 Contact Hours: 3 per week

EEP302 RESEARCH COMPONENT 1

Research component of EEP101, EEP102, EEP123 and EEP124.

Course: CE74, EE75

Credit Points: 12 Contact Hours: 3 per week EEP303 RESEARCH COMPONENT 2

Research component of EEP102, EEP104, EEP120 and EEP129.

Course: CE74, 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 Credit Points: 7 Prerequisite: EET420 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 Credit Points: 7 Prerequisite: EET350 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 pre fetch 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 transmission, TDM, FDM, modulation methods; error correction and data communication protocols.

Course: EE22Prerequisite: EET560Credit Points: 7Contact 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 Credit Points: 7 Prerequisite: CST390 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.



Prerequisite: EET642 Contact Hours: 3 per week

# EET860 COMMUNICATIONS TECHNOLOGY

Broadcast radio and TV, terrestrial and satellite; specialised broadcast systems, eg. police, taxi; point-topoint 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 Credit Points: 7 Prerequisite: EET570 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 Credit Points: 7 Prerequisite: EET570 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 modulesCo-requisites: Major modules 1(d) and 2(d)Credit Points: 7Contact 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: EE22Prerequisite: CST390Credit Points: 7Contact 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 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: B\$50Prerequisites: EPB142, EPB152Credit Points: 12Contact 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; multi-collinearity; serial correlation; heteroscedasticity; the use of dummy variables; introduction to the statistical package SAS. Course: BS50 Prerequisite: EPB110

Course: BS50 Credit Points: 12

# 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 Credit Points: 12 Prerequisite: EPB102 Contact Hours: 3 per week

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 models.

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 South-East 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; diagnostic checking to determine model adequacy; forecasting and adaptive forecasting; seasonal forecasting models and their application. Course: BS50 Prerequisite: EPB110

Course: BS50 Credit Points: 12 0

## 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.



# UNIT NOPSES

#### Course: BS50 Credit Points: 1

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 distributions; inferential statistics; correlation and regression.

Courses: BS50, IF56

Credit Points: 12 Contact Hours: 3 per week Incompatible with: EPB110

# 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, IF37

Credit Points: 12 Contact Hours: 3 per week Incompatible with: EPB109

#### 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; failure of soviet planning; socialist economic reforms; transition to a market economy; structural change and economic development.

Courses: BS50, ED50

**Prerequisites:** EPB140 & EPB150 or EPB172 or EPN102

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

Credit Points: 12

Prerequisites: EPB140 & EPB150 or EPB172 or EPN102

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, EPB140 & EPB150, or EPB172 or EPN102

# 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, IF56, IT20, PU48

Credit Points: 12 Contact Hours: 3 per week Incompatible with: EPB140 & EPB150

# 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 & EPB150 or EPB172 or EPN102

Credit Points: 12 Contact Hours: 3 per week

#### 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 economics 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

Government in the national and international context; political concents and principles, models of govern-

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: BŠ50, IF52, IF54, IŚ43, IT20, 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. Case studies are used to examine political processes and debates in business policy.

Course: BS50Prerequisites: EPB124 or HUB686Credit Points: 12Contact 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 & EPB150 or 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 barriors 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; world 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 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 or EPB172

Credit Points: 12 Contact Hours: 3 per week

#### EPB133 GLOBALISATION & WORLD BUSINESS

Examines 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, IF56

Credit Points: 12 Contact Hours: 3 per week

This unit applies analytical tools acquired from the preceding units to investigate 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; the local Government Commissioner and local government legislation. Course: BS50

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.

Course: BS50 Credit Points: 12

#### Prerequisite: EPB135 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.

Courses: BS50, ED50 Credit Points: 12

7/10/6

Prerequisite: EPB136 Contact Hours: 3 per week

# UNIT SYNOPSES

# EPB140 MACROECONOMICS

Macroeconomics is that part of economics primarily concerned with the relationships between broad economic aggregates. The most important of these include the level of GDP, aggregate expenditure and saving, the level of employment, the quantity of money, the average price level, and the balance of payments. The aim of this unit is to define and analyse the relationships between these aggregates, and their impact upon the national economy. The unit examines 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 incomeexpenditure model; international trade and capital flows.

Courses: BS50, ED50, IF31, IF37, IF52, IF54, IS43, IT20, NS48, PU48

Credit Points: 12 Contact Hours: 3 per week Incompatible with: EPB116, EPB172

## 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

Prerequisites: EPB140 or EPN102 or EPB172 Credit Points: 12 Contact Hours: 3 per week

#### EPB143 MANAGEMENT SCIENCE A (INFO TECH)

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: 9 Contact Hours: 2 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, IF37, IF52, IF54, IS43, IT20, PU48

Credit Points: 12 Contact Hours: 3 per week Incompatible with: EPB116, EPB172

# 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, industry policy, externalities and the environment.

Course: BS50Prerequisite: EPB152Credit Points: 12Contact 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. **Course:** BS50

Prerequisites: 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 & EPB150 or EPB172 or EPN102.

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; constitutional framework: judicial review and division of powers; legislative processes: the contemporary committee system, scrutiny mechanisms; electoral processes: voting behaviour; public policy making; 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 Credit Points: 12

Prerequisite: EPB124 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 democ-



racy; 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

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; 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 or HUB686 or EPN101 Credit Points: 12 Contact Hours: 3 per week

# EPB158 PUBLIC FINANCE

Economic analysis of taxation and government expenditure. Analysis of alternative taxation strategies from a microeconomic point of view, focussing upon equity and efficiency. Examination of properties of goods and services tax, progressive versus proportional income tax, and other tax options. Economic criteria for assessing the appropriateness of public (as opposed to private) provision of goods and services, or public subsidisation. Government budgeting, size of the public sector, and role of public debt.

Course: BS50

Prerequisites: EPB140 & EPB150 or EPB172 or EPN102

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; legitimation and succession; policy implementation; determinants of policy; economic and political; policy theory.

Course: BS50

Prerequisites: EPB100 or, for non public admin students, 8 units including introductory government or politics unit

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 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 re-regulation.

Course: BS50 Credit Points: 12

#### Prerequisite: EPB152 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

Credit Points: 12

EPB163 RESEARCH & SURVEY METHODS

Contact Hours: 3 per week

This unit deals with data (primary and secondary): the gathering of data via surveys, the understanding of data through the study of statistics and the analysis of data. 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

Prerequisites: EPB140 & EPB150 or EPB172 or EPN102

Credit Points: 12 Contact Hours: 3 per week

#### EPB165 SPECIAL TOPIC – ECONOMICS

This unit provides the opportunity for the student to examine in detail a specific current economic policy issue. The nature of the unit varies from year to year depending upon policy questions and the interests of staff: Contact the Subject Area Co-ordinator of Economics and Public Policy for further details. In Semester 1,1995 this unit will be Environmental Economics and Policy which provides an introduction to the foundations of environmental and natural resource economics, and examines the increasingly important role of economics in the formulation and implementation of environmental policy. Topics include: sustainable development, market failure, pollution and depletion of natural resources and analysis of environmental policy, Prerequisites: EPB150 or EPB140 or EPB116.

Credit Points: 12 Contact Hours: 3 per week

#### EPB166 SPECIAL TOPIC -- PUBLIC POLICY

This unit helps 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

UNIT

Prerequisites: EPB140 & EPB150 or EPB172 or EPN102

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 costbenefit 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 or EPB172 or EPN102

Credit Points: 12 Contact Hours: 3 per week Incompatible with: EPB151, EPB152

# EPB172 ECONOMIC PRINCIPLES 2

Market demand and supply; fundamental principles of consumer and producer behaviour; market structures; developments in microeconomics; capital and labour factor markets; market failure and reform; the national accounts; aggregate product markets; the multiplier; macroeconomic controversies; control of the macroeconomy; the balance of payments; the open economy and economic growth.

Courses: BS50, IF53, NS48

Prerequisites: EPB116 or EPB106

Credit Points: 12 Contact Hours: 3 per week Incompatible with: EPB140 & EPB150

## 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

Prerequisites: 96 credit points of undergraduate study Credit Points: 12 Contact Hours: 3 per week

# EPB174 SPECIAL TOPIC – INTERNATIONAL BUSINESS

This unit provides the opportunity for the student to study in detail a specific policy issue in international business. The nature of the unit varies from year to year depending upon current policy issues and the interests of staff. Contact the Subject Area Co-ordinator of Economics and Public Policy for further details. In Semester 1, 1995 this unit will be China and the World Economy which provides students with an understanding of the Chinese economy, given China's emerging role within the Asian and World economic context. It demonstrates how a centrally-planned economy can transform into a market economy as compared to the former East-European countries, its reform measures and the problems it encounters. It also provide students with a knowledge of doing business with China.

Prerequisites: EPB140.

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. Case studies are used to explore these relationships and contemporary trends.

Courses: BS70, BS81, BS78 Credit Points: 12 Cont

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, IF64

Prerequisites: An undergraduate degree

Credit Points: 12 Contact Hours: 3 per week

# EPN105 STATISTICAL METHODS

Statistics is the study of the procedures for collecting, analysing and interpreting the data required for effective decision making; the basic concepts and techniques of statistical analysis, with particular reference to their application in management; campus computers may be used; topics include: graphs, charts, descriptive statistics, probability, sampling methods, analysis of sample results and regression and correlation.

# Course: BS81

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, IF64

Prerequisites: An undergraduate degree Credit Points: 12 Contact Hours: 3 per week

# EPN108 DEVELOPMENTS IN MICROECONOMIC THEORIES

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, and public utility theories are considered in this unit. It 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, IF64



Prerequisites: 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, IF64

Prerequisites: 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. Analysis of a region's economic, business and government environment, its key institutions and trade and investment relation with other countries, particularly Australia. These studies are 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, IF64

Prerequisites: Undergraduate degree or major in international business

Credit Points: 12 Contact Hours: 3 per week

EPN111 CONTEMPORARY MACROECONOMIC THEORIES

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 looks 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 in the theoretical foundations of macroeconomic policies employed in different countries are highlighted.

Courses: BS62, BS83, IF64

Prerequisites: Undergraduate economics degree or economics major

Credit Points: 12 Contact Hours: 3 per week

# EPN112 MULTIVARIATE METHODS

This unit is intended to provide students with the skills needed to perform appropriate analysis of data. It focuses upon some of the more important mulitvariate methods, of which multiple regression is but a part. Other multivariate techniques covered include discriminant analysis, principal component analysis and factor analysis. The link between appropriate multivariate statistics and a research question is thoroughly investigated.

Courses: BS60, BS61, BS62, BS83

Prerequisites: EPB110 or equivalent

Credit Points: 12 Contact Hours: 3 per week

## EPN113 AUSTRALIAN TRADE & FOREIGN POLICY

The development of an understanding of Australian trade and foreign policy. It focuses upon policy structure, content and processes, with particular attention given to both the domestic and international contexts of Australia's trade and foreign policy.

Courses: BS30, BS62, BS78, BS81, BS83, IF64 Prerequisites: Undergraduate degree or equivalent Credit Points: 12 Contact Hours: 3 per week

# EPN114 INDUSTRY POLICY

An examination of the question of how government policy is able to support industry development. It applies different approaches to policy making and includes the application of principles of welfare economics to industry policy. Several types of market structures are analysed which require different approaches to government intervention. Account is taken of both the Australian and the international contexts. In the light of the different market structures and policy aims, the unit analyses the effectiveness of support to particular industries by such means as protection and subsidies in foreign trade, tax incentives, infrastructure support and regulatory reforms.

Courses: BS62, BS83, IF64

Prerequisites: Undergraduate degree

Credit Points: 12 Contact Hours: 3 per week

EPN115 ENVIRONMENTAL ECONOMICS & POLICY

Environmental economics is concerned with the interaction between economic systems and the natural environment. Fundamental are the issues of sustainable economic development, the economic cost to future generations of potential degradation of the environment, the proper definition of property rights, the economics of pollution and the depletion of non-renewable resource stocks. This unit provides a comprehensive analysis and critique of the role played by environmental economics in the formulation of contemporary environmental policy in Australia and globally.

Courses: BS62, BS81, BS83, IF64

Prerequisites: Undergraduate degree Credit Points: 12 Contact Hours: 3 per week

# EPN116 SPECIAL TOPIC – ECONOMICS, PUBLIC POLICY & INTERNATIONAL BUSINESS

This unit provides the opportunity to study in detail, at a postgraduate level, a specific current economic, public policy and/or international business issues. The nature of the unit varies from year to year depending upon contemporary issues and the interests of staff. Contact the Subject Area Coordinator School of Economics and Public Policy for further information.

Semester 1, 1995 – TBA

Semester 2, 1995 – Government Budgeting & Finance An understanding of the budgetary and financial context in which public sector agencies, and individual public sector managers operate. It examines the strategic objectives which underpin broad Government financial and budgetary policies, and the way in which budgetary constraints and financial management requirements affect the development of new policies and the management of existing programs. Topics covered include broad expenditure, revenue and debt policies; institutions, processing and politics of public sector budgeting; financial relations between public trading mechanisms within the public sector.

Courses: BS78, BS81

Prerequisites: An undergraduate degree Credit Points: 12 Contact Hours: 3 per week

# UNIT SYNOPSES

# EPN117 ECONOMICS & PUBLIC POLICY

The relationship between economics, economists and public policy; currently influential bodies of economic theory, and their application in the public policy environment; the role of economists in the policy process. Topics addressed cover both the macro and micro dimensions of economic policy and include: the balance of payments and foreign debt; employment and unemployment; taxation; privatisation; health policy; social and welfare policy; environmental policy.

Courses: BS62, BS78, BS81, BS83, IF64

Prerequisites: Undergraduate degree or equivalent

Credit Points: 12 Contact Hours: 3 per week

# EPN118 RESEARCH SEMINAR

Quality in policy research requires sound understanding of appropriate research methodologies, their design and implementation. This unit is intended to help provide the student with that understanding, tailored to the specific needs of individual research dissertations. It provides a particular focus upon methods and techniques relevant to evaluation research.

Courses: BS62, BS78, BS81, BS83, IF64

Credit Points: 12 Contact Hours: 3 per week

# EPN119 SCIENCE & TECHNOLOGY POLICY

This course assists students in understanding Australian and technology policy. It is structured into two parts. The first examines policy structures and processes whilst the second part examines science and technology policy issues which are sector specific. The latter part of this course has a particular focus on policy and the commercialisation of technology although issues relevant to other sectors are also addressed.

Courses: BS62, BS78, BS81, BS83, IF64

Prerequisites: Undergraduate degree or equivalent 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, IF66, IF69

Credit Points: 6 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.

Courses: SC10, SC12

**Credit Points: 8** 

Points: 8 Contact Hours: 3 per week

# ESB122 PHYSICAL GEOLOGY

Basic geologic principles, physical geology, geomorphology, weathering, erosion, river and coastal environments, groundwater, deserts and aeolian processes. Origin and composition of 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 rocks; structural exercises; 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 HISTORICAL GEOLOGY

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 biostratigrapy. Practical work includes stratigraphic interpretations, study of fossils, and map interpretation. Field excursions to local areas of interest.

Courses: ED50, SC30

Credit Points: 12 Contact Hours: 5 per week

#### ESB229 GEOLOGY FOR THE BUILT ENVIRONMENT

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, surveying, and engineering design and construction. The engineering properties of rock and soil, and the effect of geologic hazards on the built environment; case histories on the relevance of geology to the surveyor's and civil engineer's workplace.

Courses: CE42, IF52, PS47

Credit Points: 6 Contact Hours: 2 per week

# ESB312 MINERALOGY

Introductory crystallography; fundamentals of crystal chemistry, mineral stability and reactions; crystallisation, growth and habit; the geologic context of minerals; classification of minerals; systematic treatment of the physical, chemical and structural properties of minerals; techniques of mineral analysis; theory and identification of minerals in transmitted light; the introduction to mineragraphy with theory of reflected light; optical properties of ore minerals and identification of minerals in thin section, polished section, and grain mounts.

Courses: ED50, SC30 Prerequisite: ESB122 Credit Points: 12 Contact Hours: 5 per week

# ESB332 GEOPHYSICS

Physical properties of the earth; geophysical methods including: seismic, gravity, magnetic, radiometric, resistivity, induced polarisation, electromagnetic; electrical properties of rocks and minerals; natural electrical sources. The unit covers both sold earth and exploration aspects.

Courses: ED50, SC30

**Prerequisites:** One unit of maths or physics **Co-requisite:** ESB392

Credit Points: 12 Contact Hours: 5 per week

# ESB342 STRUCTURAL GEOLOGY AND GEOMECHANICS

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 brite 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 de-



tachment faults; folds – description and classification, kink bands, chevron folds, boudinage, mechanisms and mechanics. Practical work includes a series of assignments of increasing complexity, and field work involves mapping deformed terrain.

Courses: ED50, SC30

Prerequisites: ESB122, ESB222

Co-requisites: ESB392 Credit Points: 12

Contact Hours: 5 per week

# ESB392 FIELD TECHNIQUES AND STUDIES

Methods used in the accumulation, analysis and interpretation of geological field data. Geological mapping, sampling and presentation of reports. This unit includes an extended excursion (five days or more), during which students are required (individually or in groups) to map the geology of an assigned area. During the field excursion, students are required to produce a geological map, 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

# ESB432 GEOMORPHOLOGY AND SEDIMENTARY GEOLOGY

Introduction to geomorphic systems, processes, and landforms; regolith, weathering, effects of climate and subsidence; drainage systems and river processes; volcanic terrains, volcanic hazards, and volcanism monitoring; type and distribution of marine sediments; the sedimentary cycle and sediment transport; sedimentary structures, sediment textures, grain size analysis; depositional environments; fossiliferous sediments and microfossils; an introduction to biostratigraphy and basin analysis.

Courses: ED50, SC30

Prerequisites: ESB122, ESB222, plus one unit of first year chemistry

Credit Points: 12 Contact Hours: 5 per week

# ESB452 GEOCHEMISTRY

An 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. Crystal chemistry, nature of solids, bonding forces, covalent and ionic radii, crystal structures, unit cell composition, solid solution. Thermodynamics, including equilibrium and equilibrium constants, chemical potential, fugacity, activity, the phase rule and phase diagrams. Isotope geochemistry. The geochemistry of aqueous environments, water chemistry, properties of water, solutions and solubilities, pH, oxidation and reduction, water reactions. Presentation of geochemical data. Practical aspects include experience in geochemical methodology, from sample collection in the field through analytical methods appropriate to geology (ICP, electron microprobe, XRD, AAS).

Courses: ED50, SC30

Prerequisites: ESB312, CHB182, CHB282

Credit Points: 12 Contact Hours: 5 per week

# ESB462 LITHOLOGY

Optical mineralogy; the description and classification of igneous, metamorphic, and sedimentary rocks in thin section and hand specimen; the identification, classification, and interpretation of textures. A field study of one-day's duration is required.

Courses: ED50, SC30 Prerequisite: ESB312 Credit Points: 12 Contact Hours: 5 per week

#### ESB472 MINERAL DEPOSITS AND MINE GEOLOGY

Ore concentration mechanisms according to classical and modern ore genesis theory. The different types of economic materials are then studied under the following headings: mineralogy, genesis, use and value, mining methods, beneficiation, major overseas deposits, Australian deposits. The role of the mine geologist. Practical work includes studies of economic minerals, and exercises in interpretation of mine data.

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-metalliferous 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. Course: ED50

**Prerequisites:** ESB392 and at least one of ESB342, ESB422, ESB442, ESB452, or ESB462

Credit Points: 12 Contact Hours: 5 per week

#### ESB512 IGNEOUS AND 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 examines the petrography and geochemistry of igneous and metamorphic suites. Field studies are an essential component of the unit.

Courses: ED50, SC30 Prerequisite: ESB462 Credit Points: 12 Contact Hours: 5 per week

#### ESB522 HYDROGEOLOGY

A broad-based course on groundwater, directed to its occurrence and quality, from both resource and environmental aspects. 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, computer software and modelling. Laboratory visits, demonstrations and a field practical, interaction with government departments and private industry.

Courses: ED50, SC30Prerequisite: ESB432Credit Points: 12Contact Hours: 5 per week

#### ESB542 ENGINEERING AND ENVIRONMENTAL GEOLOGY

This unit is structured around the inter-related fields of engineering and 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 & ESB462

Credit Points: 12 Contact Hours: 5 per week

#### ESB582 ORE GENESIS

The formation of ore deposits. A wide variety of deposits are studied with an emphasis on metallic ore deposits, their characteristics, and environments of deposition. Ore forming processes are discussed, together with tectonic perspectives, modern ore formation, and techniques of study of ore deposits.

Prerequisites: ESB472 Courses: ED50, SC30 Credit Points: 12 Contact Hours: 5 per week

## ESB592 GEOLOGICAL FIELD EXCURSIONS

A field excursion conducted during the semester break emphasising geologic mapping skills in lithologically and structurally varied regions. Past excursions have focussed on the Mt Isa region, and have been run in collaboration with the University of Queensland. Lectures/tutorials prior to the excursion review and develop mapping and geologic interpretation techniques. Assessment is based on tutorial exercises completed during the semester, and geologic maps, cross sections, and reports in the field. All work is finalised at the conclusion of the excursion. Students are expected to cover their transport expenses to the field site, as well as accommodation and food costs during the excursion.

Courses: SC30

Prerequisites: ESB342, ESB392, ESB432, ESB512 Credit Points: 12

#### ESB602 GEOLOGICAL INVESTIGATIONS

An introduction to geological research through the development and completion of a research project within a specified area of geology. Students are required to develop, in consultation with an appropriate staff member, a research proposal with specific aims and objectives, relevant methodology, and appropriate background. The research problem must be field-based and include a laboratory component. Lecture/tutorial sessions in information retrieval, writing, and presentation skills. Assessment is based on written and oral reports.

Courses: SC30

Prerequisites: Approval from Head of School. Credit Points: 12 Contact Hours: 5 per week

ESB612 EARTH RESOURFCES

# 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. Management in applied geology, professionalism and ethics together with an introduction to civil and mining law. 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

appplications for exploration licences, claims and leases. A field trip may be included.

Course: ED50

Credit Points: 12 Contact Hours: 5 per week

# ESB652 EXPLORATION GEOSCIENCE

Design of mineral exploration programs: target generation, reconnaissance, detailed investigation, evaluation, time and budget schedules, risk factors. Introduction to the theoretical base of exploration geochemistry; main types of geochemical surveys in regional, local, and mine scale exploration; the role of statistics in design and interpretation of exploration geochemical programs; analytical methods in geochemical prospecting; the role of biogeochemistry. Remote sensing in exploration; airborne geophysical surveys, design, acquisition, processing and interpretation leading to the design and operation of follow up ground surveys; assessment of drilling results by geophysical logging and tomography; use of software applications; geophysical case histories.

Courses: SC30, ED50

Prerequisites: ESB332, ESB452, ESB582 Credit Points: 12 Contact Hours: 5 per week

# ESB672 FOSSIL FUEL GEOLOGY

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 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: SC30, ED50 Credit Points: 12

Prerequisites: ESB522 Contact Hours: 5 per week

#### ESB682 SEDIMENTOLOGY AND BASIN ANALYSIS

Principles of fluid flow, flow regimes, sedimentary processes; facies and sequence models for alluvial, deltaic, estuarine, shoreline, shelf, turbidite, carbonate, lacustrine, and evaporite depositional systems; how these systems respond to accommodation-space changes induced by changes in tectonic, eustatic, and climatic conditions through time; integration of geogeochemical, biostratigraphical, physical, palaeoecological, diagenetic, thermal, and other specialist datasets to the process of basin analysis. Involves compulsory field studies and practical exercises in both modern and ancient sedimentary environments

Course: SC30

#### Credit Points: 12 Contact Hours: 5 per week ESB700 PROJECT

This unit involves undertaking, in consultation with a supervisor and through interaction with lecturing and technical staff of the School of Geology, a substantial project in an appropriate area of earth science. The unit provides the opportunity for students to identify and solve geological problems logically and creatively. Students are required to relate the project work to published work in the field of study, and adopt the style of Australian Journal of Earth Sciences for the written report. Each project is assessed on the basis of an extensive written report and an oral presentation. Course: SC60

Credit Points: 48



# ESB701 GEOLOGY REVIEWS

Within this unit students develop a written discussion of a geological problem or issue that is comparable to the focus of their own research project. Using available published literature, students critically analyse data and conclusions presented by other researchers in order to synthesise a discussion of the geological issue or case. The report focuses on those geological components that justify its selection as a geological review. Course: SC60

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

# ESB702 COMPLEMENTARY STUDIES

Provides students with skills that allows them to formulate and write a research proposal, to be capable of reading scientific literature with a view of abstracting critical aspects, and to produce reports that are written in a journal format and at a standard that could lead to publication. The unit also addresses philosophical issues such as ethics, professional integrity, and plagiarism, and to provide workshops in practical methods relevant to research in geology. These workshops include: (a) SEM unit; XRD unit; ICP and AAS analysis; (b) computing skills; (c) sample collection and processing; (d) data presentation and geological mapping methods.

Course: SC60

Credit Points: 12 Contact Hours: 2 per week

# **ESB704 ADVANCED STUDIES IN EARTH** SCIENCE

Provides a selection of coursework appropriate to fourth level studies in earth science disciplines. The unit has a modular structure that not only accommodates the range of advanced level studies needed to support research projects of individual students but also avoids promoting overspecialisation at the Honours level. From the 4- and 8-credit point modules indicated, students select any combination of modules appropriate to their interests and research project to total 20

Credit Points: (a) Advanced Sedimentology and Stratigraphy [4 credit points]; (b) Advanced Resources Geology [8 cp]; (c) Coastal Zone Hazards [8 cp]; (d) Geochemical systems: magmatic processes [4cp]; (e) Geochemical systems: isotopes, fluids, and phase equilibria [4 cp], (f) Global Plate Tectonics [8 cp]; (g) Groundwater Geology and Geochemistry [4 cp]; (h) Mineral Exploration Geophysics [4 cp]; (i) Seismic Exploration Geophysics [4 cp].

#### Course: SC60

Prerequisites: As approved by Honours (Geology) coordinator

Credit Points: 20

#### 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 in therefore variable and depends on the earth science topic chosen.

Courses: SC80

Credit Points: 12

### ESN120 ADVANCED TOPICS IN EARTH SCIENCE 2

See ESN110 Courses: SC80

Credit Points: 12

#### ESN130 COMPUTER APPLICATIONS IN 1 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. Courses: 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.

Courses: SC80 Credit Points: 12

ESN150 RESEARCH METHODOLOGY 2 See ESN140 Courses: 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. Credit Points: 12

Courses: SC80

# ESN170 LITERATURE SURVEY

Develops the detailed background of a student's research topic; extends the student's knowledge into current and relevant literature. Courses: SC80

Credit Points: 12

# EST219 ENGINEERING GEOLOGY

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, surveying, and engineering design and construction. The engineering properties of rock and soil, and the effect of geologic hazards on the built environment; case histories on the relevance of geology to the surveyor's and civil engineer's workolace.

# Courses: CE21

Credit Points: 7

## Contact Hours: 3 per week

#### **FNB100 AUSTRALIAN FINANCIAL** 1 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

Prerequisites: FNB111, ISB892 Course: BS50 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

UNIT SYNOPSES

Credit Points: 12 Credit Points: 12 Credit Points: 12 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, IF56

Prerequisites: AYB100 or AYB110

Credit Points: 12 Contact Hours: 4 per week Incompatible with: FNB111

# FNB111 FINANCE 1

The Australian institutional framework; terminology; uses and pricing of basic instruments; Financial mathematics, NPV, risk and returns, certainty and uncertainty, the CAPM model. Practical asset management, firm valuations, investments and capital budgeting. **Courses:** BS50, IF37

Prerequisites: AYB110 or AYB100, EPB150 or EPB116

Credit Points: 12 Contact Hours: 4 per week Incompatible with: FNB107

# 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, IF37 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: BS50Prerequisite: FNB112Credit Points: 12Contact 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

Prerequisites: FNB107 or FNB111 or FNN102 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 Prerequisites: FNB111 or FNN102 Credit Points: 12 Contact Hours: 4 per week Incompatible with: FNB124

### 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; NPV calculations; project evaluation.

Courses: EE43, ME45, ME46

Credit Points: 8 Contact Hours: 2 per week Incompatible with: FNB125

# 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 Prerequisites: FNB111, ISB892 Credit Points: 12 Contact Hours: 4 per week Incompatible with: AYB101

# FNB120 INTERNATIONAL FINANCE

Financial management from an international perspective; portfolio theory, the investment decision and the financial decision; International exchange rate determination and parity conditions; International banking, the foreign exchange market, currency futures, forwards, swaps, options, and international trade. **Courses:** BS50, IF56

Prerequisites: FNB111 or FNB107

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: BS50Prerequisites: FNB111, FNB123Credit Points: 12Contact 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 versus debt, leasing, investment dividends; introduction to financial maths; understanding the financial press.

Course: ED50 Prerequisite: AYB110 Credit Points: 12 Contact Hours: 4 per week Incompatible with: FNB123

# 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; cost-volume profit analysis.

Courses: BS50, IF37, IT20 Prerequisite: AYB110 Credit Points: 12 Contact Hours: 4 per week Incompatible with: FNB122

# 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; decision-making and relevant costs; pricing techniques, advertising and transfer pricing; performance evaluation.

Courses: BS50, IF37, IT20 Prerequisite: FNB123 Credit Points: 12 Contact Hours: 4 per week Incompatible with: FNB115

# 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 Credit Points: 4

Credit Points: 4 Contact Hours: 2 per week Incompatible with: FNB116

## 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 Prerequisites: FNB112 or FNN102 Credit Points: 12 Contact Hours: 4 per week

# FNN100 ADVANCED CAPITAL BUDGETING

Application of the theoretical constructs developed in undergraduate finance units to complex problems in investment appraisal.

Courses: B\$70, B\$87Prerequisite: FNB112Credit Points: 12Contact 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, IF64Prerequisites: 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 Credit Points: 12 Contact Hours: 3 per week Incompatible with: FNB117

# 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, IF64 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, international trade finance, offshore investment, legislation, transfer pricing, accounting and taxation aspects. **Courses:** BS70, BS87, IF64

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

## **FINIL2 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

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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 satisfies 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, IF64

Prerequisites: 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:** IF69

# Credit Points: 6

s: 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

Credit Points: 48 total

Contact Hours: HLN001 – 3 per week, HLN002 – 3 per week

#### HLN405 QUALITATIVE RESEARCH

Addresses qualitative methodologies and methods pertinent to research in the health sciences.

Courses: HL88, HL50, HL52, HL58, NS85, NS64, PU65, PU69

Credit Points: 12 Contact Hours: 3 per week

#### 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 Prerequisites: MAN009 or HLN405 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-requisites:** All other units in Honours program **Credit Points:** 48

#### HMB171 FITNESS, HEALTH & WELLNESS

The study of systems of the human being basic to physical activity; the interrelationships of health, physical activity and wellness, historically and dimensionally; basic principles of conditioning and exercise prescription to demonstrate the impact of physical activity on lifestyle diseases, health behaviours and wellness. **Courses:** ED50, ED51, HM42

Credit Points: 12 Contact Hours: 3 per week

#### HMB172 PHYSICAL ACTIVITY, NUTRITION AND WEIGHT CONTROL

An introduction to the essential physical growth concepts and an overview of nutritional principles as they apply to physical activity and weight control. **Course:** ED50, HM42

Credit Points: 12 Contact Hours: 4 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: ED50, HM42 Prerequisite: LSB231 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: ED50, 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: ED50, HM42

Prerequisites: 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: ED50, HM42, ME46

Prerequisite: LSB131 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: ED50, HM42

Prerequisite: SSB912 or equivalent

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

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

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, ED54

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Prerequisites: EDB323 and at least 48 credit points in the relevant discipline area Credit Points: 12

Contact Hours: 3 per week
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# HMB311 MOVEMENT ANALYSIS

Introduces 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:** BS50, 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; circulatory, 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: BS50, ED50,

Credit Points: 12 Contact Hours: 5 per week

# FOUNDATIONS OF PHYSICAL ACTIVITY

Lays 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. **Courses:** ED50, HM42

Credit Points: 12 Contact Hours: 4 per week

# HMB314 PERFORMANCE SKILLS 1

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

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/apparatus; 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; lightweight, minimum impact camping; leadership skills and safety techniques; the Australian natural environment; promotion of positive attitudes towards natural environments.

Course: ED50 Prerequisite: 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: BS50, ED50

Prerequisites: 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

# HMB328 INTERNATIONAL PHYSICAL EDUCATION & SPORT

Provides 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

Prerequisites: 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

Prerequisites: 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

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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

#### 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. 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

Designed for those students who have chosen to do a double major in physical education, this unit 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, ED54

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 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

Designed around micro-teaching and involving student teachers, children and their working environment in schools, this unit promotes excellence in teaching, preparation and planning with an enphasis 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 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 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

Examination of 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

Anticipolitetic 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 Prerequisite: HMB274

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

Course: HM42 Credit Points: 12

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: ED50, 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: ED50, 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, ED54Prerequisite: HMB310Credit Points: 12Contact 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 schemata; visual-spatial, force and temporal aspects and sequencing of complex movements. Research design in motor control and learning.

Course: ED50, HM42 Prerequisite: HMB271 Credit Points: 12 Contact Hours: 4 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: ED50, HM42

Credit Points: 12 Contact Hours: 4 per week

# HMB374 PSYCHOLOGY OF REHABILITATION

Practical application of psychological skills beneficial to the physical and psychological rehabilitative process: topics include: specific rehabilitation strategies;

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vicarious ego support; trauma from athletics; psychological process; disabled athletes.

Course: ED50, HM42 Prerequisite: HMB275 Credit Points: 12 Contact Hours: 4 per week

HMB375 ADAPTED PHYSICAL ACTIVITY Similarities and differences in the motor development and performance with intellectual, sensory, neurological, physiological, orthopaedic, musculo-skeletal 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: ED50, HM42 Credit Points: 12

Prerequisite: HMB271 Contact Hours: 4 per week

# HMB376 MOTOR DEVELOPMENT IN CHILDREN

Theoretical perspective of normal and abnormal motor development, incorporating maturational, descriptive and behavioural 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: ED50, HM42

Prerequisites: 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: ED50, HM42

Credit Points: 12 Contact Hours: 4 per week

# ■ HMB380 PHYSICAL EDUCATION CURRICULUM STUDIES 2B

This unit is designed for those students doing a double major in physical education and focuses particularly 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: ED54 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: 4 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: ED50, HM42

Prerequisites: HMB273 or at lecturer's discretion. Credit Points: 12 Contact Hours: 4 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 employee 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: 4 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: ED50, HM42

Credit Points: 12 Contact Hours: 4 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, ED54

**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: BS50, 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: BS50, ED50

Credit Points: 12 Contact Hours: 3 per week

The inequalities that exist in society's major institutions, with particular reference to sport and physical education. The development of knowledge of government policy and legislation regarding equity in public,



private and corporate establishments, as well as within educational settings.

Course: BS50, ED50

Prerequisites: 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 and, itself provides the foundation for contemporary analyses of sport in society.

Course: BS50, 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, ED54 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 practices. 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 psychomotor 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 work in small groups on original topics. Work includes: a literature review and the presentation of experimental hypotheses, research methodology and analysis procedures. Groups present a formal colloquium at the end of Semester 1.

Course: HM42

Credit Points: 12

# 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

# 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

# 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.



# UNIT VNOPSES

# 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 are the foundation for the investigation of this unit. Examination of 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 OF 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

Enables students to explore the breadth of their chosen sub-discipline in contrast to the more specific focus of their thesis topic to follow. 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: HL 88

Course: HL88 Credit Points: 12

2 Contact Hours: 3 per week

# HMN603 SCIENTIFIC BASES OF HUMAN PERFORMANCE

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. 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 requirement for a critical cultural analysis has been necessitated by issues such as discrimination, violence, drugs, elitism, ethnocentricism, internationalism, politicisation, commercialisation and quantification. The focus is on the analysis of the nature, role and significance of sport in modern society. 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, ÉD37 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, ED37 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, ED37

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, ED37

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 Prerequisites: HRB130, HRB104 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 Credit Points: 12 Prerequisite: HRB120 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 Prerequisites: 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 Prerequisites: 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 develops 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

Prerequisites: 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

Prerequisites: HRB131 or HRN104

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 Prerequisites: 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 statutes and case law related to the above.

Course: BS50 Prerequisites: 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
Credit Points: 12 Contact Hours: 3 per week
RB114 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 Prerequisites: HRB114 or HRN105 Credit Points: 12 Contact Hours: 3 per week

#### HRB116 INNOVATION & ENTREPRENEURSHIP

The nature and processes of innovation and new ven-



ture 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. Students are strongly urged to take a unit of Accounting before attempting this unit, although this is not compulsory. **Courses:** BS50, IF56

Prerequisites: BSB102 or HRN104

Credif Points: 12 Contact Hours: 3 per week

# HRB117 INTERNATIONAL HRM

Organisational structure and cultural differences; communicating across cultural boundaries; multicultural teams; cross-cultural leadership, motivation and negotiation; comparative human resource management; comparative employee relations.

Course: BS50 Prerequisites: 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 foci; ethics and international management.

Course: BS50, IF56

Prerequisites: 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 interviewe and their inter-relationships; 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 Prerequisites: 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

Prerequisites: Completion of at least 96 credit points or HRN104

# Credit Points: 12 Contact Hours: 3 per week HRB121 MANAGEMENT (ENGINEERS)

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, organising, controlling and leading; project teams; interpersonal interaction and teamwork; application of theoretical material to case study analysis.

#### Course: EE44 Credit Points: 4

it 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

This unit builds on theories of management encountered in introductory units. It has a focus on developing skills in the analysis of concepts and on practical application of managerial principles. It emphasises decision-making in the context of strategic planning; development and adaptation of structure; control systems; process analysis. It analyses organisations within a systems paradigm considered in an environment of change.

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 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 Prerequisites: 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 Prerequisites: 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, conflict and organisational symbolism.

Courses: BS50, NS48, PU48

Credit Points: 12 Contact Hours: 3 per week

# HRB131 PERSONNEL MANAGEMENT & INDUSTRIAL RELATIONS

Influences impacting on human resource management and industrial relations; the theoretical foundations of human resource management and industrial relations.



Courses: BS50, IF52, IF54, IF56, IS43, IT20, NS48, PU44, PU48

Credit Points: 12 Contact Hours: 3 per week

# HRB132 PRACTICE MANAGEMENT

Small business management; the various roles in which small business managers must develop at least rudimentary proficiency. The structure, organisation, finance, planning, control, taxation, marketing and environmental factors to equip students with skills necessary for starting a successful small business.

Courses: OP42, PU45

Credit Points: 4 Contact Hours: 2 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. 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 Prerequisites: HRB105 or HRP110 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, IF56

Prerequisites: BSB102 or HRN104

Credit Points: 12 Contact Hours: 3 per week

# HRB136 STRATEGIC HRM

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 Prerequisites: 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 Prerequisites: 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 organisa-

tions 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 Prerequisites: 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, IF56

Prerequisites: 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 Prerequisites: HRB131 or HRN105 Credit Points: 12 Contact Hours: 3 per week

# HRB146 SPECIAL TOPIC – HRM

Offered as required; permits an in-depth examination of an issue of importance to HRM; content varies depending on the issue examined.

Course: BS50 Prerequisites: 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; intra-organisational conflicts and negotiation.

Course: BS50 Prerequisites: BSB102 or HRN104 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

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Credit Points: 8 Contact Hours: 2 per week HRB150 COMPARATIVE INDUSTRIAL

RELATIONS

Examination of 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 Prerequisites: HRB131 or HRN105 Credit Points: 12 Contact Hours: 3 per week

### HRB151 INDEPENDENT STUDY

Enables Management, Human Resource Management and Industrial Relations majors to demonstrate competence in directing their own learning. This is essential for professionals who must subsequently keep themselves up-to-date in their area of expertise. Students undertake within an approved content area, as agreed to by their supervisor, one or more learning activities.

SYNOPSE

Prerequisites: Completion of 192 credit points Credit Points: 12 Contact Hours: 3 per week

# HRB402 PUBLIC PERSONNEL MANAGEMENT

Principles of public sector management; public sector t staffing structure; planning; organising/staffing; grievance resolution; reviews; development; personnel management issues; revision.

Course: BS50 Prerequisites: 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.

for Australia; organising for quality. Course: BS50 Prerequisites: BSB102 or HRN104 Credit Points: 12 Contact Hours: 3 per week

# HRB404 PRINCIPLES OF MANAGEMENT

Introduction to the concepts, principles and practical techniques involved in managing organisations; strategic and operational planning; the organising function; staffing of organisations; motivation and effective leadership; the dynamics of groups and the management of organisational culture; the design and operation of effective control systems; the management of quality; managing change and conflict.

Courses: BS62,IS10

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, LS70, LS80 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, IF64

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, group and organisational level influences on 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, IF64, IF66

Prerequisites: 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, IF66

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, IF66

Credit Points: 12 Contact Hours: 3 per week

# HRN116 HRM CASES

Further development of 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 are required to: (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 Co

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 are 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 context relevant to industrial relations; the different ways in which industrial relations have developed and operate. The comparative method: Japan, Sweden and Britain as industrial relations models.

Course: BS74, IF64

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, IF69 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, IF64 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, IF64

Credit Points: 12 Contact Hours: 3 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.

Courses: BS74, BS78, BS81, IF64 Prerequisites: 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, IF69 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, IF69

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:** NS40, 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: NS40, 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); socioultural factors and changes generating moral dilemmas in society; case studies of moral issues and moral decision-making; the ethics of teaching controversial 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. Particular focus 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

# HUB201 PEOPLE & THE NATURAL ENVIRONMENT

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

s: 12 Contact Hours: 3 per week

Prerequisite: HUB201 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

# HUB311 THE STUDY OF HISTORY

Provides an introduction of some of the key issues inherent in the study of history. Considers the role and importance of history for contemporary society and examines differing theories of history; 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: ED50

Credit Points: 12 Contact Hours: 3 per week

# HUB321 CONTEMPORARY INDONESIA

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

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 Credit Points: 12

Prerequisite: HUB419 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: ED50, 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 crosssection 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

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; a 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

## 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

# 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, 鋖 **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 postcontact 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 include 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

# HUB624 ADVANCED SEMINAR IN ASIAN/ PACIFIC STUDIES

Provides opportunities for studies in depth on selected topics relating to Asian/Pacific Studies. Normally taken by students in their third or fourth year (honours), the unit varies in content from semester to semester depending upon the availability of staff and other resources. Students may enrol in the unit more than once with the permission of the course co-ordinator. Courses: HU20, IF36, ED50

Credit Points: 12 Contact Hours: 3 per week

# HUB625 AMERICAN LITERATURE

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 preand post-World War II periods.

Courses: ED50, HU20

Credit Points: 12 Contact Hours: 3 per week

#### HUB626 CONTEMPORARY SOUTH-EAST ASIA

An introduction to South-East Asia as a region focussing on geographic characteristics, recent political developments, population and urban studies, economic development and social and cultural characteristics

Courses: HU20, IF36, ED50

Contact Hours: 3 per week Credit Points: 12

#### HUB627 AUSTRALIA AND THE SOUTH PACIFIC

Critical analysis of the history of Australian bilateral and multilateral links with the Pacific islands region, including Pacific frontier theory, sub-imperialism, colonial rule and contemporary dialogue over aid, trade, regionalism, defence, cultural exchange and migration. The unit will focus on events from 1788 to the present. Courses: HU20, IF36, ED50

Credit Points: 12 Contact Hours: 3 per week

# HUB628 MODERN JAPAN

The history of nineteenth and twentieth century Japan; including the range of contemporary issues confronting Japan including those associated with Japan's increased power in the Asia/Pacific region. Where possible primary source documentation is used to enhance historical understanding

Courses: HU20, IF36, ED50

Credit Points: 12 Contact Hours: 3 per week

# HUB629 MODERN CHINA

A historical survey of China during the nineteenth and twentieth centuries. The primary focus will be on the decline of the traditional Chinese state and the impact of foreign imperialism. Stress is placed on the growth of nationalism and the chinese revolution. The modernisation of Chinese culture, the position of women and the forces which have brought China to resume its place as the major Asian power.

Courses: HU20, IF36, ED50

Credit Points: 12 Contact Hours: 3 per week

# HUB630 GEOGRAPHY OF EAST ASIA

A geographical interpretation of the East Asia region, covering China, Japan and Korea. This includes an examination of the region's physical landscapes, human population distribution, demographic and cultural change, environmental issues and the role of the East Asian countries in the geopolitics of the Asia-Pacific region.

Courses: HU20, IF36, ED50

Credit Points: 12 Contact Hours: 3 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: ED50, HU20

Credit Points: 48

#### HUB649 ADVANCED SEMINAR IN EUROPEAN STUDIES

Provides opportunities for studies in depth on selected topics relating to European Studies. Normally taken by students in their third or fourth year (honours), the unit varies in content from semester to semester depending upon the availability of staff and other resources. Students may enrol in the unit more than once with the permission of the course co-ordinator.

Courses: HU20, IF36, ED50 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

Courses: BS50, ED50, ED51,

Prerequisite: HUB644

Credit Points: 12 Contact Hours: 4 per week 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

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

Prerequisites: 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: B\$50, ED50, ED51, HU20, IF36

Prerequisites: 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

UNIT SYNOPSES

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

# HUB678 FRENCH FOR BUSINESS AND THE PROFESSIONS

Equips students to use French in business or professional contexts. The focus is on: the professional experience of guest speakers; background information needed for survival in the French-speaking business world; and everyday business documents.

Courses: BS50, HU20, IF36

Prerequisites: HUB675 (4 or better)

Credit Points: 12 Contact Hours: 3 per week

#### HUB680 APPROACHES TO AUSTRALIAN STUDIES

Introduces the Australian Studies major; focuses 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

Considers the various development options open to Australia. Attention is paid to Australia's economic history and current economic structures.

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, 1F36

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 HUB694 AUSTRALIAN POLITICS

# The political life of the Australian citizen; the democratic political traditions and institutional bases of Australian political life; the process by which political decisions get made at all levels of Australian politics.

Courses: HU20, IF36, ED50

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

Contact Hours: 3 per week Credit Points: 12

# 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 HUB713 ADVANCED SEMINAR IN

AUSTRALIAN STUDIES Provides opportunities for studies in depth on selected

topics relating to Australian Studies. Normally taken by students in their third or fourth year (honours), the unit varies in content from semester to semester depending upon the availability of staff and other resources. Students may enrol in the unit more than once with the permission of the course co-ordinator.

Courses: HU20, IF36, ED50

#### 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

Contact Hours: 3 per week Credit Points: 12

#### 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 & 癜 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 eg. 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 (eg. 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;



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; consolides the four language skills of reading, writing, listening and speaking; introduces students to a selection of post-war literature from German-speaking countries. Courses: BS50, ED50, ED51, HU20, IF36

Prerequisites: 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 Points: 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 siecle 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

# HUB756 ADVANCED SEMINAR IN APPLIED ETHICS

Provides opportunities for studies in depth on selected topics relating to Applied Ethics. Normally taken by students in their third or fourth year (honours), the unit varies in content from semester to semester depending upon the availability of staff and other resources. Students may enrol in the unit more than once with the permission of the course co-ordinator.

Courses: HU20, IF36, ED50

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

# HUB772 INTRODUCTION TO POLITICS : POLITICAL IDEOLOGIES

The political spectrum of the traditional Left-Right-Centre ideologies including Fascism; Conservatism; Liberalism; Socialism; Communism; Anarchism are discussed, along with cross spectrum ideologies such as Feminism; Imperialism; Racism; Environmentalism. The course concludes with reference to post-modernist politics and its implications for the traditional ideological spectrum.

Courses: HU20, IF36, ED50

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 Hou

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 nonmarket 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

# 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: ED22, ED50, ED67

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: IF24, IF25

Prerequisites: 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 through 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 abstract services; clectronic 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: 2 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: IF69 Prerequisites: HRB131 or HRN105 Credit Points: 12 Contact Hours: 3 per week

# ISB170 INTRODUCTION TO COMPUTING

The 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: CN41, CN43

Credit Points: 6 Contact Hours: 2 per week ■ ISB180 COMPUTER APPLICATIONS

The role of computer and information systems in the context of the building and construction industries. It includes an overview of the terminology and concepts of computing, communications, and information systems technologies and an introduction to computer applications packages such as microcomputer spreadsheets software.

Courses: CN31, CN32, CN33

Credit Points: 4 Contact Hours: 2 per week

#### ISB183 INTRODUCTION TO COMPUTERS IN PLANNING

The role of computer and information systems in the context of urban and regional planning. It includes an overview of the terminology and concepts of computing, communications, and information systems technologies and an introduction to computer applications packages such as microcomputer word processing, spreadsheets and database software. **Course:** PS67

Credit Points: 4 Contact Hours: 1 per week

# ISB382 MICROCOMPUTER APPLICATIONS

The role of computer and information systems in the context of scientific and public health applications. It includes an overview of the terminology and concepts of computing, communications, and information systems (eg database) technologies and an introduction to computer applications packages such as microcomputer word processing, spreadsheets and database software. **Courses:** LS36, PU42, PU44, and PU45

Credit Points: 8 Contact Hours: 3 per week

### ■ ISB393 COMPUTER BASED INFORMATION SYSTEMS

Examination of the role of computer and information systems in the context of engineering applications. It includes an overview of the terminology and concepts of computing, communications, and information systems and an introduction to computer applications packages such as microcomputer word processing, spreadsheets and data base software.

Courses: EE44 and ME45

Credit Points: 4 Contact Hours: 2 per week

ISB863 DATABASE THEORY & TECHNIQUES

The 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

This unit includes the modelling of information systems; relational systems; fact oriented approaches; conceptual schema design.

Course: ED50 Prerequisite: ISB863 Co-requisite: ISB863 Condit Pointon 12 Contact House 2 converse

Credit Points: 12 Contact Hours: 3 per week

# ISB892 BUSINESS COMPUTING

The role of computer and information systems in the context of business and commercial applications. It includes an overview of the terminology and concepts of computing, communications, and information systems technologies and an introduction to issues related to the design, development, and management of information systems. It also includes an introduction to computer applications packages such as microcomputer word processing, spreadsheets and data base software.

Courses: AA21, BS20, BS50, ED50, IF31, PU48 Credit Points: 12 Contact Hours: 4 per week

### ISN380 INFORMATION SYSTEMS & QUALITY

Examination of 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, IF66 Credit Points: 6

# ■ ISP811 BOOKS & PUBLISHING

Examination of the 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 ITB002 COMPUTING PRACTICE (NOTE) 2** These units are 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: 3 per week

Contact Hours: 3 per week

# ■ ITB101 LABORATORY 1 (COMPUTING ENVIRONMENTS)

Professionals in information technology must have an ability to work in a variety of computing environments 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 use the basic functions of existing databases, wordprocessors and spreadsheets.

Courses: IF23, IF33, IF38, IF54, 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. Students are provided with a practical experience in the design, implementation and testing of software systems. Emphasis is 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, IF38, IF54, IT20

Prerequisites: ITB101, ITB210, ITB410

Credit Points: 12 Contact Hours: 3 per week

# ITB210 FORMAL REPRESENTATION

This unit provides a foundation with regard to the specification and implementation of information systems. As such, it gives an introduction to topics built on subsequent units, notably those in database and system analysis and design. Topics covered include models; facts; sets; relations; relational calculus; SQL; defining the database; referential integrity; knowledge; schemata; state transitions.

Courses: IF23, IF33, IF38, IF54, IT20

Credit Points: 12 Contact Hours: 3 per week



# ITB220 DATABASE DESIGN

Covers the 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, IF38, IF54, IT20, IT40 Prerequisite: ITB210 Credit Points: 12 Contact Hours

Contact Hours: 3 per week

## ITB221 LABORATORY 3 (COMMERCIAL PROGRAMMING)

Extends 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, IF38, IT20

Prerequisite: ITB210 & ITB410

Credit Points: 12 Contact Hours: 3 per week

# ■ ITB222 SYSTEMS ANALYSIS & DESIGN 1

The development of basic systems development skills by teaching a methodology and techniques of systems analysis and design and 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 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, IF38, IT20

Prerequisites: BSB103, ITB210

Credit Points: 12 Contact Hours: 3 per week

#### ITB223 LABORATORY 4 (4GL PROGRAMMING)

Introduction to 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 develop standards for comparing the applicability of one environment to another.

Courses: IF33, IF38, 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 ITB222. 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 indepth 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, IF38, IT20

**Prerequisite:** Successful completion of at least 72 credit points from the Information Systems major or in IF33.

Credit Points: 12

# ITB231 APPLICATIONS DEVELOPMENT

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. Requires students to re-examine major design, programming and planning issues within the context of a 4GL software environment.

Course: IT20Prerequisites: ITB223, ITB224Credit Points: 12Contact Hours: 3 per week

# ITB232 DATABASE MANAGEMENT

Examination of 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, IT40

Prerequisites: ITB233 or ITB421

Credit Points: 12 Contact Hours: 3 per week

# ■ ITB233 FILE STRUCTURES

Examination of file structures and their processing; The various forms of persistent storage (conventional disks, tapes and CDs); different approaches to file indexing; tree structured storage; the cost of accessing these structures is estimated.

Course: IF38, IT20, IT40

Prerequisites: ITB220, ITB221

Credit Points: 12 Contact Hours: 3 per week

# ITB235 MULTIMEDIA SYSTEMS TECHNOLOGIES

Image, sound and video now make up a new dimension in computer stored databases. The technical problems of dealing with these new media in a digital way pose a challenge to information technologists. This unit introduces interactive mulimedia system technologies and provides students with the basic knowledge required to contend with existing and future technical problems. Students integrate this knowledge in creating an interactive multimedia system. **Course:** IT20

Credit Points: 12 Contact Hours: 3 per week

#### ITB236 OBJECT-ORIENTATED ANALYSIS & DESIGN

The goal is to develop basic skills in methodologies and techniques of object-orientated analysis and design. Covers all phases of the object- orientated software development life cycle.

Course: IT20

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.

Course: IT20

Prerequisites: 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. The knowledge and skills relevant to these planning, organising and staffing responsibilities is covered.

## Courses: IF33, IF38, IT20

**Prerequisites:** Completion of at least 60 credit points from 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. Prerequisite: ITB222

Courses: BS50, IT20 Credit Points: 12 Contact Hours: 3 per week

# ITB243 KNOWLEDGE-BASED SYSTEMS

Examination of 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.

Course: 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 are offered as required and when the necessary expertise is available. See School of Information Systems announcements for details of topics being offered.

Course: IT20

Prerequisites: See School announcements.

Credit Points: 12 Contact Hours: 3 per week

# ITB246 UNIX & C

Introduction to the Unix operating system environment and to the C programming language. It covers the basics of both, and advanced topics relevant to software devel-opment under Unix and C. Emphasis is placed on the production of high quality software and documentation. Course: IT20 Prerequisites: ITB410, ITB412 Credit Points:12 Contact Hours: 3 per week

# ITB247 PROJECT

This unit 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

Prerequisites: Completion of at least 60 credit points from the Information Systems major.

# Credit Points: 12

#### ITB249 THEORETICAL FOUNDATIONS OF DATABASE SYSTEMS

Covers the 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 Prerequisite: ITB220 Credit Points: 12 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, IF38, IF54, 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, IF54, IT20 Prerequisite: ITB102 Co-requisite: ITB220

Credit Points: 12 Contact Hours: 3 per week

# ITB321 SYSTEMS ANALYSIS

Information management draws on systems analysis as a central resource. Many of the techniques applied in systems analysis translate to information management. This unit provides an introduction to all phases of the classical systems development life cycle: this gives 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: IF54, IT20

Credit Points: 12 Contact Hours: 3 per week

# ITB322 INFORMATION RESOURCES

Examination of the ability to obtain accurate, up-todate, business information on an ongoing basis which is today accepted as an important component of competitive success. A variety of computer and documentary sources are investigated, and information retrieval techniques are learnt.

Course: IT20 Prerequisite: ITB310 Credit Points: 12

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, including data dictionary and repository maintenance, thesaurus construction and maintenance, and interface development for Internet tools.

Courses: IF52, IF54, IT20 Prerequisites: ITB320 Co-requisite: ITB520

Credit Points: 12 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. Exploration of 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, IF54, IT20 Prerequisite: ITB322 Credit Points: 12 Contact Hours: 3 per week

# ITB331 INFORMATION MANAGEMENT 2

Covers 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, IF54, IT20 Prerequisite: ITB310 Credit Points: 12 Contact Hours: 3 per week

# ITB340 PROJECT

The ability to apply knowledge and skills to real-life situations is essential for information management professionals. A one semester project, under academic supervision, is considered useful in developing students' ability to apply their skills. Course: IT20



**Prerequisites:** Completion of at least 72 credit points from the Information Management major. **Credit Points:** 12

ITB341 INFORMATION MANAGEMENT 3

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 and enterprise information modelling. Functions and practices of management that relate to provision of information services, and utilisation of technology to support them. **Courses:** IF52, IF54, IT20 **Prerequisite:** ITB331 **Credit Points:** 12 **Contact Hours:** 3 per week

## ITB342 SPECIAL TOPIC (INFORMATION MANAGEMENT)

Covers aspects of information management of specific interest at that time. Makes allowances for significant developments or emphasis in information management not included in the remainder of the course program.

Course: IT20Prerequisites: Topic DependantCredit Points: 12Contact Hours: 3 per week

#### ITB343 MULTIMEDIA

Course: IT20 F Credit Points: 12

 Prerequisites: Topic dependant

 s: 12
 Contact Hours: 3 per week

# ITB348 PROJECT

Allows students to undertake a large project in one semester.

Course: IT20 Credit Points: 24

# 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

**Prerequisites:** 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)

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 and enterprise information modelling. Functions and practices of management that relate to provision of information services, and utilisation of technology to support them are dealt with. 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 **Prerequisite:** ITB331 **Credit Points:** 12 **Contact Hours:** 3 per week

#### ITB352 LABORATORY 4H (INFORMATION SUPPORT METHODS & EVALUATION)

Provides practical exposure to a range of techniques that are used to support information management implementations including data dictionary and repository maintenance, thesaurus construction and maintenance and interface development for Internet tools. 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.

# Course: IT20 Prerequisites: ITB320 and ITB520 Credit Points: 12 Contact Hours: 3 per week

#### ITB410 SOFTWARE DEVELOPMENT 1

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. Introduces the student to the need for software quality management and control during software development.

Courses: IF23, IF33, IF38, IF54, IT20 Co-requisite: ITB101 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. Provides the foundation knowledge for the external and internal perspective of software modules in a system context. Provides students with an understanding of modules in the context of programmable 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 are examined. **Courses:** IF23, IF33, IF38, IF54, IT20

Prerequisite: ITB410

Credit Points: 12 Contact Hours: 3 per week

# ITB412 TECHNOLOGY OF INFORMATION SYSTEMS

Computer hardware and system software 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; hard-wired versus microprogrammed control; i/o and secondary storage devices; advanced computer architectures; networking.

Courses: IF23, IF33, IF38, IF54, IT20

Credit Points: 12 Contact Hours: 3 per week

# ITB420 COMPUTER ARCHITECTURE

Extends the introductory treatment of computer hardware and system software given in the prerequisite unit. A study of the following concepts: virtual machine architecture, device handling and memory management. Courses: IF23, IT20 Prerequisite: ITB412 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. Builds upon the concepts of encapsulation and abstraction which were introduced in ITB411 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
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#### ITB422 LABORATORY 3 (ADTS IN A UNIX ENVIRONMENT)

Extends students' knowledge of the Unix environment and introduces the language C, with an emphasis on the implementation of ADTs in that language. Students obtain extensive experience with this important practical language, including documentation and report

UNIT

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 & ITB102

Credit Points: 12 Contact Hours: 3 per week

# ITB423 LABORATORY 4 (SOFTWARE DEVELOPMENT)

Consolidates the software engineering principles studied in earlier units as well as augmenting the material in ITB424. Provides students with an opportunity to work in small groups on a major project which requires them to take a problem from statement to a well documented and researched solution.

Course: IF23, IT20 Prerequisites: ITB422, ITB424 Credit Points: 12 Contact Hours: 3 per week

# ITB424 SOFTWARE ENGINEERING PRINCIPLES

Examination of the problems of developing and maintaining reliable large scale software product and the techniques needed to overcome them, as students need to appreciate the seriousness of the problem, and the value of a disciplined approach to the solution. Students are made 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

Examination of 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 multiprocessor UNIX systems.

Courses: IF23, IT20 Credit Points: 12 Contact Hours: 3 per week

# ITB431 PROGRAMMING LANGUAGE PARADIGMS

Introduction to non-procedural language paradigms; viz functional logical and object-oriented programming techniques. Each is studied in the context of a wellknown computer language with its computational environment. A major component of this unit is laboratory based. For each paradigm substantial program development is included.

Courses: IF23, IT20 Prerequisite: ITB411 Credit Points: 12 Contact Hours: 3 per week

# 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 recognisors in stylised, reusable code.

Courses: IF23, IT20 Prerequisite: ITB421 Credit Points: 12 Contact Hours: 3 per week

# **ITB441 GRAPHICS**

Examines the nature of computer graphics hardware and software and 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 FOUNDATIONS OF ARTIFICIAL INTELLIGENCE

As 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. 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 Provesuisites: ITP422 or ITP412

Prerequisites: ITB422 or ITP413 Credit Points: 12 Contact Hours: 3 per week

# ITB444 SPECIAL STUDIES 1 ITB445 SPECIAL STUDIES 2

Aspects of current scientific interest; making allowances for significant developments in computing science not provided for in the remainder of the course program. Details of topics are published before the start of each semester.

Courses: IF23, IT20

Credit Points: 12 Contact Hours: 3 per week

# ITB446 PROJECTITB447 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, 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. 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

**Prerequisites:** Completion of at least 72 credit points from the Computing Science major **Credit Points:** 12

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# ITB448 OBJECT TECHNOLOGY

Examination of 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 reusable 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

Formal mathematical logic is the main theme of this unit. Some fundamental theories in the formal representation of domain knowledge is introduced. The introductory topics include: propositional and predicate logic, resolution, temporal logic, fuzzy logic and connectionist knowledge representation themes. This unit is designed to establish a strong theoretical foundation for students who will work in knowledge and engineering

Courses: IF23, IT20

Credit Points: 12 Contact Hours: 3 per week

#### ITB450 ADVANCED COMPUTER ARCHITECTURE

A continuation of the material introduced in the units ITB412 and ITB420. 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. 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: IF23, IF33, IT20 Prerequisite: ITB420 Credit Points: 12 Contact Hours: 3 per week

# ITB451 PROJECT

Enables 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. See ITB446/7 for a general description of project units.

#### Course: IT20

Prerequisites: 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 has a significant research component in addition to the practical development of a system of greater size and complexity than previously undertaken by a student. See ITB446/7 for a general description of project units.

#### Course: IT20

Prerequisites: Completion of at least 72 credit points from the Computing Science major and ITB440. Credit Points: 24

# ITB453 PROJECT

This unit allows students to undertake a large project in one semester. See ITB446/7 for a general description of project units.

# Course: IT20

Prerequisites: Completion of at least 60 credit points from the Computing Science major

Credit Points: 24

#### ITB454 SOFTWARE QUALITY ASSURANCE

Software quality assurance is concerned with ensuring that software products are of high quality, and that the software development process supports the production of high quality software. In this unit it is presented as an integral part of software development, affecting all stages of the life cycle of a software product. Practical work focuses on the techniques and tools for defining, measuring and achieving high quality software products; and for helping to increase overall productivity. Course: IT20 Prerequisite: ITB424

Credit Points: 12 Contact Hours: 3 per week

#### **ITB455 INTEGRATED SOFTWARE** ENGINEERING ENVIRONMENT

Provides a thorough understanding of the rationale for the use of software tools in the software engineering process. The information stored in various software engineering constructs and the software tools used to aid their construction are examined. The interrelationship between the information generated in the software engineering process will also be examined. In the light of this examination, the relationship between the various software tools can be defined. Existing software tools and methodologies will also be examined and evaluated. Implementation issues for a fully integrated software engineering environment are examined by inspecting the implementation of one or more software engineering tools.

Course: IT20 Credit Points: 12

**Prerequisite: ITB424** Contact Hours: 3 per week

**ITB456 INTELLIGENT GRAPHIC USER** INTERFACES

Introduction to the design and construction of GUIs. Conventional User Interfaces (CUIs) and graphical techniques are discussed as the basis for the development of GUIs. Although a computing science perspective is employed in the approach to the topics treated in this unit, influences from other disciplines are discussed. Course: IT20 Prerequisite: ITB424

Credit Points: 12

Contact Hours: 3 per week ITB457 FUNCTIONAL PROGRAMMING

Introduction to an alternative programming language and method of programming. An emphasis is placed on two important new techniques for building programs: higher order functions and hazy evaluation. Application areas include: AI, symbolic processing, rapid protyping and reusable software design.

Course: IT20 Prerequisite: ITB421 Credit Points: 12 Contact Hours: 3 per week

#### **ITB461 FOUNDATIONS OF** NEUROCOMPUTING

Presents the neurocomputing paradigm and explains the biological concepts on which it is based. Focus on how neurocomputing complements the tools of the computing professional; demonstrates that neurocomputing is an inherently parallel computing method. Discusses the strengths and limitations of the most used neural network architectures and training methods; reviews neural network hardware. Course: IT20

Credit Points: 12 Contact Hours: 3 per week ITB462 COGNITIVE SYSTEMS

### Expert systems, natural language processing (with the exception of speech recognition), reasoning, high-level vision, planning and learning. Symbolic as well as neurocomputing methods, and hybrid systems, and is open to extensions.

Prerequisites: ITB442, ITB461 Course: IT20 Credit Points: 12 Contact Hours: 3 per week



# UNIT OPSES

# ITB463 PATTERN RECOGNITION

Focus on pattern recognition problems using the three main approaches: statistical, syntactical and neurocomputing. It demonstrates two applications of pattern recognition: speech recognition and image analysis and description.

Course: IT20 Prerequisites: ITB442, ITB461 Credit Points: 12 Contact Hours: 3 per week

# ITB520 DATA COMMUNICATIONS

An introductory treatment of the major topics and issues in data communications including the terminology and concepts of data and telecommunications networks, the services and architectures; the facilities and functions of the data and telecommunications products and services used in national and international communications networks; the main issues in the design, management, security and control of data and telecommunications networks and services; and the social, political, and economic effects of communications technologies.

Courses: BS50, IF38, IF54, IT20

Credit Points: 12 Contact Hours: 3 per week

# ITB521 LABORATORY 3 (COMPUTER NETWORKS)

Provides a practical study of the current network protocols in use today. Topics include the installation, configuration, management, performance and security of communication products and services. Students gain a theoretical understanding of the transport protocols for internetworking via repeaters, bridges, routers, and gateways; and also an understanding of the application services and protocols provided by different LANs.

Course: IT20 Co-requisite: ITB522 Prerequisite: ITB411

Credit Points: 12

Contact Hours: 3 per week

#### ITB522 ADVANCED DATA COMMUNICATIONS

Topics covered include data link protocols, transport layer services, upper layer services; data communications network design and management (techniques and case studies); performance modelling of communications networks; evaluation of data communications products and services (mostly Australian-based); data communications software design and implementation; provision of integrated communications services (voice, data, video, etc); LAN/WAN integration; high speed networking; internetworking and network management. **Course:** IT20 **Prerequisites:** ITB520, ITB410 **Credit Points:** 12 **Contact Hours:** 3 per week

# ITB530 TRANSPORT PROTOCOLS

Students study the principles, protocols, and architectures of internetworking. Topics include: routing strategies used by bridges and gateways; security and management of routing data over global networks; network interface design; and error and flow control. **Course:** IT20 **Prerequisites:** ITB521 & MAB177 **Credit Points:** 12 **Contact Hours:**3 per week

# ITB531 APPLICATION SERVICES

A study of 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. Other topics include abstract syntax notation; profiles for government, office and manufacturing; and security issues.

Course: IT20 Prerequisite:ITB522 Credit Points: 12 Contact Hours: 3 per week

#### ITB532 LABORATORY 4 (NETWORK MANAGEMENT)

Network management forms a vital part of the overall control and operation of computer networks and interconnection of these networks on a local, national or worldwide basis. Topics include: 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. **Courses:** IT20, IT40 **Prerequisite:** ITB521

Co-requisite: ITB531 Credit Points: 12 Contact Hours: 3 per week

# ITB533 COMPARATIVE NETWORK SYSTEMS

Various operating systems and the techniques used to perform interprocess communication. The client/server model is examined, address schemes, ports, sockets, remote procedure calls are programmed in the C language on UNIX, DOS and OS/2 systems.

Course: IT20, IT40 Prerequisite: ITB542 Credit Points: 12 Contact Hours: 3 per week

# ITB534 TELECOMMUNICATION MODELLING

The growing complexity of communication networks and services in the world today requires a detailed knowledge of how they perform and how they should be designed and managed in a cost effective way. This unit lays the foundations for a proper understanding of the factors involved. Covers the basic concepts and models used in teletraffic theory as they are applied to current telecommunication networks. Studies the mathematical techniques for achieving efficient, cost effective communication networks.

Course: IT20 Credit Points: 12 C

Prerequisite: MAB178 Contact Hours: 3 per week

# ITB541 TRANSMISSION TECHNIQUES

An examination of 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, BISDN, ATM.

Course: IT20Prerequisites: ITB520, MAB177Credit Points: 12Contact Hours: 3 per week

# ITB542 NETWORK PROGRAMMING

Students require a detailed understanding of the processes involved in the design, development, programming and management of communications software. The interprocess communications on various systems, the necessary practical skills to utilise the concepts of network programming, enable them to setup network facilities, develop and modify network code, and ethtes of network programming. Topics include: streams, sockets, remote procedure calls.

Courses: IT20, IT40 Prerequisites: ITB422 Co-requisite: ITB522

Credit Points: 12 Contact Hours:3 per week

# ITB543 DATA SECURITY

Information security within an organisation deals with the managerial and technical aspects involved in protecting the information. At the completion of this unit, students are able to demonstrate knowledge of the factors which impact upon the availability, integration and confidentiality of data; make a realistic assessment of the needs for data security in an organisation; discuss the implications of security decisions on the organisation's information systems. Course: IT20, IT40 Credit Points: 12

Prerequisite: ITB520 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

Prerequisites: 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

Prerequisites: Completion of at least 60 credit points from the Data Communications major.

Credit Points: 24.

# ITB546 SPECIAL STUDIES 1 ITB547 SPECIAL STUDIES 2

These units cover 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 are published before the start of each semester.

Course: IT20 Credit Points:12

Contact Hours: 3 per week

# ITB548 INTRODUCTION TO CRYPTOLOGY

This unit covers classical ciphers: modern symmetric ciphers; public key ciphers; practical cryptology. Courses: IF23, IT20, IT40, MA34, SC30, SC60. Prerequisites: MAB177 or MAB493 or MAB620 Credit Points: 12 Contact Hours: 3 per week

#### ITB549 ERROR CONTROL & DATA COMPRESSION

This unit covers data compression techniques; introduction to block codes; convolutional codes; cyclic codes and Reed-Solomon codes; coding techniques and applications.

Courses: IF23, IT20, IT40, MA34, SC30, SC60, Prerequisites: MAB177 or MAB493 or MAB620 Credit Points: 12 Contact Hours:3 per week

# ITB555 PROJECT

This unit allows students to undertake a large project in one semester.

Course: IT20

Prerequisites: Completion of at least 60 credit points from the Data Communications major. Credit Points: 24.

# I ITB560 INTRODUCTION TO CRYPTOLOGY

This unit covers number theory; finite field theory; information theory; classical ciphers; key ciphers and cryptology.

Courses: EE44, IF23 Credit Points: 7

Prerequisite:MAB493 Contact Hours: 4 per week

# ITB561 ERROR CONTROL & DATA COMPRESSION

This unit covers data compression technique; 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

# ITN100 RESEARCH METHODOLOGIES

Provides a basis for students to undertake a research project in the Honours and Masters program. Examines the nature of information technology and the specific research approaches which are commonly applicable to it. Students will learn how to review literature relevant to their research and how to select the research method most appropriate to their project. Provides the foundation skills required in research: critical reviewing, analysis and writing.

Courses: IT30, IT40

Credit Points: 12 Contact Hours: 3 per week

# ITN110 PROJECT (HONOURS)

Designed to enable a student to pursue, in some depth, a particular area of interest, either professional or personal, in information technology.

Courses: IT30 Co/prerequisite: ITN100 Credit Points: 12

# ITN120 DISSERTATION

Designed to enable students to undertake significant research work in a particular area of information technology

Courses: 1T30 Credit Points: 24 Prerequisite: ITN100

# ITN130 DISSERTATION (PART-TIME)

Designed to enable students to undertake significant research work in a particular area of information technology.

Course: IT30 Credit Points: 24

# ITN140 PROJECT

Designed to enable a student to pursue, in some depth, a particular area of interest, either professional or personal, in information technology. Courses: IT40

Credit Points: 48

ITN150 PROJECT (PART-TIME)

Refer to ITN140.

Course: IT40 Credit Points: 48

#### **ITN210 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 systems 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 program. This unit describes how such statements may be specified in the Z notation and implemented in SQL.

# Courses: IT40

Credit Points: 12 Contact Hours: 3 per week

ITN211 SYSTEMS ANALYSIS AND DESIGN For the creation of a useful and unable information system, it is essential that the feasibility of the system has



UNIT SYNOPSES

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.

Courses: IT40Co/Prerequisite: ITN210Credit Points: 12Contact Hours: 3 per week

#### ITN220 MAJOR ISSUES IN INFORMATION SYSTEMS

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.

Courses: IF64, IT40

Credit Points: 12 Contact Hours: 3 per week

# ITN221 OBJECT-ORIENTED ANALYSIS AND DESIGN

The goal is to develop basic skills in methodologies and techniques of object-oriented analysis and design. Covers all phases of the object-oriented software development life cycle.

Courses: IT30, IT40

Prerequisites: ITB222 or equivalent

Credit Points: 12 Contact Hours: 3 per week

# ITN230 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

Courses: IT30, IT40

Prerequisites: ITB232 or equivalent

Credit Points: 12 Contact Hours: 3 per week

# ■ ITN231 KNOWLEDGE-BASED SYSTEMS

This unit assumes a background in conventional systems concepts, programming and database, and an exposure to fundamental expert systems concepts. 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 base; and (d) methodological: questions associated with the definition, design and control of knowledge-based systems.

Courses: IT30, IT40 Prerequisite: ITB243 or equivalent Credit Points: 12 Contact Hours: 3 per week

# ■ ITN241 ADVANCED TOPICS IN HUMAN-COMPUTER INTERACTION

The most significant issues and activities of human computer interaction 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 review 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 difference aspects of human computer interactions and are aware of future developments in this field.

Courses: IT30, IT40

Prerequisite: ITB224 or equivalent

Credit Points: 12 Contact Hours: 3 per week

#### ■ ITN242 DISTRIBUTED TRANSACTION MANAGEMENT SYSTEMS

Distributed transactions management systems are the object of active research. Data sharing makes imperative the need to address the problem of making different transaction managers talk to each other in homogeneous and heterogenous environments. Therefore, the techniques which are covered in this unit have a far reaching benefit as far as mastering the technology of the next generation database systems.

Courses: IT40 Prerequisites: ITB232 & ITN243 Credit Points: 12 Contact Hours: 3 per week

#### ITN243 ACCESS METHODS FOR INFORMATION SYSTEMS

Modern information systems are built around fast access methods and flexible structuring mechanisms. In this unit these techniques are studied using both analysis and experimentation. Trees, lists, tables, hashing and stacks are reviewed. Extensible hashing, K-d trees, quadtrees, multiattribute hashing and signature files are studied.

Courses: IT30, IT40

Prerequisite: ITB246 or equivalent Credit Points: 12 Contact Hours: 3

Credit Points: 12 Contact Hours: 3 per week

ITN244 SPECIAL TOPIC 1

# ITN245 SPECIAL TOPIC 2

These units are designed to allow for the significant development of, or emphasis in, information systems not dealt with in other course units. Selected topics and study areas are offered as required and when the necessary expertise is available. See School of Information Systems announcements for details of topics being offered.

Courses: IT30, IT40

Prerequisites: See School announcement.

Credit Points: 12 Contact Hours: 3 per week

# ITN250 DISTRIBUTED DATABASE SYSTEMS

Distributed DBMS architectures, data replication and fragmentation; query decomposition and optimisation; transaction management in distributed settings; distributed concurrency control; recovery and multidatabases.

Courses: IT30, IT40

Prerequisites: ITB232 & ITN243

Credit Points: 12 Contact Hours: 3 per week

# ■ ITN340 INFORMATION AGENCIES

In-depth understanding of the history and development of information agencies and their services, to enable approaches to their advancement based upon performance analysis and analysis of user needs.

Courses: IF64, IT30, IT40

Credit Points: 12 Contact Hours: 3 per week

# ITN341 INFORMATION POLICY AND PLANNING

The relationship between the public and private sectors in information provision, and an examination of the information industry and corporate and government policies relating to it.

Courses: IF64, IT30, IT40

Credit Points: 12 Contact Hours: 3 per week

# ITN342 INFORMATION SCIENCE

An understanding of theories and principles that have been adopted from a variety of disciplines and which together give some pointers towards a model for information and communication theory.

Courses: IT30, IT40 Credit Points: 12

Contact Hours: 3 per week



# ITN410 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.

Courses: IT40

Credit Points: 12

# Contact Hours: 3 per week

# ■ ITN411 SYSTEMS ARCHITECTURE AND OPERATING SYSTEMS

Computer organisation; the nature and roles 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.

Courses: IT40 Co-requisite: ITN410 Credit Points: 12 Contact Hours: 3 per week

### ITN420 COMPARATIVE PROGRAMMING LANGUAGES

Language is the fundamental conceptual tool and means of expression within information technology so its principles need to be understood and the similarities and differences between different languages appreciated. This unit provides an understanding of the languages currently used and, importantly, in what directions they can be expected to develop. Language is also the major technical support for software engineering principles so can be seen as a large part of the solution to current and future software engineering problems.

Courses: IT30, IT40

Prerequisites: Knowledge of ADT's

Credit Points: 12 Contact Hours: 3 per week

# ITN421 SOFTWARE SPECIFICATION

The use of formal methods is viewed as an integral part of the software engineering process. The unit includes formal specifications and uses the laws of refinement to derive Modula-2 code. Later temporal logic to deal with real-time issues is introduced.

Courses: IT30, IT40

Credit Points: 12 Contact Hours: 3 per week

#### ITN430 ADVANCED OPERATING SYSTEMS

This unit has two themes: the nature, design and implementation of realtime systems on the one hand, and the nature of object oriented programming environments and operating systems on the other. Students are expected to be familiar with systems programming and object oriented concepts.

Courses: IT30, IT40

Prerequisites: ITN410 & ITN411(IT40 only)

Co-requisites: ITB430

Credit Points: 12 Contact Hours: 3 per week

# ITN431 DISTRIBUTED SYSTEMS

The rationale for distributed computer systems, their domain of application and the principles of distributed control underlying their construction. A number of representative systems are examined.

Courses: IT30, IT40 Co/Prerequisite: ITB430 Credit Points: 12 Contact Hours: 3 per week

#### ITN440 ADVANCED GRAPHICS

Advanced level extension of the material in the undergraduate curriculum; the use of facilities provided by existing graphics systems.

Courses: IT30, IT40 Credit Points: 12 Prerequisite: ITB441 Contact Hours: 3 per week

## ITN441 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 a major impact on the use of computers in the near future. Courses: IT30, IT40 Prerequisite: ITB442

Courses: IT30, IT40 Prerequisite: ITB442 Credit Points: 12 Contact Hours: 3 per week

# ■ ITN442 COMPILER CONSTRUCTION

The organisation and structure of language translator 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: IT30, IT40 Prerequisite: ITB440 Credit Points: 12 Contact Hours: 3 per week

# ITN443 NEUROCOMPUTING

An introduction to the principles upon which current artificial neural network computing is based, giving examples of current applications, and exploring the potential future development of the technology . Courses: IT30, IT40

Credit Points: 12 Contact Hours: 3 per week

# ITN444 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: IT30, IT40

Credit Points: 12

Contact Hours: 3 per week

# ITN445 PATTERN RECOGNITION

Introduction of new methods for producing more powerful software for tasks traditionally considered as requiring intelligence. Hands on experience is provided by computer simulations exercises and assignments using MATLAB.

Courses: IT30, IT40

Prerequisites: ITB442 & ITB461 or equivalent Credit Points: 12 Contact Hours: 3 per week

## ITN446 PROJECT

Students may pursue a specialised area or broaden their knowledge in areas of relevance to their employment. Topic is decided by agreement between the student and a staff member acting as supervisor.

#### Courses: IT40

Prerequisites: At least 72 credit points completed Credit Points: 12 Contact Hours: 3 per week

#### ITN447 SPECIAL STUDIES

Aspects of current scientific research interest; it makes allowances for significant developments in computing science not provided for in the remainder of the course program. See noticeboard for further information. **Courses:** IT30, IT40**Prerequisites:** Topic dependent

Credit Points: 12 Contact Hours: 3 per week

# ITN510 DATA NETWORKS

Basic data communications and topics of fundamental importance concerning the technology and architecture of data networks at a postgraduate level. It emphasises communications software and hardware, telecommunication services, local area networks, wide area networks, interconnectivity and network management. **Courses:** IT40

Credit Points: 12

Contact Hours: 3 per week



# ITN520 INTERNETWORKING

Students entering the field of computer networks are expected to possess practical skills in various aspects of the installation and management of communications systems, particularly local area networks.

Courses: IT40 Prerequisite: ITN510 Credit Points: 12 Contact Hours: 3 per week

# ■ ITN521 NETWORK APPLICATIONS

Students will study the distributed application services offered by open networking technologies. The international standards pertaining to these distributed application services will also be studied (mainly those using the OSI and TCP/IP communications technologies). Students will also gain insight into future industry trends in the area of open systems.

Courses: IT40Prerequisites: ITN510Credit Points: 12Contact Hours: 3 per week

# ITN530 CORPORATE TELECOMMUNICATIONS

The issues of design, control, security and management of enterprise-wide networks. The corporate network encompasses integrating a company's telecommunications systems, including local area networks, metropolitan area networks, wide area networks (national and international), voice networks, and other special services.

Courses: IT30, IT40 Prerequisites: ITN510 Credit Points: 12 Contact Hours: 3 per week

# ITN531 NETWORK 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 a 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: IT30, IT40

Prerequisites: ITB543 or ITB548

Credit Points: 12 Contact Hours: 3 per week

#### ITN540 ADVANCED NETWORK TECHNOLOGIES

Details the latest network technologies for moving information across the room or across the world. Investigates the network protocols used in the transport of information using this new hardware.

Courses: IT30, IT40

Prerequisites: ITN510 or ITN522

Credit Points: 12 Contact Hours: 3 per week

#### ITN553 OS SECURITY AND MANAGEMENT

Computer professionals need to be able to identify, assess, and advise on the security features (in particular the enforcement techniques used) in computer systems. **Courses:** IT30, IT40 **Co-requisites:** ITN531 **Credit Points:** 12

# ITN554 SPECIAL TOPIC

An advanced topic in data networks is studied in detail. The topic concerned will depend on the interests of the faculty member or visitor responsible for the unit in any semester in which the unit is offered.

Courses: IT30, IT40

Prerequisites: Approval of Head of School of Data Communications

Credit Points: 12 Contact Hours: 3 per week

# ITN555 SPECIAL TOPIC

Refer to ITN554 Course: IT30

Credit Points: 12

#### ITN556 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: IT30, IT40 Prerequisite: ITN554 Credit Points: 12 Contact Hours: 3 per week

# ITP310 SYSTEMS ANALYSIS

This unit provides an introduction to all phases of the classical systems development life cycle: this gives students a balanced overview of the process of analysing information systems, while ensuring that students develop the necessary skills to apply the major techniques. **Course:** IS25

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 description, classification and subject analysis of information in print media using AACR2 (1988 revision), DDC, and LCSH. Other related topics are mentioned briefly, eg. LCC, MARC, ABN, and other efforts.

Course: IS25, IT20 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, IT20

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

Prerequisites: 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 Credit Points: 12 Prerequisites: ITP311, ITP313 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 Credit Points: 12 Prerequisite: ITP312 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: IS25Prerequisite: ITP313Credit Points: 12Contact 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 are offered as required and when the necessary expertise is available.

Course: IS25

Prerequisites: 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 are offered as required and when the necessary expertise is available.

Course: IS25

Prerequisites: 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

**Prerequisites:** To be determined by the nature of the study.

Credit Points: 8 Contact Hours: 2 per week

### **21** 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

■ ITP326 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

Prerequisites: To be determined by the nature of the study.

Credit Points: 12 Contact Hours: 3 per week

# **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, LW41

Credit Points: 12 Contact Hours: 3 per week

# **JSB102 SOCIAL ETHICS & THE JUSTICE** SYSTEM

The ethical domain, the significance of ethics for the



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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, LW41

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.

Course: J\$31

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 writen tasks.

Courses: JS31, LW41

Credit Points: 12 Contact Hours: 3 per week

# 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, LW41

Credit Points: 12 Contact Hours: 3 per week

# **JSB107 INTRODUCTION TO** CRIMINOLOGY

An examination of the theories of crime and criminality. The nature, scope and objects of criminology; general introduction to criminological theory: classical and neoclassical theories; the positivist school; physical and biological factors and theories; psychological and psychiatric explanations; crime as a social phenomenon; radical or critical criminology; feminist criminology; post-modern criminology; theory, research and policy. **Courses:** JS31, LW41

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. Topics include: creative problem solving and goal attainment; interprofessional cooperation in problem situations; basic social science research methodology; and the use of computers in research.

Courses: JS31, LW41

# 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. Course: JS31

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, LW41

**Prerequisites:** JSB103, JSB109, (prerequisites waived for LW41 students).

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, LW41 Prerequisite: JSB101 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, LW41 Prerequisite: JSB105 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, LW41 Prerequisite: JSB201 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, LW41 Prerequisites: JSB108, JSB109

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, LW41 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 Credit Points: 12 Contact Hours: 3 per week

# **JSB213 PROTECTIVE SECURITY** THEORY & APPLICATION

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 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, LW41 Prerequisite: JSB108 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, LW41 Prerequisite: JSB108 Credit Points: 12 Contact Hours: 3 per week

#### JSB216 CURRENT ISSUES IN ADMINISTRATIVE LAW & JUSTICE

Introduces students to the role of the State in the public sphere, its powers and its responsibility to individuals and the need for accountability and the function of justice professionals in protecting the public interest. During the course of this unit Western political and philosophical traditions are examined in order to enhance student's understanding of State action in a political context. This unit provides the theoretical framework necessary for the exploration of the Administrative Justice minor but is also an appropriate elective for students interested in the area.

Courses: JS31, JS33, LW41 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, LW41 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, LW41 Prerequisite: JSB108 Credit Points: 12 Contact Hours: 3 per week

#### JSB220 INTELLIGENCE ACTIVITY: LAW, MORALITY & THE MEDIA

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 Prerequisites: JSB108 Credit Points: 12 Contact Hours: 3 per week

# JSB221 INTELLIGENCE & NATIONAL SECURITY

Examination of the concept of national security and development of 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 Prerequisites: JSB108 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 Prerequisites: JSB108 Credit Points: 12 Contact Hours: 3 per week

#### JSB225 INTELLIGENCE, ORGANISATIONS, PERSONNEL & OPERATIONS

Examination of 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 re-

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source 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

Prerequisites: JSB108 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 Prerequisites: JSB108 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 provides students with a clear understanding of the law relating to the gathering of evidence, interrogation and admissibility of evidence in court. Study includes 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 enquires such as 'Operation Trident' enquiry are also be explored.

Courses: JS31, JS33, LW41 Prerequisite: JSB204 Credit Points: 12 Contact Hours: 3 per week

# JSB302 IDEOLOGY, ETHICS & JUSTICE

Examination of the notion and related concepts of ideology and how they shape, constrain and drive theories of justice and social policy. The focus is on integrating ethical reflection with application to various spheres of public policy to do with welfare, economics, law and order and the environment.

Courses: JS31, JS33, LW41 Prerequisite: JSB102 Credit Points: 12 Contact Hours: 3 per week

# JSB303 HUMAN DYNAMICS: THE JUSTICE PROFESSIONS

This unit is designed to acquaint students with the nature of the unique stresses within the justice professions and law enforcement agencies and to equip students with coping skills. Consideration is 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 are also be examined. Students are required to undertake independent research study.

Courses: JS31, JS33, LW41 Prerequisite: JSB203 Credit Points: 12 Contact Hours: 3 per week

# ■ JSB304 CRIMINOLOGY 2

Examination of the theories of punishment. Having defined punishment and the nature and limits of the criminal law students assess the traditional justifications for punishment: retribution and just deserts, deterrence, rehabilitation and elimination and incapacitation. Justifications for severity of punishment, the control of judicial discretion and the political significance of punishment are examined. Options for reform are also canvassed.

Courses: JS31, JS33, LW41 Prerequisite: JSB107 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 socalled 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 gain an understanding of the historical development, social perceptions and consequences and the perceived extent of organised crime. Students 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, LW41 Prerequisite: JSB108 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 are studied.

Courses: JS31, JS33, LW41 Prerequisite: JSB108 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 are 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, LW41 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. 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, LW41 Prerequisite: JSB108 Credit Points: 12 Contact Hours: 3 per week

### ISB314 PUBLIC LAW 1: HUMAN RIGHTS

This unit is of central importance in any course about law and the administration of justice. It provides a basis for the examination of some of the main issues of human rights and how this effects the operation of law. Its focus is 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 includes: the nature of human rights; existing Australian legislation on human rights; civil and political rights; economic, social and cultural rights. Courses: JS31, JS33, LW41 Prerequisite: JSB108

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

#### JSB316 PUBLIC LAW 2: 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, LW41 Prerequisite: JSB108 Contact Hours: 3 per week Credit Points: 12

#### 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, LW41 Prerequisite: JSB108 Contact Hours: 3 per week Credit Points: 12

# 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, LW41 Prerequisite: JSB108 Contact Hours: 3 per week Credit Points: 12

#### JSS001 THE LAW & LEGAL INSTITUTIONS

Provides students with a sound knowledge of relevant legal institutions and procedures, as well as assists students to develop an ability to analyse and critique both the strengths and weaknesses inherent in our legal system. In so doing, the unit traces the development of law in Australia from its early beginnings to the present, as an outcome of meeting the needs of a changing society. Course: ED50

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 analysing socio-legal 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.

Prerequisite: JSS001 Course: ED50 Contact Hours: 3 per week Credit Points: 12

#### 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.

Prerequisites: JSS001 Course: ED50 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, JSS004 Credit Points: 12 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

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



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 TEACHING ADOLESCENT 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.

Prerequisite: HUB100 Course: ED50 Credit Points: 12 Contact Hours: 3 per week

# LAB325 ENGLISH CURRICULUM STUDIES 1

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.

### Courses: ED50, ED54

Prerequisites: 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

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.

Courses: ED50, ED54 Prerequisite: LAB325 Credit Points: 12 Contact Hours: 3 per week

# LAB327 FILM & MEDIA CURRICULUM STUDIES 1

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.

# Courses: ED50, ED54

Prerequisites: 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**

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.

Prerequisite: LAB327 Courses: ED50, ED54 Credit Points: 12 Contact Hours: 3 per week

# LAB329 LOTE CURRICULUM STUDIES 1

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. Courses: ED50, ED54

Prerequisites: Normally the completion of 48 credit points in each relevant discipline area.

Contact Hours: 3 per week Credit Points: 12

# LAB330 LOTE CURRICULUM STUDIES 2

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.

Prerequisite: LAB329 Courses: ED50, ED54 Credit Points: 12 Contact Hours: 3 per week

## LAB331 LANGUAGE PROGRAMMING & ASSESSMENT

Development of 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 The relationship between language and learning; 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 LAB335 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 audiovisual 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 Credit Points: 12

#### Prerequisite: LAB336 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

# LAB339 ADULT LITERACY AND SECOND LANGUAGE LEARNERS

Explores the special literacy needs of second language learners and investigates teaching approaches which recognise these needs and develop cross-cultural awareness and communication strategies. Topics include a comparison of first and second language literacy; the relationship between second language oracy and literacy; issues in cross-cultural communication; the literacy impact for non-English speaking background learners of current policy initiatives and workplace practices needs analysis in second language literacy course design.

Course: ED54

Credit Points: 12 Contact Hours: 3 per week

# LAB340 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, ED54

Credit Points: 12 Contact Hours: 3 per week

# LAB410 LANGUAGE CURRICULUM ISSUES

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 P-12 teacher. 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

**Prerequisites:** 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

oints: 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 current 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

**Prerequisites:** Studies in the teaching of reading at Diploma of Teaching level.

Credit Points: 12 Contact Hours: 3 per week

#### LAB445 LANGUAGE LEARNING THROUGH FLIP

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

12 Contact Hours: 3 per week

#### LAN602 FUNCTIONAL GRAMMAR AND DISCOURSE

An introduction to functional grammar and discourse semantics. These provide tools for analyses of how texts make meaning – whether spoken or written, whether for pedagogical or research purposes.

Courses: ED13, ED11 Credit Points: 12

#### LAN608 SECOND LANGUAGE ACQUISITION

Research into second language acquisition is providing new insights into the complex processes involved in natural and instructed language development. This unit extends participants' knowledge of research into, and theories of, second language acquisition, and explores pedagogical implications and the relevance of research and theories to the enhancement of second language acquisition and learning.

Courses: ED14,ED13, ED11 Credit Points: 12

#### LAN611 ADULT AND WORKPLACE LITERACY AND NUMERACY

An exploration of how the field of adult literacy and numeracy has evolved; the changing nature and roles of literacies and numeracies in contemporary societies;


how literacy and numeracy practices are embedded in particular settings, eg. workplaces, and how cultural, political and economic factors impinge on adult literacy and numeracy learning in different contexts.

Prerequisites: CUN605 Courses: ED13.ED11 Credit Points: 12

#### LAN612 PRINCIPLES OF SECOND 缀 LANGUAGE METHODOLOGY

The range of approaches to second language learning and the theories of language and learning which underpin them. Theories of language and learning and their implications for TESOL; the social context of learning and its impact on methodological decisionmaking; current approaches and methods in TESOL; the roles of teachers and learners in the TESOL classroom.

Courses: ED14

Credit Points: 12

#### LAN613 SECOND LANGUAGE CURRICULUM DESIGN OPTIONS

The factors which influence teachers in the development of language programs. Includes analysis of the following areas: learner profiles and needs; aims and objectives; processes and criteria for selecting methodology; content selection and sequencing; choice and evaluation of materials and resources.

Credit Points: 12 Courses: ED14

#### LAN614 RESEARCH METHODS IN SECOND LANGUAGE EDUCATION

This unit will introduce students to methods and techniques which are used by classroom teachers and language educators to undertake small and large scale research projects and to report research findings in journals and other publications.

Courses: ED14

Credit Points: 12

#### LAN615 DIRECTED READING IN SECOND LANGUAGE EDUCATION

This unit provides an opportunity for teachers and others involved in TESOL to review current research articles to gain an overview of developments in TESOL/ Applied Linguistics and to explore one or two personal interest areas in greater depth.

Courses: ED14

Credit Points: 12

#### LAN616 LANGUAGE ASSESSMENT AND PROGRAM EVALUATION IN TESOL

Theories and practices in program evaluation, language testing and proficiency assessment. It examines and evaluates standardised tests and instruments which are used to assess the English language proficiency of speakers for whom English is a second language. Courses: ED14 Credit Points: 12

LAN617 PERSONALISED LANGUAGE DEVELOPMENT

Language learning is a life long task. This unit allows teachers to take a program of language development aimed at improving their level of proficiency and enhancing their cultural awareness. Students wishing to take this unit should discuss options with the coordinator.

Courses: ED14

Credit Points: 12

#### LAN618 TECHNOLOGY AND SECOND 25 LANGUAGE LEARNING

The twentieth century has seen a rapid change in the technology available to language teachers. An exploration of the creative teaching potential of this technology in areas such as computer enhanced language learning (CELL), interactive multimedia (including CD-rom and video disc) and the use of linear video, word processing and audio materials. The unit will also

explore access to and pedagogical uses of electronic communication such as e-mail, list servers and bulletin boards.

Courses: ED14

Credit Points: 12

# LAN619 DISCOURSE ANALYSIS

When we use language to enact our everyday lives, to teach and to learn, we use texts to do so. This unit provides a means for analysing and understanding how texts make meaning linguistically. Students will engage in analysis and discussion of text level meaning via genre, register and cohesion; clause level meaning via Transitivity, Mood and Theme/Rheme; group level meaning making via nominal, verbal and prepositional groups, and the significant linguistic features of written as contrasted with spoken language.

Courses: ED14 Credit Points: 12

# LAN620 LANGUAGE AND CULTURE

The relationship between language and culture; that is, how language is a social phenomenon whose use varies according to context. This close relationship is particularly relevant in crosscultural settings such as the ESL classroom. Courses: ED14

Credit Points: 12

#### LAN621 TEXTUAL AND CULTURAL STUDIES FOR ENGLISH EDUCATION

A critical study of recent literary and cultural theories, curricular and teaching materials leads students to consider how curricula and pedagogy, teachers and learners have been variously constituted according to theoretical discourses of textuality and culture.

Courses: ED13,ED11 Credit Points: 12

#### 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.

Prerequisite: LAP401 Course: ED37 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 Credit Points: 12

Prerequisite: LAP403 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 Credit Points: 12

Prerequisite: LAP405 Contact Hours: 3 per week

LAP407 ENGLISH AS A SECOND LANGUAGE CURRICULUM STUDIES 1

Introduction 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

Continuation 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

#### LAP409 PRIMARY LOTE CURRICULUM 17 STUDIES 1

Current theory and practice in LOTE teaching/learning in the primary school with particular emphasis on the intellectual, physical, emotional and social needs of young learners and the need for teaching approaches drawn from general educational theory together with an understanding of second language acquisition. Course: ED37

Credit Points: 12 Contact Hours: 3 per week

# LAP410 PRIMARY LOTE CURRICULUM STUDIES 2

Continuation of LAP409. Content, processes and materials appropriate to the planning and implementation of LOTE programs in the primary school which integrate culture and language, articulate with the rest of the primary curriculum, and learners become more interested in, and aware of, languages and cultures other than their own.

Course: ED37

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 Credit Points: 12

Prerequisite: LAP440 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 Prerequisite: LAP501 Credit Points: 12

# 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 Prerequisite: LAP502 Credit Points: 12

# 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.

#### Credit Points: 12 Course: ED25 LAP510 INTERACTIVE TECHNOLOGIES IN INSTRUCTION

Interactive communications and resources; videodisc; 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 & 26 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 2hour evening sessions. Course: ED25

Credit Points: 12

#### 折 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 Credit Points: 12 **Prerequisite:** LAP502

# 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

# 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 & ASSESSMENT 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, ED26

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, ED26

Credit Points: 12 Contact Hours: 3 per week

#### LAP523 UNDERSTANDING ADULT LITERACY

The extent, manifestations, complex causes and personal and social effects of adult literacy problems in Australia: placing those problems within a framework of changing definitions of literacy and current policies and provisions for adult literacy.

Courses: ED22, ED66, ED26

#### 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, ED26

Credit Points: 12 Contact Hours: 3 per week

#### LAP525 ISSUES IN LANGUAGE LEARNING

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.

Courses: ED22, ED26

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 nonstandard varieties of language, including dialects, sociolects and language in contact.

Course: ED60 Credit Points: 12 Contact Hours: 3 per week LAP602 LANGUAGE TEACHING IN 36

# 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 follisation; 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

# LEB304 CHILDREN WITH SOCIAL & EMOTIONAL DIFFICULTIES

The overview of social and emotional development, theories of social and emotional development; adultchild relationships and issues of authority and discipline; the socialisation of emotions, expression of emotions, emotional disturbances; self concept and selfesteem.

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

Introduction 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, ED54, ED37

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, ED54, ED37

Credit Points: 12 Contact Hours: 3 per week

# LEB333 ADULT LEARNING AND DEVELOPMENT

The psychological foundations of human learning and development with special emphasis on adults. Contemporary theories and research issues such as cognition and learning, the effect of motivation on learning, understanding group dynamics, self/identity development, and creating effective learning environments will be explored. Course: ED54

Credit Points:12 Contact Hours: 3 per week

#### LEB334 ACQUISITION AND ADAPTABILITY OF WORKPLACE KNOWLEDGE AND SKILLS

Explores the underlying theoretical constructs which may enhance the acquisition of knowledge and skills. In accord with the National Training Reform Agenda, issues such as multi-skilling, contextualised learning, intervention to accelerate performance, and transfer of knowledge and skill are addressed. **Course:** ED54

Credit Points:12 Contact Hours: 3 per week

# LEB335 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, ED54

Credit Points: 12 Contact Hours: 3 per week

#### LEB336 PSYCHOLOGY OF LEARNING & TEACHING

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, ED54

Credit Points: 12 Contact Hours: 3 per week

# LEB337 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, ED54

Credit Points: 12 Contact Hours: 3 per week

#### LEB338 THE INDIVIDUAL IN ADULT AND WORKPLACE EDUCATION

Tailoring instruction to the needs and strengths of individuals and acquiring confidence in planning, organising and implementing learning experiences. The focus ranges from setting up initial meetings to creating responsive positive learning environments and evaluating outcomes in terms of individual learners. **Course:** ED54

Credit Points: 12 Contact Hours: 3 per week

# **EXAMPLE 1** 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

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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 familiarises 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 INTERACTIVE 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'.

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, ED54 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 educationally-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.

Prerequisite: LEB443 Course: ED26 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.

Contact Hours: 3 per week

# Course: ED26

Credit Points: 12

# 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

Contact Hours: 3 per week Credit Points: 12

# 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

# LEB480 RESEARCH METHODS IN EDUCATION

Development of an awareness and understanding of the research process for a 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, ED26, ED37, ED50, ED51, ED52, ED54

Credit Points: 12

Contact Hours: 3 per week



#### LEN602 ADVANCED EDUCATIONAL COUNSELLING

The major theoretical approaches to counselling are 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 inventions will be investigated and ethical issues will be addressed.

Courses: ED13, ED11 Prerequisites: LEB441 Credit Points: 12

Incompatible with: LEB442

#### LEN603 EDUCATIONAL COUNSELLING PROFESSIONAL PRACTICE

Professional practices of educational counsellors working in the P-12 context; intervention, prevention, affective, and developmental programs discussed; adolescent issues and career counselling outlined; consultation: models, theories and practices; Self-management skills highlighted: time management, program evaluation, accountability and decision-making discussed.

Courses: ED13, ED11 Credit Points: 12

#### 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; using assessment data in programming and placement.

Courses: ED13, ED11 Credit Points: 12

#### LEN605 LEARNERS WITH SPECIAL NEEDS: PROGRAMMING FOR INCLUSIVE EDUCATION

Special educational needs of children in early childhood, school (P-12) and post secondary settings arising from physical, cognitive, behavioural and sociocultural differences; developmental screening; diagnosing student functioning in cognitive, social-emotional, self-help and motor skill areas; programming and curriculum decision making for children with special needs; techniques of formative and summative assessment appropriate to student learning needs; strategies for inclusive education; roles and models of support and advisory personnel including in-service strategies.

Courses: ED13, ED11 Credit Points: 12

#### LEN606 REMEDIATING OF LEARNING DIFFICULTIES

In-depth review of research of the impact of learning disabilities/difficulties and developmental delay on the learning of literacy from years 1-12 and in post secondary education; studies in language and its use in learning; assessment and monitoring techniques and approaches to literacy acquisition by students with learning difficulties/disabilities. Draws on developments in areas such as sociolinguistics, psycholinguistics, metacognition and process approaches to literacy and learning within an inclusive education framework. **Courses:** ED13, ED11

Credit Points: 12

#### LEN607 CAREER EDUCATION AND CAREER GUIDANCE

Focus on career planning as a life-long process, emphasising that education and guidance programs focus on skill development for repeated decision making throughout the lifespan; the background and influence of career development theory; the complementary relationship between career education and career guidance. Educator and counsellor skills necessary to enable students to effectively assist career development are included.

Prerequisites: LEN602

Courses: ED13,ED11 Co-requisites: CPN606 Credit Points: 12

#### LEN608 FOUNDATIONS OF ADULT LEARNING AND DEVELOPMENT

Provides students an opportunity to develop an understanding of the complex nature of the adult learning and development process. This is achieved by exposing students to contemporary theories and strategies in adult learning and development and extending their knowledge to the adult and workplace environment. Key concepts such as the motivation, self directed learning and knowledge construction are addressed. Special emphasis is placed on transferring the theory to practice.

Courses: ED13,ED11 Prerequisites: CUN605 Credit Points: 12

# LEP413 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

#### 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 transexuality. Focuses on issues related to teaching.

Course: ED67 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, ED26

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

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-wiseness, 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 have an applied law orientation. Unit may be undertaken in various loads.

#### **Credit Points:**

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

LPP001 LEGAL PRACTICE

Course: LP41 Credit Points: 96

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.

Courses: SC30, ED50

# Credit Points: 6 Contact Hours: 3 per week

SCIENCE

An introduction to the study of life processes, with cells and organisms as the central point of reference. Cellular function is described at the tissue and organ levels: the interactions of organisms at the population and community levels are used to explain fundamental concepts of ecology: the diversity of life on Earth is presented in phylogenetic and evolutionary terms: molecular biotechnology is introduced as a tool that assists both the mapping of populations and communities, and the diagnosis of organism malfunction.

Courses: ED50, LS36, SC30

Co-requisites: For SC30, LSB001 recommended where Senior Biology has not been undertaken Credit Points: 12 Contact Hours: 6 per week Incompatible with: LSB122

# 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-requisites: LSB001 or Senior Biology

Credit Points: 12 Contact Hours: 5 per week

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: OP42

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: ED50, HM42, ME46

Credit Points: 12 Contact Hours: 6 per week

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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 1

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, PH80, PU42, PU44, PU48, PU49

Credit Points: 12 Contact Hours: 5 per week

# LSB150 HUMAN ANATOMY

Ultrastructure of the generalised cell. Microscopic and macroscopic anatomy of epithelium, connective tissue, muscular tissues, nervous system, skeletal system, integument, cardiovascular system, lymphatic system, respiratory system, renal system, endocrine system, male and female reproductive systems.

Courses: LS36, SC30

Credit Points: 12 Contact Hours: 5 per week

# LSB151 HUMAN 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.

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 appreciation 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.

Prerequisite: LSB281 Courses: NS40 Credit Points: 8 Contact Hours: 3 per week Incompatible with: PNB116, or PNB758, or PNB340 & PNB540 & PND640, or PNB350 & PNB450 & PNB650.

# 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 Credit Points: 8

Prerequisite: LSB141 Contact Hours: 3 per week

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# 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.

Course: ED50, SC30

Prerequisites: LSB001 or Senior Biology

Credit Points: 12 Contact Hours: 5 per week

#### LSB228 ANIMAL AND PLANT STRUCTURE AND FUNCTION

Emphasises on how functioning organisms reflect the integration of major biochemical processes. Initially, the structures of body systems are described from the functional viewpoint. Gas exchange, circulatory, reproductive and supportive systems are studied, then aspects of energy flow (photosynthesis/respiration) are considered. Finally, the regulation of organism function via biological positive and negative feedbacks, and hormonal systems, is outlined.

Courses: ED50, SC30

Prerequisites: LSB118 or LSB122 Contact Hours: 5 per week Credit Points: 12

# LSB230 ANATOMY 2

An extension of LSB130. An integrated course of lectures and practicals dealing with the macroscopic anatomy of the nervous, digestive, lymphatic, integumentary, respiratory, renal, haemopoietic, endocrine and reproductive systems.

Course: OP42 Credit Points: 8

Prerequisite: LSB130 Contact Hours: 3 per week

# LSB231 PHYSIOLOGY

The basic concepts of physiology and pharmacology. An overview of the functions of bodeny systems so that students can understand biological disorders and pharmacological strategies which may be used in their treatment.

Courses: ED50, 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.

Course: ED50 Prerequisite: LSB122 Credit Points: 12 Contact Hours: 5 per week

LSB238 CELL & MOLECULAR BIOLOGY 1 Introduction at the cell level to essential physiological

and metabolic requirements fundamental to life processes. Topics include: the morphology, chemical and biochemical composition of microbial, plant and animal cells; the relationship between metabolism and energy status of cells; biomembrane function and the organisation of genetic material in cells.

Courses: ED50, LS36, SC30

Prerequisites: CHB142, LSB118

Co-requisite: CHB242

Contact Hours: 5 per week Credit Points: 12 Incompatible with: LSB222

#### LSB241 ANATOMY 2

A course of lectures and practical exercises involving a basic, yet comprehensive, study of the anatomy and physiology of the various body systems.

Prerequisite: LSB141 Contact Hours: 4 per week

# LSB250 HUMAN PHYSIOLOGY

Topics examined include: basic mechanisms – cells, fluids, electrolytes; energy metabolism; nutrients; transport mechanisms; blood; communication and control; excitable tissues; control systems – nervous and endocrine; maintenance systems – gastrointestinal; cardiovascular; respiratory; renal; integrated mechanisms – sexual development; pregnancy; parturition; lactation; control of growth; food intake; organic metabolism; body temperature; ECF osmolality and volume; blood pressure and flow; respiration; response to tissue damage; adaptation to stress. This unit includes a practical program of two hours per week.

Course: LS36Prerequisite: LSB150Credit Points: 12Contact Hours: 6 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

Credit Points: 8 Contact Hours: 3 per week

# LSB260 QUANTITATIVE METHODS IN LIFE SCIENCE 1

Topics include: weighing procedures, pH measurement, ion selective electrodes, spectrophotometers, autotitrators, automatic pipettes and dispensers and volumetric ware; calibration of instruments, correct usage, maintenance and elementary trouble shooting; correct experimental procedure, quality control and statistical analysis. **Course:** LS36

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 Credit Points: 8 Prerequisite: LSB161 Contact Hours: 3 per week

# LSB281 PHYSIOLOGY & PHARMACOLOGY

The basic principles of normal body function; an introduction to pharmacology.

Courses: NS40, NS48

Credit Points: 8 Contact Hours: 3 per week Incompatible with: PNB115 or PNB240 or PND241

# 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 Co-requisite: LSB308

Credit Points: 8 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

# 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, SC30Prerequisite: LSB122Credit Points: 12Contact 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 Credit Points: 12 Prerequisite: CHB259 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, ED50, LS36, SC30

Prerequisites: LSB232, CHB282 or CHB242 Credit Points: 12 Contact Hours: 5 per week

# LSB310 QUANTITATIVE LABORATORY TECHNOLOGY 3

Techniques encountered in the clinical laboratory. Topics include: immunoassay, enzymic analysis, electrophoresis, isoelectric focusing, gel filtration, ion exchange, and affinity chromotography. 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

edit 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: ÉD50, 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-requisites: LSB261, 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, PH90 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.

Prerequisite: LSB222 Courses: ED50, SC30 Co-requisite: LSB362 Credit Points: 12

Contact Hours: 5 per week

# LSB358 PHYSIOLOGY 2S

A review of 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

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 OUANTITATIVE 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

Prerequisites: 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

Prerequisites: LSB151 or LSB130

Co-requisite: LSB306

Credit Points: 4

# 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

Contact Hours: 2 per week

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 Credit Points: 12

Prerequisite: LSB302 Contact Hours: 5 per week



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# 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.

Prerequisite: CHB001 Course: PU49 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, PH90 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.

Courses: ED50, SC30 Prerequisite: LSB352 Contact Hours: 5 per week Credit Points: 12

# LSB428 MICROBIOLOGY 4

An extension of LSB328; aspects of microbial taxonomy, food and water microbiology, microbial ecology, industrial and agricultural microbiology; microorganisms 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.

Prerequisites: LSB300 & LSB340 Course: LS36 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: 4 per week

# LSB438 IMMUNOLOGY 4

The mechanisms of the immune process: nature of antigen, antibodies, antigen-antibody reactions, antibody formation, control of the humeral and cell-mediated immune responses, hypersensitivity and allergy, and immunisation of man against infections.

Course: SC30 Prerequisites: LSB328, LSB242 Contact Hours: 5 per week Credit Points: 12

# LSB441 IMAGING ANATOMY

A study of the appearances on medical images of normal anatomy.

Course: PH38, PH90

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 Contact Hours: 5 per week Credit Points: 12

# LSB450 HAEMATOLOGY 4

Introduction 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

Prerequisites: LSB230, LSB308, LSB310, LSB340 Co-requisite: LSB408

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

Prerequisites: 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: PU48Prerequisite: LSB361Credit Points: 12Contact 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

nts: 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 Contact Hours: 2-4 weeks

#### 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, invertebrates 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.

Courses: ED26, ED50 Prerequisites: LSB122 Credit Points: 12 Contact Hours: 3 per week Incompatible with: LSB322

#### 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

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, subcutaneous and systemic infections in humans.

Course: LS36 Credit Points: 16

Prerequisite: LSB400 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 Week 12 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 Prerequisite: LSB362 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: SC30Prerequisite: LSB408Credit Points: 12Contact Hours: 5 per week

#### LSB517 PLANT TISSUE CULTURE 1

A broad introduction to plant tissue culture. Techniques and media preparation leading to a coverage of micropropagation. Topics include: organoegenesis, embryogenesis, genetic variablility, 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: LSB488 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: SC30Prerequisite: LSB352Credit Points: 12Contact 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

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materials; regulation of metabolism; microbial genetics; sporogenesis and germination.

Course: SC30 Prerequisite: LSB428 Credit Points: 12 Contact Hours: 5 per week

#### LSB530 IMMUNOLOGY 5

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: 3 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 spectro-photometry. Students are required to design and execute an experimental protocol for the separation of selected macromolecules.

Course: SC30 Co-requisite: LSB508 Prerequisite: LSB318

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 APPLIED 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.

Prerequisites: LSB408, LSB460 Course: LS36 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 complimentary 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 are 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 Credit Points: 12

Prerequisite: LSB362 Contact Hours: 5 per week

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

# 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

# LSB607 BIOCHEMICAL SEPARATIONS

An advanced course of lectures and a comprehensive project designed to integrate a number of specialist biochemical procedures including centrifugation, liquid chromatography, electrophoresis, spectrophotometry and peptide mapping. Students participate in group projects where they are required to design and execute their own experimental protocols for the purification and analysis of selected proteins.

Course: LS70 Prerequisites: LSB308; LSB318 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 Credit Points: 12

Prerequisite: LSB372 Contact Hours: 5 per week

# LSB617 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 metabloism of plants in tissue culture.

Course: LS70 Prerequisite: LSB517 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 Prerequisite: LSB412 Credit Points: 12

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 Credit Points: 12

# Contact Hours: 5 per week

Prerequisite: LSB428

#### 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. Prerequisite: LSB530

Course: LS36 **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 foot-printing; nucleic acid sequencing and reverse genetics.

Courses: LS70, LS80, 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.

Prerequisites: LSB358, LSB458 Course: SC30 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.

Prerequisite: LSB560 Course: LS36 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

# 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

#### LSB802 IMMUNOLOGY 5

This unit builds on the basic understanding provided in LSB430/438 and provides 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 immunlolgical process in resistance and recovery from infection. Students are also required to demonstrate basic information retrieval skills in areas of immunology and to perform a range of computer based immunology tasks. Courses: SC60, LS70

Prerequisites: LSB430, LSB438

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

# 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

#### 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

#### 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

# 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: LS70, LS80, LS85

Prerequisites: 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: LS70, LS80, LS85

Prerequisites: 24 credit points in LS85

Credit Points: 12 Contact Hours: 3 per week

# LSN150 ETHICS AND LIFE SCIENCE

Examination of the ethical implications of contemporary issues in medical science and the ethical implications of research strategies. Topics such as abortion, the status of embryos, patient rights, consent, transplantation, clinical decision making and authorship and acknowledgment are considered.

Course: LS70, LS80, LS85

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

Prerequisites: 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 support.

#### Course: LS85

Prerequisites: 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 hepa-tobiliary 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: LS80, LS85

Prerequisites: 96 credit points in LS85

Credit Points: 12 Contact Hours: 3 per week

# LSN511 HAEMATOLOGY 1

Haematologic diseases; their actiology, laboratory investigation, pathogenesis, principles of treatment and laboratory monitoring. The study program includes seminars, oral presentations and assignments selected from: haemopoeitic kinetics, haemolytic disease, haemostasis and the haematologic implications of systernic disease. Assessment is by formal examination, assignments and seminar participation.

Course: LS80, LS85

Prerequisites: 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: LS80, LS85

Prerequisites: 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 is developed.

Course: LS80, LS85

Prerequisites: 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: LS80, 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: LS80, 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

Prerequisites: 96 credit points in LS85 Credit Points: 12 Contact Hours: 3 per week

# LSN531 DISSERTATION 2

See LSN530. Course: LS85 Prerequisites: 96 credit points in LS85 Credit Points: 12 Contact Hours: 3 per week

# LSN532 PROJECT

See LSN530. Courses: LS85 (Full-time) Prerequisites: 96 credit points in LS85 Credif Points: 48 Contact Hours: 12 per week

# LSN533 PROJECT 1

See LSN530. Courses: LS85 (Part-time) Prerequisites: 96 credit points in LS85 Credit Points: 24 Contact Hours: 6 per week

# LSN534 PROJECT 2

See LSN530. Courses: LS85 (Part-time) Prerequisites: 96 credit points in LS85 Credit Points:24 Contact Hours: 6 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, neutrochemistry and neural disorders, cancerassociated biochemical abnormalities, and the seriously ill patient are studied, concentrating on diagnosis and the interpretation of results.

Course: LS80, 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, nonmalignant 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: LS80, 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: LS80, 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.

Prerequisite: LSN515 Course: LS80, LS85 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: LS80, 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: LS80, LS85 Prerequisite: LSN518 Credit Points: 12 Contact Hours: 3 per week

#### LSN710 PROJECT LSN711 PROJECT 1 LSN712 PROJECT 2

A supervised project in an 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: LS80

Credit Points: LSN710 = 48, LSN711 & LSN712 = 24

# LSP127 BUSINESS ASPECTS OF BIOTECHNOLOGY

Commercial perspectives of a biotechnology company; funding for commercial research; research patents and intellectual property; GMAC/recombinant DNA guidelines and regulations; overview of Australian biotechnology companies; site visits to one or two biotechnology companies.

Course: LS70 Credit Points: 12

Contact Hours: 5 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, LS80, 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

Credit Points: 12

Prerequisite: LSB437 Contact Hours: 5 per week

# LSX110 INTRODUCTORY BIOLOGY

An introduction to the classification of organisms. Examination of the morphology, anatomy, reproduction, life-history and physiology of selected species. Course: SC10, SC12

**Credit Points: 8** 

Contact Hours: 3 per week

# LSX111 MICROSCOPY TECHNIQUES

The use and roles of various types of optical microscopes; microscope accessories for counting, measuring, drawing and photography; procedures for preparing specimens for examination and histological/ histochemical study.

Course: SC10, SC12 Credit Points: 8

#### Contact Hours: 3 per week

# LSX121 BIOLOGICAL CHEMISTRY 1

An introduction to the basic chemistry of biological systems and the biochemistry of major groups of biologically important compounds. Topics include; solution chemistry, biochemistry of amino acids, proteins, fats and sugars; basic aspects of enzyme chemistry; nucleic acids and protein synthesis.

Course: LS12, LS15 Credit Points: 8

Contact Hours: 4 per week

#### LSX122 LABORATORY INSTRUMENTATION 1

The principles, care and effective usage of basic laboratory equipment including glassware, plastics, balances, spectrophotometers, flamephotometers, autotitrators, pH meters and specific ion meters. Programmable calculators and computers are used during the practical course to illustrate modern methods of data manipulation. Experience in the handling of chemicals and in the preparation of reagents and standards. Emphasis on laboratory safety.

Course: LS12, LS15 Co-requisite: LSX111 Credit Points: 8 Contact Hours: 4 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: LS12, LS15, SC10, SC12

Credit Points: 8 Contact Hours: 3 per week

# LSX124 PERSPECTIVES IN MEDICINE

A general introduction to the health care area; topics include: health in the Australian society, workplace safety, the function of various types of laboratories in hospitals, country pathology services, clinical measurement and research. Related topics such as the role of various laboratory personnel and the structure of health care services are discussed. Course: LS12, LS15

Credit Points: 4 Contact Hours: 1 per week

#### LSX125 ANATOMY & PHYSIOLOGY 1

An integrated study of anatomy and physiology. Emphasis is placed on gaining an appreciation of the relationship between structure and function at the levels of cells and tissues, organ and organ systems. The morphology and physiology of cells and tissues; the structure and function of the skeletal, muscular, nervous and integumentary systems. Course: LS12, LS15

Credit Points: 8 Contact Hours: 3 per week

#### LSX210 BIOLOGY B

Extends the basic concepts presented in Introductory Biology and also includes aspects of mendelian genetics, gene expression and cell differentiation, as well as reproduction and development in selected animals and plants.

Course: SC10, SC12 Prerequisite: LSX110 Credit Points: 8 Contact Hours: 3 per week

LSX211 CELL STRUCTURE & FUNCTION A general course in cell biology including the living cell and its processes, structure and function. Photosynthesis, respiration, intermediary metabolism are emphasised. Course: SC10, SC12

Credit Points: 8 Contact Hours: 3 per week

# LSX212 BIOLOGICAL DATA HANDLING

Application of statistical procedures to surveys, sampling and design of experiments. Recognition of problems arising from variability in results and particularly dye type. Methods of data collection, checking, analysis and presentation. An introduction to the use of computer software packages.

Course: SC10, SC12 Credit Points: 8

Prerequisite: MAA251 Contact Hours: 3 per week

#### LSX213 INTRODUCTORY BIOCHEMISTRY

Molecular aspects of cellular structure and organisation. Nomenclature and basic chemistry of simple biological molecules. Amino acids and proteins: fibrous and globular proteins; enzymes and their activity. Structure, function and reactions of carbohydrates and lipids and their role as structural components and metabolites. Nucleic acids in cell growth and syntheses. Cell dynamics and analytical methods.

Course: SC10, SC12 Credit Points: 8

Contact Hours: 3 per week

#### LSX221 BIOLOGICAL CHEMISTRY 2

Basic metabolism; topics include: biological catalysis; energetic of biological systems; catabolic and anabolic pathways for the metabolism of carbohydrates, lipids, amino acids and nucleic acids; metabolic control and integration.

Course: LS12, LS15 Prerequisites: LSX121, LSX122 Credit Points: 8 Contact Hours: 4 per week



# LSX222 LABORATORY **INSTRUMENTATION 2**

Lectures and practical work designed to integrate the principles and techniques of macro-molecule separation by chromatographic procedures and methods of electrophoresis, dialysis, filtration, centrifiguration.

Course: LS12, LS15 Credit Points: 8

Prerequisite: LSX122 Contact Hours: 4 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: LS12, LS15, SC10, SC12

Prerequisite: LSX123

Credit Points: 8 Contact Hours: 3 per week

# LSX224 PATHOLOGY

The application of scientific methods to the study of the general principles of disease processes and selected disease of the organ systems. Correct understanding and use of pathological terms and concepts. Course: LS12, LS15

Credit Points: 8 Contact Hours: 2 per week

# LSX225 ANATOMY & PHYSIOLOGY 2

Continuation of LSX125; structure and function of organs and systems; the cardiovascular, lympathic, respiratory, digestive, urinary, reproductive and endocrine systems.

Course: LS12 Prerequisite: LSX125 Co-requisite: LSX222

Credit Points: 8 Contact Hours: 3 per week

# LSX310 INTRODUCTION TO BIOCULTURE

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. Provides the theoretical basis for students undertaking electives in aquaculture techniques and/or plant tissue culture. Course: SC10, SC12

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, SC12

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, SC12 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 nomenclatural procedure. Short lectures and tutorials associated with the practical exercises.

Course: SC10, SC12

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: LSX110 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, SC12

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.

Courses: LS12, LS15, SC10

Prerequisites: LSX221, LSX222, LSX225

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: LS12, 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: LS12, 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: LS12, 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: LS12, LS15Prerequisites: 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: LS12, LS15Prerequisites: 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: LS12, 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: LS12, LS15Prerequisite: LSX225Credit Points: 12Contact 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: LS12, 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: LS12, 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, SC12

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, SC12 Credit Points: 8

Credit Points: 8

Co-requisite: LSX412 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, SC12

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, SC12Prerequisites: LSX110,LSX111 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 Prerequisites: LSX315 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: LS12, LS15Prerequisite: LSX320Credit Points: 8Contact 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: LS12, 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: LS12, LS15 Prerequisite: LSX322 Credit Points: 8 Contact Hours: 4 per week

# LSX423 HISTOLOGICAL TECHNIQUES 4

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: LS12, LS15Prerequisite: LSX323Credit Points: 8Contact 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: LS12, LS15 Prerequisite: LSX324 Credit Points: 8 Contact Hours: 4 per week

# LSX425 CYTOLOGICAL TECHNIQUES 4

Specialised preparative methods for non-gynaecological cytology and demonstrating the evaluation of specimens commonly encountered in routine diagnostic cytology.

Course: LS12, LS15 Credit Points: 8 Prerequisite: LSX325 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: LS12, LS15 Credit Points: 12

15 Prerequisite: LSX332 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: LS12, 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: LS12, L\$15 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: LS12, LS15 Prerequisite: LSX334 Co-requisites: LSX431, LSX432, LSX433

Credit Points: 12 Contact Hours: 5 per week

# LWB130 INTRODUCTION TO STUDY IN LAW

This unit provides an intensive introductory framework for the study of law at QUT. It outlines fundamental aspects of law and the legal system. It also provides 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 are acquired; an orientation or guidance map at the point of entry to the LLB learning environment.

of entry to the LLB learning environment. Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, 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, IF40, LW31, LW31, LW31, LX32, LX33

Credit Points: 24 Contact Hours: 3 per week Incompatible with: LWB101

# 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, IF40, LW31, LW33, LW41, LX32, LX33

Credit Points: 24 Contact Hours: 3 per week Incompatible with: LWB102

# 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, IF40, LW31, LW33, LW41, LX32, LX33

Credit Points: 24 Contact Hours: 3 per week Incompatible with: LWB103

#### 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. Topics include: 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, IF40, LW31, LW33, LW41, LX31, LX32, LX33

Credit Points: 12 Contact Hours: 3 per week Incompatible with: LWB104

# 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, IF40, LW31, LW33, LW41, LX31, LX32, LX33

Credit Points: 12 Contact Hours: 3 per week Incompatible with: LWB101

# 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, IF40, LW31, LW33, LW41, LX31, LX32, LX33

Credit Points: 12 Contact Hours: 3 per week Incompatible with: LWB203 and LWB311

#### 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, IF40, LW31, LW33, LW41, LX31, LX33

Credit Points: 24 Contact Hours: 3 per week Incompatible with: LWB202

# 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, IF40, LW31, LW33, LW41, LX31, LX33

Credit Points: 24 Contact Hours: 3 per week Incompatible with: LWB201

# 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, IF40, LW31, LW33, LW41, LX31, LX33

Credit Points: 24 Contact Hours: 3 per week Incompatible with: LWB301

#### 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, IF40, LW31, LW33, LW41, LX31, LX33

Prerequisite: LWB231

Credit Points: 12 Contact Hours: 3 per week Incompatible with: LWB203

#### 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: 1F31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33

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, IF40, 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, IF40, LW31, LW33, LX31, LX32, LX33

Prerequisites: LWB132 & LWB234

Credit Points: 12 Contact Hours: 3 per week

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, IF40, 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, IF40, LW31, LW33, LX31, LX32, LX33

Credit Points: 8 Contact Hours: 2 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, IF40, 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 Opportunity Commission Act and Privacy Act; the Human Rights Commission and state bodies.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, 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, IF40, 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, IF40, LW31, LW33, LW41, LX31, LX33



#### Prerequisite: LWB231 Credit Points: 12 Contact Hours: 3 per week Incompatible with: LWB311

# 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, IF40, LW31, LW33, LW41, LX31, LX33

Prerequisite: LWB233 Co-requisite: LWB233 Credit Points: 12 Contact Hours: 3 per week Incompatible with: LWB303

# 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, IF40, LW31, LW33, LW41, LX31, LX32, LX33

Prerequisite: LWB131

Credit Points: 12 Contact Hours: 3 per week Incompatible with: LWB305

# 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, IF40, LW31, LW33, LW41, LX31, LX33

Credit Points: 12 Contact Hours: 3 per week Incompatible with: LWB401

#### LWB351 ABORIGINAL AND ISLANDER LEGAL ISSUES

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, IF40, LW31, LW33, LX31, LX32, LX33

Credit Points: 8 Contact Hours: 2 per week

#### LWB353 ADVANCED ADMINISTRATIVE LAW

Extends and builds upon an understanding of the fundamental principals of judicial review and legal control of government established in the core unit LWB311. Provides students with a broad focus on issues which impinge upon government accountability; and also with an understanding of issues which affect the rights of citizens in their relations with the government which extends beyond an ability to seek judicial and extrajudicial review.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33

Prerequisites: LWB231, LWB311

Credit Points: 8 Contact Hours: 2 per week

This elective unit builds on civil procedure providing advanced litigation skills focussing on interlocutory and summary procedures. Content includes case flow management, commercial causes, discovery, inspection, interrogatories, drafting, briefs and advices, default and summary judgment, time constraints, injunctions, interlocutory applications, interim preservation orders, costs and management of litigation.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33

Prerequisite: LWB431

Credit Points: 8 Contact Hours: 2 per week

#### LWB359 ADVANCED TAXATION LAW

An examination of the taxation of business entities (partnerships, trusts and companies) the capital gains tax ramifications for each entry. Some tax planning issues will also be canvassed.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33

Prerequisite: LWB364

Credit Points: 12 Contact Hours: 3 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, IF40, LW31, LW33, LX31, LX32, LX33

Prerequisites: LWB233, LWB312, LWB462

Co-requisite: LWB312

Credit Points: 8 Contact Hours: 2 per week Incompatible with: LWB414

#### LWB363 INSURANCE LAW

Risk management, in particular insurance, will play an increasingly significant role in modern commercial life. Insurance however is not limited to the commercial sphere but spans a wide variety of subject matter, including compulsory schemes such as third party motor vehicle insurance and workers compensation. From a vocational perspective the study of insurance law is important, being encountered by property, commercial and litigation lawyers. From an educational perspective, the unit offers an appreciation of how the common law has been modified by the legislature to balance the interests of the insurer and the insured.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33

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, IF40, LW31, LW33, LX31, LX32, LX33

Credit Points: 12 Contact Hours: 3 per week Incompatible with: LWB403

#### 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, IF40, LW31, LW33, LX31, LX32, LX33

Credit Points: 8 Contact Hours: 2 per week

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, IF40, 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, IF40, LW31, LW33, LX31, LX32, LX33

Prerequisite: LWB131

Credit Points: 12 Contact Hours: 3 per week

# LWB410 RESTRICTIVE TRADE PRACTICES

An overview of the anti-competitive practices which are prescribed by Part IV of the Trade Practice Act 1974 (Cth.). It will also deal with the remedies available for contraventions of Part IV and the possibility of obtaining authorisation and/or where appropriate notification from the Trade Practices Commission.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, 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

#### 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, appear costs and execution

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, LX31, LX32, LX33

Credit Points: 12 Contact Hours: 3 per week Incompatible with: LWB404

#### 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, IF40, LW31, LW33, LW41, LX31, LX32, LX33

Credit Points: 12 Contact Hours: 3 per week Incompatible with: LWB402

#### 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, IF40, LW31, LW33, LW41, 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, IF40, LW31, LW33, LW41, LX31, LX32, LX33

Prerequisite: LWB134

Credit Points: 12 Contact Hours: 3 per week Incompatible with: LWB415

#### 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, IF40, LW31, LW33, LX31, LX32, LX33

Credit Points: 8 Contact Hours: 2 per week

#### LWB454 BANKING & FINANCE LAW

An introduction to the Australian banking system, including: terms of contracts between banker and customer; Clearance System; rights of recovery and liabilities of paying and collecting banks. An introduction to negotiable instruments; principle of negotiability; liability of parties to a negotiable instrument and the consequences of fraud.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF39, IF40, LW31, LW33, LW41, LX31, LX32, LX33. Credit Points: 8 Contact Hours: 2 per week

# LWB455 LEGAL CLINIC (INDIVIDUAL PLANNED EXERCISE)

Students participate in planning their own individual program in cooperation 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, IF40, LW31, LW33, LX31, LX32, LX33

Credit Points: 8 Contact Hours: 2 per week

#### LWB456 LEGAL CLINIC (ORGANISED PROGRAM)

Students are provided 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, IF40, LW31, LW33, LX31, LX32, LX33

Credit Points: 12 Contact Hours: 3 per week
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Students develop an overall perspective on and deeper understanding of the subject of remedies. The unit is designed to give students a knowledge of the principles underlying the availability of various private law remedies, and to introduce students to an understanding of the circumstances which may give rise to a claim for restitution. It also develops a knowledge and understanding of the choice and range of private law

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remedies and defences and the capacity to make sound judgments in electing which remedies to pursue against a background of heterogenous fact situations.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33

Prerequisites: LWB132, LWB133, LWB234

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, IF40, 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, IF40, 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, IF40, 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, IF40, LW31, LW33, LX31, LX32, LX33

Credit Points: 8 Contact Hours: 2 per week

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

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The securities unit examines security interests including securities given by third parties over real and personal property. Those securities examined include Torrens title mortgages, guarantees, bills of sale over motor vehicles and other assets and possessory lien's. The consumer credit legislation and Trade Practices Act 1974 as they affect the validity and operation of securities will also be considered. Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33

Prerequisites: LWB132, LWB233

Credit Points: 12 Contact Hours: 3 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 is considered. **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

#### LWS010 PUBLIC LAW

This introduction to public law provides students with an understanding of the origins and nature of the parliamentary system of law and government in Australia and the manner in which public authority is organised and exercised. It examines the functions of the central institutions of government – the Crown and Executive. The Parliament, the Judiciary and their relationship one with another. The role of state constitutions is dealt with as well as the organisation of government under the Australian Federal Constitution.

Course: IF64

Credit Points: 12 Contact Hours: 3 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 are considered. **Courses:** LW50, LW51

Credit Points: 12 Contact Hours: 2 per week

A spects 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

# 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

Topics include: Overview of the legal framework of the Australian banking and finance industry; "money" and "legal tender"; foreign exchange transactions; banker and customer and incidents of that relationship; bank accounts and dealings in relation to such accounts; bills of exchange, promissory notes and cheques; collecting bank and paying bank; the clearing system. Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week LWN022 BANKING & FINANCE LAW 2

Topics include: banking instruments including documentary and standby credits, performance bonds and bank guarantees; electronic banking; the role of bankers as financiers and specific financing methods such as bill line facilities and foreign currency loans; securities for finance including company securities; default and insolvency and its impact on bankers.

Courses: LW50, LW51

Credit Points: 12 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. Students may undertake up to 48 credit points of Research Projects only with the approval of the Director of Postgraduate Studies.

Courses: LW50, LW51

Credit Points: 12

LWN026 RESEARCH PROJECT 2A

A supervised research project over the whole year 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 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

An examination of the theories of crime and criminality. Having studied the nature, scope, and objects of criminology, students are referred to the broad sweep of criminological theory: classical and neo-classical theories; the positivist school; physical and biological factors and theories; psychological and psychiatric explanations including the notion of dangerousness; crime as a social phenomena; 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 & 390 PRACTICE

The law and policy regime for Australian foreign investment at Commonwealth and State levels; theoretical and practical aspects of foreign investment regulation; workshops and seminars covering Commonwealth and State legislation, situations commonly arising in practice, and topics related to foreign investment (eg native title, government contracts, etc). Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week

#### LWN032 CREDIT FOR UO 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 QUT and of the University of Queensland, undertake any combination of whole year and one semester units offered in the LLM degree by Coursework at the University of Queensland which are equivalent to no more than 48 credit points. This unit code represents a one-semester unit 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 UO SUBJECT 3

Under the course rules, a coursework student may, with the prior approval in writing of the Deans of the Faculties of Law of QUT and of the University of Queensland, undertake any combination of whole year and one semester units offered in the LLM degree by Coursework at the University of Queensland which are equivalent to no more than 48 credit points. This unit code represents a full-year unit taken pursuant to that course rule at the University of Queensland.

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;



UNIT SYNOPSES

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.

Courses: 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. Topics in this unit include: the relationship between Part IIIA and the othe- 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 rollover provisions; companies and capital gains tax; partnerships and capital gains tax; trust 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 complements LWN042. However, both units stand alone and neither is a prerequisite for the other. It provides a comparative analytical perspective from which to consider the notion of justice and related concepts. A thematic approach is 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 judicial 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

A consideration of 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 is 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 complements LWN040. However, both units stand alone and neither is a prerequisite for the other. The focus of this unit is on the interface between public/social policy and the Law as an instrument of social transformation, and how these phenomena are grounded in theoretical and ideological positions, as well as being reflective of particular ontogenic stages of moral reasoning. The unit provides the opportunity for students to carry out advanced research into various justice models and their implications/applications to a particular social problem within the realm of legal and public/social policy. Includes seminars and structured small group work as well as student presentations. **Courses:** LW50, LW51

# Credit Points: 12 Contact Hours: 2 per week

LWN043 LAW OF COMPANY TAKEOVERS Consideration of Chapter 6 of the Corporation Law which regulates acquisition of shares which affect a change in a company's control. Both practical perspectives and conceptual analysis are emphasised. Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week

LWN044 INSTITUTIONAL INVESTORS

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 unit entail three parts. The first part deals 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.

# 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; anti-corruption models; 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 LAW

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 nonconforming 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 together with consideration of the implications on legal education of new schools of contemporary thought 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 concepts, techniques, aims and methods of legal research and other research relevant to an interdisciplinary perspective. Extensive training in finding source material, including the use of advanced technology in locating and organising source materials. The unit also deals 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 also deals 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: IF64, LW50, LW51

Credit Points: 12 Contact Hours: 2 per week

#### LWN050 RESTRICTIVE TRADE PRACTICES LAW

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

This unit is divided into two main parts. The first part considers the statutory and common law actions which are available to protect consumers from misleading or deceptive conduct and unfair marketing practices. Emphasis is given to the role played by the Trade Practices Act in relation to conveyancing and land transactions, banking transactions and advertising. Unconscionable conduct is also considered. The second part of the unit is concerned with statutory and common law actions available when loss or damage is suffered as a result of defective products. Remedies and defences are considered throughout the course.

Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week

#### LWN052 LITIGATION – CIVIL PROCEDURE

Focus upon topics of current interest or difficulty in civil procedure. Supreme and Federal Court rules and practice directions are considered in the light of the theories of civil procedure and tactics involved in dispute resolution. Some principles of negotiation and alternative dispute resolution are also addressed. Participants will acquire an appreciation of the dynamics of the adversarial process and an understanding of selected principles of interlocutory disputes in the light of the tactics involved in an action as a whole. Offers an opportunity for students to deepen and broaden their legal education in a way related directly to professional practice.

Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week

LWN053 RESEARCH PROJECT 1B

See LWN025. Courses: LW50, LW51 Credit Points: 12

Prerequisite: LWN025

# LWN054 CONTEMPORARY COMMERCIAL LEGAL ISSUES

The law and practice of contemporary commercial legal issues; topics covered include the law of commercial obligations, professional negligence and standards of professional conduct in various professions, native



title law and practice, third party securities, crown immunity, equitable infusions into "black letter law", legal problems in property valuation, client-based research in commercial practice, and trends in legal reasoning in commercial law areas.

# 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

See LWN025 Courses: LW50, LW51 Prerequisites: LWN025, LWN053 Credit Points: 12 Contact Hours: 2 per week

# LWN057 RESEARCH PROJECT 1D

See LWN025 Courses: LW50, LW51 Prerequisites: LWN025, LWN053, LWN056 Credit Points: 12

# LWN058 RESEARCH PROJECT 2B See LWN026.

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: IF64, LW50, LW51

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: IF64, LW50, LW51

Contact Hours: 2 per week Credit Points: 12 Incompatible with: LWN014, LWN027

#### 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: IF64, 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 include European countries, including the EEC, North America and the Asia Pacific Region.

# Courses: IF64, 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 legal critiques, especially of race, gender, culture and class.

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

# LWN066 ADVANCED INSURANCE LAW

Detailed examination at an advanced level of the general principles of law applicable to contracts of insurance as well as an examination of the idiosyncratic rules and practices pertaining to specific types of insurance. Topics include: Nature and definition of insurance; insurable interest; third parties interests; utmost good faith; brokers and agents; formation of contracts, proposals, etc.; contract terms; claims; indemnity and amount recoverable; subrogation; double insurance and contribution; regulation of insurers; marine insurance; workers compensation; compulsory third party insurance; superannuation/ re-insurance contracts. Courses: LW50, LW51

Credit Points: 24 Contact Hours: 2 per week

LWN070 CREDIT FOR UQ SUBJECT 4 See LWN032.

Credit Points: 12

LWN071 CREDIT FOR UQ SUBJECT 5 See LWN032. Courses: LW50, LW51

Credit Points: 12

LWN072 CREDIT FOR UQ SUBJECT 6 See LWN034.

Courses: LW50, LW51

Courses: LW50, LW51

Credit Points: 24

LWN075 INTERNATIONAL COMMERCIAL TRANSACTIONS

This unit on international trade law addresses the legal problems that arise in the formation and operation of commercial transactions of an international nature. Its scope is largely confined to the sphere of private law. Topics covered include: sources of, and modern developments in, international trade law; harmonisation and unification of law; international contracts (characteristics, negotiating and drafting, choice of law); international sale of goods (trade terms, standard conditions, uniform law); carriage of goods by sea; payment in a documentary sale, and other financing mechanisms; marketing arrangements (agency, distributorship, subsidiary, joint venture)

Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week Incompatible with: LWN023

#### LWN076 INTERNATIONAL COMMERCIAL DISPUTES

Legal issues regarding the resolution of commercial disputes in international trade. Mainly concerned with disputes in respect of international commercial relationships of a private law nature. Dispute resolution mechanisms (such as litigation, arbitration and alternative dispute resolution) are examined, and their effectiveness evaluated, in the light of the legal and practical realities in the international trade environment. Students are introduced to a range of commercial practices, national regulation, and international uniform rules, model laws and conventions.

Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week Incompatible with: LWN023

#### LWN077 LITIGATION – EVIDENCE

Focus on topics of current interest or difficulty in evidence and advocacy. Rules of admissibility in Queensland and Federal courts are considered, as well as issues of trial and appellate advocacy. Some principles of negotiation and alternative dispute resolution are also addressed. Participants will acquire an appreciation of the dynamics of the adversarial process, understanding of selected principles of admissibility and knowledge of key forensic skills such as examination and cross-examination of witnesses. This unit offers an opportunity for students to deepen and broaden their legal education in a way related directly to their professional needs.

Courses: LW50, LW51

Credit Points: 12 Contact Hours: 2 per week Incompatible with: LWN052 pre 1995

# 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

#### LWR001 THESIS

The dissertation should make a notable contribution to professional knowledge and practice which may be in the form of new knowledge or significant original adaptation, application and interpretation of existing knowledge and practice. Course: LW50 Credit Points: 36

# LWR002 THESIS

See LWR001. Course: LW50

Credit Points: 48 LWR101 THESIS

Credit Points: 12

Credit Points: 24

See LWR001. Course: LW50

LWR102 THESIS See LWR001. Course: LW50

LWS001 MEDICINE & THE LAW

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

Contact Hours: 3 per week Credit Points: 8

# LWS006 HEALTH ETHICS & THE LAW

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, NS85, PU69, PU85 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: LS12, LS15, SC12

Contact Hours: 3 per week Credit Points: 8

#### MAB003 MATHEMATICS FOR SCIENCE & 22 **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, EE43, EE44, IF23, IF34, IF52, IF53, ME45, ME46, 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, EE43, EE44, IF23, IF34, IF52, IF53, ME45, ME46, SC30 Credit Points: 6

Contact Hours: 3 per week



# NN SYNOPSE

# 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

# MAB103 INTRODUCTORY ENGINEERING MATHEMATICS

Computational mathematics; algebra; circular functions, trigonometric functions; vector algebra: addition of vectors, unit vectors, scalar products; linear algebra: elementary matrix algebra, solution of linear equations; complex numbers; cartesian form, addition, multiplication, modulus and argument, Argand diagram; differential calculus; elementary functions, definite and indefinite integration.

Courses: CE31, CE42, EE43, EE44, IF23, IF52, IF54, IF56, ME35, ME45, ME46, PS47

Credit Points: 8 Contact Hours: 3 per week

# MAB151 QUANTITATIVE TECHNIQUES

A basic mathematics unit with emphasis on the interpretation of data and the application of numerical techniques.

Course: PH38, PH90

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, 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

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 MATHEMATICS FOR TELECOMMUNICATIONS

Fundamentals of probability and random processes as required for the modelling and mathematical analysis of data communication networks; basics of queuing theory and queuing 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

# 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: CE31, 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 calculustrigonometric, exponential and logarithmic functions, applications to max/min, limits, rates of change; indefinite integration-standard forms; integration by parts, integration by substitution, applications. **Course:** CE31, 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: CE31, 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 Prerequisite: MAB184 Credit Points: 8 Contact Hours: 3 per week MAB187 ENGINEERING MATHEMATICS 1A

Vector algebra: scalar and vector triple products, vector equation of a straight line; matrix algebra: determinants, inverse matrix; solution of systems of linear equations. Binomial and geometric series; exponential functions: expansion, natural logarithms; gradient of a curve,



derivatives, trigonometric functions, Taylor series; implicit functions, log function, logarithmic and parametric differentiation, curve sketching. Definite integration: approximation of integrals, fundamental theorem of calculus, integration by parts, substitution, improper integrals.

Courses: CE31, CE42, EE43, EE44, IF23, IF52, IF54, IF56, ME45, ME46, ME85, PS47

Credit Points: 8 Contact Hours: 3 per week

#### MAB188 ENGINEERING MATHEMATICS 1B

Vector algebra: moments, forces, velocity, acceleration, polar coordinates, differentiation of scalar and vector products, grad; matrix algebra: eigenvalues, eigenvectors. Differentiation: Newton-Raphson method; hyperbolic functions, inverse functions; functions of several variables; partial derivatives, chain rule. Integration: double integrals, volume under a surface, polar coordinates; differential equationa: solution of first order differential equations, linear differential equations; applications in engineering.

Courses: CE31, CE42, EE43, EE44, IF23, IF52, IF54, IF56, ME35, ME45, ME46, PS47

Credit Points: 8 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, IF34, 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 Moive's theorem; applications. Ordinary differential equations. First order: variables separable; exact lincar. Second order: lincar homogeneous differential equations with constant coefficients. Partial differentiation; geometrical interpretation, partial derivatives of higher order.

Courses: ED50, IF34, 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, IF34, IT20, SC30

Co-requisite: MAB222

Credit Points: 12 Contact Hours: 4 per week

# MAB237 STATISTICS

The collection of 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, IF34, 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 Prerequisite: MAB251 Credit Points: 4 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

**Prerequisites:** 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.

Courses: CN31, CN33 Credit Points: 4

4 Contact Hours: 2 per week

# MAB298 MATHEMATICS & STATISTICS See MAB297.

Course: CN32 Credit Points: 4

74.4

Contact Hours: 2 per week

#### MAB299 MATHEMATICS FOR TECHNOLOGISTS

Data handling and basic algebra, geometry and trigonometry. Introduction to statistics, organisation and analysis of data, probability and probability distribution; sampling theory; estimation; test of hypothesis; regression and correlation. Introduction to quantitative operation research methods applicable in solving economic and general business problems, including linear programming, transportation and assignment methods, dynamic programming, decision trees, etc. Courses: CN41, CN43

Prerequisites: First Year Subject

Credit Points: 6 Contact Hours: 3 per week

# MAB301 CALCULUS & ANALYSIS A

Levels of measurement and their relationship to particular operations with real numbers, accuracy and precision: basic algebraic, geometric and trigonometric results; introduction to the concepts of function, limits, continuity and monotonicity; elements of differential and integral calculus, associated theorems and analytical and numerical applications.

Courses: ED50, IF34, 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: IF34, MA34, SC30

Co-requisite: MAB301

Credit Points: 12 Contact Hours: 4 per week

# MAB304 CALCULUS & VECTOR

ALGEBRA

First order and linear second order differential equations, simple applications; vector algebra; vector products; Euclidean spaces; vector calculus: space curves, line integrals; kinematics of a particle.

Courses: IF34, MA34, SC30Prerequisite: MAB301 Credit Points: 12 Contact Hours: 4 per week

#### MAB321 COMPUTATIONAL MATHEMATICS 1

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, programming languages and graphical/mathematical software.

Courses: ED50, IF34, MA34, SC30

Co-requisites: 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, IF34, 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: ED50, IF34, 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-offit; introduction to non-parametric tests.

Courses: BS50, ED50, IF34, MA34, SC30 Prerequisites: MAB347 or credit in MAB237

#### Co-requisites: 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

#### MAB487 ENGINEERING MATHEMATICS 2A

Solution of large scale systems of linea equations by direct and indirect methods; solution of second order differential equations with constant coefficients; numerical solution of differential equations; polynomial approximation, finite differences, Newton-Gregory formulas.

Courses: CE42, EE43, IF56, ME45, ME46 Credit Points: 8 Contact Hours: 3 per week

#### MAB488 ENGINEERING MATHEMATICS 2B

Determination of eigenvalues and eigenvectors of large scale linea systems, power method, inverse iteration, acceleration techniques; interpolation by cubic splines; Fouview series and Harmonice analysis; convergurce of infinite series.

Courses: CE42, EE43, IF56, ME45, ME46

Credit Points: 8 Contact Hours: 3 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, polynominal 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, ME46

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: IF54, PS47 Credit Points: 6

Prerequisite: MAB188 Contact Hours: 3 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 nonsingular 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: IF34, 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, 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

Mathematical modelling with differential equations; wellposedness of first order differential equations and graphical methods; theory of linear systems and nth order differential equations, solutions for constant coefficients; series; Laplace Transform; boundary value problems; Fourier series; separation of variables method for partial differential equations.

# Courses: MA34, SC30

Prerequisites: MAB303, MAB304

Credit Points: 12 Contact Hours: 4 per week

#### MAB618 COMPUTATIONAL MATHEMATICS 2

Linear equations; numerical solution of a single nonlinear equation; interpolation; quadrature; numerical solution of a single first order differential equation. Courses: IT20, MA34, SC30Prerequisite: MAB321 Credit Points: 12 Contact Hours: 4 per week

#### MAB620 FINITE MATHEMATICS

Logic; axioms, proofs, truth-table decidability; set theory, relations, factions; number theory: primes and divisibility, Fermat's and Euler's theorems; greatest common divisor, Euclid's algorithm; primitive roots; arithmetic functions; abstract algebra: Boolean algebras, groups, rings, fields; automata: finite state machines.

Courses: IT20, MA34, SC30Prerequisite: MAB303 Credit Points: 12 Contact Hours: 4 per week

#### MAB630 LINEAR ALGEBRA & ITS APPLICATIONS

Concrete and abstract vector spaces; matrices; linear systems and determinants; inner products and the projection theorem; linear operators on a unitary space; eigenvalues; applications.

Courses: ED50, IT20, MA34, SC30 Prerequisite: MAB303

Credit Points: 12 Contact Hours: 4 per week

#### MAB632 MATHEMATICAL MODELLING

Models are taken mainly from the areas of medicine and biology, including cancer research and population growth, and from mechanics applied to sport. Emphasis is on the mathematical modelling and not on the development of new mathematical techniques. **Courses:** ED50, MA34, SC30

Prerequisites: MAB303, MAB304 or MAB212, MAB222

Credit Points: 12 Contact Hours: 4 per week

#### MAB637 OPERATIONS RESEARCH 1A

Linear programming; replacement, maintenance and reliability; project scheduling techniques; simulation. **Courses: ED50**, IF34, IT20, MA34, SC30

Prerequisites: CSB155, MAB303, MAB347 Credit Points: 12 Contact Hours: 4 per week

#### MAB638 OPERATIONS RESEARCH 1B

Transportation, transhipment and assignment models; sensitivity analysis and duality; inventory models; introduction to queuing theory.

Courses: IF34, IT20, MA34, SC30

Prerequisite: MAB637

Credit Points: 12 Contact Hours: 4 per week

#### MAB641 ACTUARIAL MATHEMATICS

Mathematics of finance; fixed interest securities, pure endowments and life annuities; assurances; policy values; mortality laws, population projections, superannuation, introduction to general insurance.

Courses: IF34, MA34, SC30

Prerequisites: MAB301, MAB342

Credit Points: 12 Contact Hours: 4 per week

#### MAB642 METHODS OF MATHEMATICAL ECONOMICS

The nature of mathematical economics; optimisation 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.

Courses: IF34, MA34, SC30

Prerequisites: MAB304, MAB342

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: BS50, ED50, IF34, MA34, SC30

Prerequisites: MAB348, MAB301

Co-requisite: MAB303

Credit Points: 12 Contact Hours: 4 per week

#### MAB648 STATISTICS 2B

Single and multiple regression analysis, prediction and estimation; use of Minitab package, residual plots; blocking, 2 and 3 factor designs, general theory for 2k designs, additive and interaction models; orthogonal contrasts.

Courses: BS50, ED50, IF34, MA34, SC30 Prerequisite: MAB348 Credit Points: 12 Contact Hours: 4 per week

# UNI SYNOPSE:

# 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, IF54, PS47 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, IF54, ME45, ME46, PS47

Prerequisite: MAB493

Credit Points: 8 Contact Hours: 3 per week

# MAB894 ENGINEERING MATHEMATICS 4

The simultaneous partial differential equations of Maxwell; the three-dimensional wave equation; vector analysis; mathematical problems involving Maxwell's equations; complex variable; Cauchy-Riemann equations; Laurent series.

Courses: EE43, EE44, IF23 Prerequisite: MAB493 Credit Points: 6 Contact Hours: 3 per week

#### MAB906 TOPICS IN ANALYSIS

Convergence in R; uniform convergence; measure theory: measurable sets and functions; Lebesque integrals; metric spaces, contraction mapping principle; normed and Banach spaces, dual spaces and linear operators: Hilbert spaces, O N basis, self-adjoint operators.

Courses: IF49, MA34, SC30, SC60, SC80 Prerequisite: MAB601

Credit Points: 12 Contact Hours: 4 per week

# MAB907 STATISTICS 3A

Estimation; testing; exponential; linear models; introduction to generalised linear models; multicollinearity, heteroscedasicity, effect of auto-correlation; non linear LSE; diagnostics.

Courses: IF34, 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: IF34, MA34, SC30

Prerequisite: MAB648

Credit Points: 12 Contact Hours: 4 per week

MAB911 COMPUTATIONAL

MATHEMATICS 3A

Zeros of polynomials; solution of special types of matrix systems by direct methods; matrix and vector norms, eigenvalues and eigenvectors; solutions to systems of linear equations by indirect methods; solution of non-linear equations; ordinary differential equations (ODEs); the eigenvalue problem.

Courses: MA34, SC30 Prerequisite: MAB618 Co-requisite: MAB630

Credit Points: 12 Contact Hours: 4 per week

# MAB912 CONTINUUM MODELLING

Revision of elementary vector analysis; vector field theory; curvilinear coordinates; mathematical models of fluid motion including circulation and vorticity; Bernouilli equation and applications; incompressible potential flow; equations of motion and some exact solutions of the Navier-Stokes equations; introduction to the use of a computational fluid dynamics package, FLUENT.

Courses: MA34, SC30, SC60

Prerequisites: MAB601, MAB612

Credit Points: 12 Contact Hours: 4 per week

#### MAB913 COMPUTATIONAL MATHEMATICS 3B

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, SC80, IF49 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: IF34, MA34, SC30Prerequisite: MAB638 Credit Points: 12 Contact Hours: 4 per week

# MAB928 OPERATIONS RESEARCH 2B

Simulation; queuing theory; decision analysis; implementation in operations research.

Courses: IF34, MA34, SC30Prerequisite: MAB637 Credit Points: 12 Contact Hours: 4 per week

#### MAB929 TIME SERIES & STATISTICAL FORECASTING

Fundamentals of time series analysis; time series models; non-stationary processes; seasonal ARIMA models; exponential smoothing; transfer function analysis; vector autoregression; combined forecasts; state-space models and the Kalman filter.

Courses: MA34, SC30, SC60, SC80, IF49

Prerequisites: MAB601, MAB647, MAB648 Credit Points: 12 Contact Hours: 4 per week

# MAB933 MATHEMATICAL BIOLOGY

Population ecology, using both discrete and continuous models; predator-prey interactions; enzyme kinetics; epidemics and developmental biology.

Courses: MA34, SC30

Prerequisites: MAB601, MAB612, MAB632 Credit Points: 12 Contact Hours: 4 per week

#### MAB941 MATHEMATICAL MODELLING IN ECONOMICS

Comparative static analysis; optimisation theory; techniques for dynamic economic models; stability theory; optimal control theory.

Courses: MA34, SC30 Prerequisite: MAB642 Co-requisite: MAB601

Credit Points: 12 Contact Hours: 4 per week MAB942 OPTIMISATION METHODS

Numerically based algorithms for function optimisation and non-linear equation solving; classical methods of optimising non-linear functions with non-linear inequality constraints; global optimisation strategies.

Courses: MA34, SC30, SC80 Prerequisites: MAB601, MAB618

Credit Points: 12 Contact Hours: 4 per week

# MAB960 PROJECT WORK

Projects vary in nature and may involve the collection and devaluation of mathematical techniques in some field of interest or the formulation of a problem of interest and the derivation of a solution. Practical community/industry orientated projects are encouraged. Each project is undertaken by a student, or group of students, and is supervised by a member of staff who provides guidance throughout the duration of the project.

#### Courses: MA34, SC30

Prerequisites: 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: MÅ34, SC60, SC30, SC80, IF49 Prerequisite: MAB647.

Credit Points: 12 Contact Hours: 4 per week MAB971 ADVANCED MATHEMATICS

OF FINANCE

Background to investment, investment objectives and philosophy; types of markets, equity, debt securities, derivatives; portfolio theory; investment performance measurement.

Courses: MA34, SC30, SC60, SC80

Prerequisite: MAB641 Credit Points: 12

Contact Hours: 4 per week MAB973 PARTIAL DIFFERENTIAL

EQUATIONS

Derivation of first and second order partial differential equations; solution of partial differential equations by characteristics, separation of variables and Laplace and Fourier transforms; a study of Schrodinger's wave equation

Courses: MA34, SC30, SC60, SC80, IF49 Prerequisites: MAB601 or MAB602, MAB612 Credit Points: 12 Contact Hours: 4 per week

#### MAB974 SAMPLING & SURVEY 5 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, SC80

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: SC60, SC80, IF49

Prerequisites: MAB601, MAB612, MAB911

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: SC60, SC80, IF49

Prerequisites: MAB647, MAB648

Credit Points: 12 Contact Hours: 4 per week

#### MAB977 SCHEDULING & NETWORKS

Inventory systems, production planning and scheduling: aggregate planning and master scheduling, requirement planning, LP, LDR and SDR techniques. Scheduling problems, sequencing problems, flow-shop and job shop scheduling problems. Network flows. Courses: SC60, SC80

Prerequisites: MAB927, MAB928

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.

Courses: SC60, SC80, IF49 Prerequisite: MAB929 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: SC60, SC80, IF49

Prerequisites: MAB601, MAB907

Credit Points: 12 Contact Hours: 4 per week

#### 1 MAB980 STOCHASTIC PROCESSES & APPLICATIONS

Gaussian processes; Brownian motion; diffusions; stochastic equations; martingale; random walks; central limit theorems; epidemic models; queuing models; stochastic compartment models; extreme value theory for stochastic processes. Courses: SC60, SC80, IF49

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.

Courses: SC60, SC80, IF49

Prerequisites: MAB630, MAB907, MAB908

Contact Hours: 4 per week Credit Points: 12

# MAB984 ACTUARIAL STATISTICS

Distribution theory; financial stochastic models and their use in problem-solving; credibility, utility and risk theory; loss and ruin models.

Courses: SC60, SC80 Prerequisite: MAB907 Co-requisite: MAB970

Credit Points: 12 Contact Hours: 4 per week

#### MAB985 COMPUTATIONAL MATHEMATICS 4

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.
Courses: SC60, SC80, IF49 Prerequisite: MAB911 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.

Courses: SC60, SC80, IF49

Prerequisites: MAB973, MAB601, MAB913

Co-requisite: MAB985

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.

Courses: SC60, SC80, IF49

Prerequisites: MAB601, MAB612

Credit Points: 12 Contact Hours: 4 per week

#### MAB989 PROJECT

Project and thesis component of Honours course (SC60).

Course: SC60

Co-requisites: Approved Honours program. Credit Points: 36

#### MAN001 READING COURSE 1

Provides the candidate with the appropriate background at an advanced level necessary for the completion of a research program. Course: SC80

Credit Points: 8

#### MAN002 READING COURSE 2

See MAN001. Course: SC80

Credit Points: 12

#### MAN009 EXPERIMENTAL DESIGN AND STATISTICAL ANALYSIS

The development of further statistical understanding and techniques for researchers in other areas.

Courses: AT22, BN71, BN72, BN73, BS81, BS83, BS84, BS85, BS87, CE74, CN77, CS36, ED11, ED12, ED13, EE75, EE78, HL50, HL52, HL58, HL88, IF49, IS50, IT84, LS85, ME76, NS64, NS85, PH80, PU65, PU69,SC80

Prerequisites: At least one undergraduate statistics unit Credit Points: 12 Contact Hours: 4 per week

#### MAN012 ADVANCED STUDIES

Advanced studies in quality management concepts and techniques with emphasis on the application of statistics.

#### Course: SC60

Prerequisites: Permission of the Head of School Credit Points: 12 Contact Hours: 4 per week

#### 18 MAN120 QUANTITATIVE SYSTEMS ANALYSIŠ

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, IF66 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

#### 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, paried data and independent samples.

Course: BS77, IF69

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. Attribute batch sampling; OC curve, sampling plans (single, double, multiple, sequential), switching rules. Rectifying inspection; Dodge Romig schemes - AOQL, LTPD. Sampling by variables; procedures, sampling plans, inspection rules.

Course: BS77, IF69

Credit Points: 12 Contact Hours: 3 per week

#### MAP222 QUALITY IMPROVEMENT

Flow charts; deployment, layout, top down. Pareto analysis; stratified data, frequency v cost. Cause and effect diagram; dispersion analysis, process classification. Correlation analysis; scattergram, percentage variation explained, several predictors. Affinity diagrams etc. Decision making techniques; brainstorming, multivoting, nominal group technique. Quality improvement teams and quality circles. Quality improvement roadmaps; project identification, improvement plan, strategies, PDCA cycle, 7-step improvement process, team building.

Course: BS77, IF69 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; 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

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

#### MDB300 TEACHING IN THE INFORMATION AGE

The impact of information technology on education; the concept of an information society; how, what is defined as knowledge is contested and changed by information technology; strategies for learning and teaching using information technology. Practical skills using computer hardware and software communication technology and multimedia are developed with a view to appropriate implementation within the curriculum. **Courses:** ED37, ED50, ED51, ED52, ED54

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, Fermet, Turning; major historical developments in content areas of geometry, algebra, probability and applications involving measurement.

Courses: ED51, ED52

Prerequisites: 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. 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, ÊD52

Credit Points: 12 Contact Hours: 3 per week

#### MDB325 BIOLOGY CURRICULUM STUDIES 1

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.

Courses: ED50, ED54

**Prerequisites:** 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

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.

Courses: ED50, ED54 Prerequisite: MDB325 Credit Points: 12 Contact Hours: 3 per week

## STUDIES 1

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. Courses: EDS0, ED54

**Prerequisites:** 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

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.

Courses: ED50, ED54 Prerequisite: MDB327 Credit Points: 12 Contact Hours: 3 per week

#### MDB329 COMPUTING CURRICULUM STUDIES 1

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.

Courses: ED50, ED54, IT20

**Prerequisites:** 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

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.

Courses: ED50, ED51, ED52, ED54, ED37 Prerequisite: MDB329

Credit Points: 12 Contact Hours: 3 per week

#### MDB331 EARTH SCIENCE CURRICULUM STUDIES 1

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.

Courses: ED50, ED54

Prerequisites: 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

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.

Courses: ED50, ED54 Prerequisite: MDB331 Credit Points: 12 Contact Hours: 3 per week

#### MDB333 MATHEMATICS CURRICULUM STUDIES 1

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. **Courses:** ED50, ED54



Prerequisites: 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

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.

Courses: ED50, ED54 Prerequisite: MDB333 Credit Points: 12 Contact Hours: 3 per week

#### MDB335 PHYSICS CURRICULUM STUDIES 1

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.

Courses: ED50, ED54

Prerequisites: 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

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.

Courses: ED50, ED54 Credit Points: 12

Prerequisite: MDB335 Contact Hours: 3 per week

#### MDB337 SCIENCE CURRICULUM STUDIES 1

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.

Courses: ED50, ED54

Prerequisites: 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

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.

Courses: ED50, ED54 Prerequisite: MDB329 Contact Hours: 3 per week Credit Points: 12

#### MDB339 MATHEMATICS EDUCATION

Key concepts and skills in the domains of percents, rate, ratio, chance and data, pre-algebra and geometry. 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

Builds on the understandings developed in MDB302 and MDB339. Exploration of issues concerned with the teaching of measurement and mathematical problem solving; investigation of how information technology can be used to facilitate the development of highlevel 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

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 EDUCATION

Exploration of 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. Software design and development is closely bound to particular problems contexts. This unit 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 unit 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

76 %

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, Fermet, Turning; major historical developments in content areas of geometry, algebra, probability and modern day applications involving measurement.

Courses: ED51, ED52

Prerequisites: 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 TEACHERS

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 unit provides students with a framework to evaluate this methodology.

Course: ED50 Credit Points: 12 Prerequisite: MDB375 Contact Hours: 3 per week

#### MDB378 EARTH & SPACE

Examination of 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

Examination of 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 unit 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

#### MDB381 SCIENCE AND TECHNOLOGY IN THE COMMUNITY AND WORKPLACE

Contact Hours: 3 per week

Development of an awareness of how science and technology pervade most aspects of our daily lives in communities and workplaces. The implications of a rapidly changing scientific and technological base of industry; increasing involvement of the public in national and international decision-making; the need for a scientifically literate society. Practical exercises and projects are also undertaken. Course: ED54

Credit Points:12 Contact Hours: 3 per week

#### MDB382 PROBLEM SOLVING, CRITICAL THINKING AND FUTURING

Reviews state-of-the-art concepts and practices from problem solving, critical thinking, and futuring knowledge bases which have practical applications in the adult education and human resource development field. Participants may enhance their professional effectiveness in performing administrative, instructional, and program development responsibilities through modern practice.

Course: ED54

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

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.

Contact Hours: 3 per week

Courses: ED26, ED62 Credit Points: 12



#### 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 problemcentred 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

#### MDB447 MATHEMATICS CURRICULUM

Recent developments in the teaching and learning of mathematics; identification of effective curriculum models and teaching strategies for mathematics; understanding the content of school mathematics; developing and evaluating curriculum applications. Courses: ED26

Credit Points: 12

Contact Hours: 3 per week

MDN615 CURRICULUM STUDIES IN MATHEMATICS, SCIENCE OR TECHNOLOGY EDUCATION

A study of curriculum in one of the major areas of study in mathematics, science, or technology education. Examples of topics to be addressed include: curriculum theory and design: intended, developed and enacted curriculum; curriculum implementation and evaluation; historical considerations; current curriculum considerations.

Courses: ED13, ED61 Credit Points: 12

#### MDN616 PEDAGOGY IN MATHEMATICS SCIENCE OR TECHNOLOGY EDUCATION

The various factors that determine the effectiveness of the mathematics, science and technology learning environments. Factors considered include, the role of the teacher, learning theories, social context. The units achieves a balance between theoretical considerations and practical experience of the participants.

Courses: ED13, ED61 Prerequisites: EDN601 Credit Points: 12

#### MDN619 TECHNOLOGICALLY SUPPORTED LEARNING AND TEACHING ENVIRONMENTS

Computer-based software, equipment and educational settings as technological environments; models of interpreting technological environments; historical perspective of learning/teaching technologies; design of technological environments. Courses: ED13

Credit Points: 12

**MDN620 STUDENT EVALUATION IN** MATHEMATICS /SCIENCE/ TECHNOLOGY EDUCATION: **ASSESSMENT & INTERVENTION** 

The major theoretical issues in assessment in math-

ematics, science and technology education. The role of assessment and intervention is discussed and expertise is developed in planning of assessment instruments and in their evaluation.

Courses: ED13,ED11 Credit Points: 12

#### **MDN621 MATHEMATICAL AND** SCIENTIFIC REASONING

Recent theories and research in cognitive psychology and their application to mathematics and science education. Topics of study include the nature of mathematical and scientific knowledge and understanding, cognitive complexity, analogical reasoning, and problem solving and thinking in mathematics and science. The unit develops students' understanding of these issues so that they might apply this to their own teaching and research.

Courses: ED13,ED11 Prerequisites: EDN601 Co-requisites: MDN616 Credit Points: 12

#### 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 Prerequisite: MDP401 Credit Points: 12 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

Prerequisite: MDP403

Credit Points: 12 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

Prerequisite: MDP406 Credit Points: 12 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 is 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

Prerequisite: MDP407 Contact Hours: 3 per week

Credit Points: 12 Contact Hours: 3 per we MDP412 SENIOR MARINE STUDIES CURRICULUM STUDIES 2 See MDP408. Course: ED37 Prerequisite: MDP4

Prerequisite: MDP407 Contact Hours: 3 per week

MDP413 SENIOR PHYSICS CURRICULUM STUDIES 2

See MDP408. Course: ED37 Credit Points: 12

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: 3 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; di

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. How information is modelled, stored and retrieved using relational database techniques; the impact on society of the use of information systems; the pedagogies associated with teaching about and using information systems in schools are explored.

Course: ED21

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: ED21Prerequisites: MDP532 or MDP530Credit Points: 12Contact 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.

Course: ED21 Prerequisites: MDP503, MDP532 Co-requisite: MDP537

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, ED70

Prerequisites: 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

UNIT SYNOPSES

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

Credit Points: 12 Contact Hours: 3 per week Incompatible with: MDP505

#### 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, Linkways and 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

Credit Points: 12 Contact Hours: 3 per week Incompatible with: MDP501

#### 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 Credit Points: 12 Contact Hours: 3 per week Incompatible with: MDP509

#### 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 Credit Points: 12 Contact Hours: 3 per week Incompatible with: CSP842

#### 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: ED21Prerequisite: MDP532Credit Points: 12Contact Hours: 3 per weekIncompatible with: CSP837

#### 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

Prerequisites: MDP532 or MDP530

Credit Points: 12 Contact Hours: 3 per week Incompatible with: CSP843

#### 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

Credit Points: 12 Contact Hours: 3 per week Incompatible with: MDP502

#### 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.

Courses: ED22, ED26

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: IF56, 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: EE43, EE44, IF53, ME23, ME35, 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, IF54

Contact Hours: 3 per week Credit Points: 6

#### MEB133 MATERIALS

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, IF56, 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 interrelationship 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 nontraditional manufacturing technology; introduction to value analysis, product design and material selection; tolerancing and metrology; total quality control.

Course: IF56

Credit Points: 8

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

MEB212 MECHANICS OF SOLIDS Concepts of stress, strain and elasticity; analysis of stress and strain; stresses in simple beams; torsion of circular shafts; stresses in thin-walled pressure vessels;

strain measurement and strain gauging Courses: IF56, ME45 Prerequisite: CEB184 Credit Points: 6 Contact Hours: 3 per week

#### 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: IF54, 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 nonferrous 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 nonferrous alloys.

Courses: IF53, ME35, ME45

Prerequisite: MEB133

Credit Points: 6

Contact Hours: 3 per week

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** 

#### 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

#### MEB314 MECHANICS 1

Kinematic and dynamic analysis of planar linkages and mechanisms; link synthesis and its application to the design of mechanisms; determination of static and dynamic forces and torques due to inertia and other effects in mechanisms; balancing; design and synthesis of cams with specified motion using graphical and analytical methods; kinematic analysis of spur gears in mechanisms.

Courses: IF56, ME31, ME45

Prerequisites: CEB184, MEB111

Credit Points: 8 Contact Hours: 4 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

#### MEB334 MATERIALS 2

Introduction to fracture mechanics; plastic zone size and limitation of linear elastic fracture mechanics (LEFM); application of LEFM to static design, stress corrosion cracking, and fatigue crack growth; charactersitics of polymers and composites; review of engineering ceramics.

Courses: IF56, ME35, ME45 Prerequisite: MEB133

Credit Points: 8

Contact Hours: 4 per week

#### MEB352 THERMODYNAMICS 1

Basics of engineering thermodynamics; reversibility; first and second laws of thermodynamics; liquid, vapour and gas; reversible non-flow processes; heat engine cycles; positive displacement expanders and

compressors; multi-stage compressors; engine performance testing.

Courses: IF56, ME45

Credit Points: 8 Contact Hours: 4 per week

#### MEB361 FLUIDS 1

Fluid mechanics; forces in a fluid at rest and its action on submersed 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: 6 Contact Hours: 3 per week

#### MEB363 FLUIDS 1

Fluid properties; forces on a fluid at rest; manometry; fluid pressure on submersed bodies; states of equilibrium; fluid flow; fluid flow and pressure drop in pipes; power transmission through pipelines; momentum and fluid flow; energy equation and fluid flow; applications of the momentum and energy equations: branching pipes.

Courses: IF56, ME45

Prerequisites: CEB184, PHB132, MAB188 Credit Points: 8 Contact Hours: 4 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 Prer

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: ME45

Prerequisites: CEB184, CEB185, MEB101, MEB121 Co-requisite: MEB313

Credit Points: 8 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.

Prerequisite: MEB502 Course: ME45 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.

Prerequisite: MEB502 Course: ME45 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

#### MEB430 MATERIALS 3

Nucleation and growth phenomena in commercial materials; structure-property relationships and design considerations; welding of structural and joining materials; review of structure-property relationships in wrought alloys; engineering properties of steels.

Courses: ME45 Prerequisite: MEB133 Credit Points: 8 Contact Hours: 4 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

Prerequisites: MEB251, MEB462

Co-requisite: MEB550 Credit Points: 8

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 Prerequisite: MEB362 Credit Points: 8

Contact Hours: 3 per week

#### MEB455 THERMODYNAMICS 2

Steam plant; nozzles; impulse and reaction turbines; gas turbines; mixtures; refrigeration; chemistry of combustion.

Courses: ME35, ME45 Prerequisite: MEB352 Credit Points: 8 Contact Hours: 4 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

#### 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

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

#### MEB473 MANUFACTURING ENGINEERING 1

Practical machining principles; cutting tools and cutting tool materials; analysis of tool wear and tool life; introduction to CNC technology and CNC part programming; types of welding processes; grinding and non-traditional material cutting processes; principles of metrology.

Courses: IF56, ME45, ME46

Credit Points: 8 Contact Hours: 4 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: 8 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.

Prerequisites: CEB185, MEB121 Course: ME46 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

Prerequisites: MEB483, MEB511, MEB610, MEB773 Co-requisites: MEB772, MEB911 Credit Points: 14

Contact Hours: 3 per week

# UNIT SYNOPSES

#### 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 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: 8 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; leq; SEL; noise dose and standards; sound power; absorption; the behaviour of sound relating to rooms, enclosures and partitions.

Courses: IF53, ME45 Prerequisites: MAB493, PHB132

Co-requisite: MAB893

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 thinwalled sections; failure criteria and their applications; experimental strain measurement.

Courses: ME45, ME46

Credit Points: 7 Contact Hours: 3 per week

#### MEB512 NOISE AND VIBRATIONS

Introduction to acoustics; noise levels, frequency and duration; sound power level; free and reverberant field; free and forced vibration and vibration absorption; torsion vibration; Holzer's method.

Prerequisites: PHB132, MAB493, MEB111

Credit Points: 8 Contact Hours: 4 per week

#### MEB513 STRESS ANALYSIS

Stress and strain in three-dimension; strain-gauge rosette analysis; two-dimensional problems; axisymetrically loaded problems; torsion of non-circular section; introduction to plates.

Prerequisites: First Year Subject, MEB212, MAB493 Credit Points: 8 Contact Hours: 4 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: IF56, ME45, ME46

Prerequisites: MEB230, MEB231

Credit Points: 8 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 carburettors; actuator disc theory of propellers and rotary wing aircraft; gas turbine engines; compressors; turbines; ignition systems; fuel control systems and afterburners; rocket motors; fuels and thrust calculations.

Course: EE43 Prerequisite: MEB362 Credit Points: 8 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.

Courses: EE43Prerequisite: MEB454Credit Points: 6Contact Hours: 3 per week

#### MEB554 HEAT TRANSFER

Conduction and convection heat transfer; overall heattransfer coefficient; viscuous and inviscid flow; boundary layers; empirical and practical relations for forcedconvection heat transfer; natural-convection systems; radiation heat transfer; condensing and boiling; heat exchangers.

Credit Points: 8

Contact Hours: 4 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

#### MEB572 MANUFACTURING ENGINEERING 2

Introduction to metalworking principles; hot and warm forging operations; extrusion operation; flat rolling operation; deep drawing operation; shearing/blanking operation; spinning operation; non-traditional metal forming operations; die/moulds in manufacturing processes; introduction to casting of ferrous and non-ferrous metals and alloys; shrinkage and porosity; fluid flow and design considerations in casting.

#### Course: IF56 Credit Points: 8

#### 8 Contact Hours: 4 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: ME46Prerequisite: MEB484Credit Points: 8Contact 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: IF56, 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: 8 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

Prerequisites: MAB493, MEB411, MEB510 Co-requisite: MEB511

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 Credit Points: 8 Prerequisite: MEB553 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

#### MEB613 MECHANICS 2

Analysis of two-dimensional frames; small curvature beam theory; analysis of compression members; introduction to energy methods; introduction to matrix methods; free and forced vibration; damped vibration; energy methods in vibration analyses.

Credit Points: 8 Contact Hours: 4 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

#### MEB641 AUTOMATION 1

Mathematical models of mechanical systems; time domain; frequency domain; S-plane, including plotting of root locus diagrams. Course: IF56

Credit Points: 8

Contact Hours: 4 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 energysaving 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

#### MEB661 TRIBOLOGY

Terminology in lubrication, friction and wear; ploughing and adhesion components of friction; characterisation of solid surfaces; wear modes; chemistry of lubricants; lubrication modes; bearing design; lubrication of transmission elements; failure diagnosis; special lubrication problems; biological deterioration of lubricants; lubrication of human and prosthetic joints. **Course:** IF56

Credit Points: 8 Contact Hours: 4 per week

#### MEB662 FLUID POWER

Components of hydraulic and pneumatic systems; fluid power graphical symbols to Australian standards; fluid logic; hydraulic components; hydraulic system design; hydraulic circuits.

Course: IF56 Prerequisite: MEB465

Credit Points: 8 Contact Hours: 4 per week

#### MEB670 INDUSTRIAL ENGINEERING 1

Project planning and control; plant location and layout; work study; design of experiments; linear programming applications.

Courses: IF53, ME35, ME45, ME46

Credit Points: 6 Contact Hours: 3 per week

#### MEB672 TOTAL QUALITY MANAGEMENT

Total quality control and systems; quality engineering technology; statistical process control; product and systems reliability; ISO9000 and AS3900; management of engineering projects.

Course: IF56 Credit Points: 8

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: IF56, ME35

Credit Points: 8 Contact Hours: 4 per week

MEB676 DESIGN FOR MANUFACTURING 1 Introduction to solid modelling; techniques used in the development of solid models; use of solid modelling in rapid prototyping; solid modelling in the concurrent engineering environment; introduction to CAD/CAM; use of CAM computer software for different manufacturing processes; other rapid prototyping techniques such as stereolithography.

Course: IF56

**Credit Points: 8** 

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: 8 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: 8 Contact Hours: 3 per week MEB701 SPECIAL TOPIC 3

See MEB601

Courses: ME45, ME46

Credit Points: 8 Contact Hours: 3 per week

MEB703 RELIABILITY AND

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-new renewal; Hastings' repair limit; inspect or monitor; physics of failure.

Credit Points: 8 Contact Hours: 3 per week MEB710 AUTOMATION 2

Use of computer packages in control system design (eg. Matrix, 'X'); fundamentals of discrete time systerns; 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

#### MEB711 AUTOMATION 2

Classical control: performance specification, system identification, creation of control loops, tuning, simulation: modern control: state space modelling, state variable feedback, controllability/observability, simulation.

Prerequisite: MEB641

Contact Hours: 4 per week Credit Points: 8

#### 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, IF56, ME35, ME46

Credit Points: 8 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, IF56, ME45

Credit Points: 8 Contact Hours: 3 per week

#### MEB775 TECHNOLOGY MANAGEMENT

Ethics in business, policy and public service; health and safety administration and responsibilities; innovation, planning, creativity and intellectual property; planning and legal aspects of new technology and technology management.

Course: IF56

Credit Points: 8 Contact Hours: 3 per week

MEB776 DESIGN FOR MANUFACTURING 2 The system of limits and fits; AS1654; geometric analysis for different features; interchangeability and loops equation; geometric tolerancing; datum systems; basic features of jig and fixture design.

Course: IF56

Credit Points: 8 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 Prerequisite: EEB692 Credit Points: 8 Contact Hours: 3 per week

#### MEB800 SPECIAL TOPIC 4

See MEB701.

Courses: IF56, ME45, ME46 Credit Points: 8 Contact Hours: 3 per week

#### MEB801 PROJECT

Investigate and present a formal report on a mechanical engineering problem; project may be industry based or arise from applied research.

Credit Points: 40 Contact Hours: 6 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: 8

Prerequisite: MEB510 Contact Hours: 3 per week

#### MEB871 COMPUTER CONTROL OF MANUFACTURING SYSTEMS

Analysis of digital control systems and its application to process monitoring; programmable controllers; control of manufacturing and information systems in manufacturing; integration and interfacing of machine tools; applications and control systems associated with industrial robots; communications networks for manufacturing including MAP/TOP.

Course: IF56 Credit Points: 8

Contact Hours: 4 per week

#### MEB872 DESIGN FOR 5

MANUFACTURING 3 Materials selection; design for manufacturing processes including casting, forging, extrusion, metal stamping, forming, powder metallurgy, welding and joining; de-

sign for assembly; design with advanced materials including plastics, ceramics and adhesives; electromechanical parts assembly; productibility, quality and cost considerations.

Course: IF56 Credit Points: 8

Prerequisite: MEB776 Contact Hours: 3 per week

#### **MEB873 COMPUTER INTEGRATED** MANUFACTURING

Systematic approach to integrated manufacturing systems; product-centred approach to manufacturing process; concepts of cell manufacturing; flexible manufacturing systems; modelling and simulation as a manufacturing system design tool; modelling and simulation methodology; use of commercial simulation package to evaluate manufacturing systems design. Course: IF56

Contact Hours: 4 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 multilinked 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

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

#### MEB901 INDUSTRY PROJECT

Student will work full-time in an industrial environment for approximately six months attempting to solve a particular problem in the organisation; student will present seminars and a final report. Course: IF56

Credit Points: 32 Contact Hours: 40 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

#### MEB912 FINITE ELEMENT ANALYSIS

Survey of engineering applications of finite element analysis; formulation of simple elements including isoperimetric elements; modelling considerations for static and dynamic analyses; introduction to a finite element analysis package.

Prerequisites: MEB513, MEB554, MEB613 Credit Points: 8 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: 8 Contact Hours: 3 per week

#### MEB951 ENERGY AND THE ENVIRONMENT

Developing an energy management plan; energy audits and associated metering; financial analysis; electricity and other tariffs; combustion theory and practice; fuel properties; energy cycles and refinement including co-generation; energy recovery methods and plant; pinch technology; building energy management; compressed air; chemistry of water treatment processes. Credit Points: 8 Contact Hours: 3 per week

#### MEB960 FLUID SYSTEMS DESIGN

Analysis of selected fluid systems; performance characteristics of components and systems.

Course: ME45 Credit Points: 7

Co-requisite: MEB464 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: IF56	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.

Prerequisite: MEB571 Course: IF53 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** 纖 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 Credit Points: 7

Prerequisite: MEB976 Contact Hours: 3 per week

#### MEB979 MANUFACTURING RESOURCES 19<sup>16</sup> 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 MRPII; measuring performances.

Course: IF56

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: 8 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

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: 6

#### 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, IF66

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, IF66

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 is 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 mainte-



nance; 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 interrelationships 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, IF69 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, IF69

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 man agement and control; design and maintenance of personal protection equipment; safe habits and the effective use of personal protection equipment.

Course: PÚ65 Credit Points: 12 Prerequisite: MEP201 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, IF69

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 1

General properties of materials; materials selection; service requirements and properties of ferrous and nonferrous metals and alloys; corrosion types and prevention; testing procedures; plastics, ceramics and other materials.

Course: CE21 Credit Points: 8

80%

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

Credit Points: 7

Prerequisite: MET250 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 Contact Hours: 3 per week Credit Points: 6

#### 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 nonferrous 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 Credit Points: 7

Prerequisite: MET580 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 Credit Points: 6

Prerequisite: MET171 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

26 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

Contact Hours: 3 per week Credit Points: 7

#### 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

#### 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 Incompatible with: MJB140

#### 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 Incompatible with: MJB140

#### MJB105 FILM & SOCIETY

The Great Depression era, Roosevelt's new deal; the ways 1930s genre films refracted these problems; postwar 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

Prerequisites: 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 an expression of society. These analyses are related to the broader questions of representation and rhetoric of fiction in film. (Note: this is not a scriptwriting 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

culture.

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.

**Courses:** BS50; Not available to Cross Institutional students

#### Credit Points: 12

**Contact Hours:** 4 (Workshops may involve a further 3 hours per week)

#### 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

Prerequisites: 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 Nuovo, 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; advanced production techniques in dramatic film. Students are required to work in crews to produce a significant film production.

Courses: B\$50; Not available to Cross institutional students

Prerequisite: MJB126

Credit Points: 12

**Contact Hours:** 3 (Workshops may involve a further 3 hours per week)

#### 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 abovethe-line, below-the-line and marketing costs. Sources of finance: pitching to 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.

Course: BS50, BS72

Prerequisites: 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 produc-

tion. Seminar presentation and discussion of each stage of production throughout the semester with progress reports made each week including pre-production the viewing of rushes and cut material.

Courses: BS50; Not available to Cross Institutional students

Prerequisites: MJB114 and either MJB134 or MJB113 Credit Points: 12

**Contact Hours:** 3 (Workshops may involve a further 3 hours per week)

#### 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, Photo CD.

Courses: BS50, BS72, IF52, IF54, IT20

Credit Points: 12

Contact Hours: 3 (Workshops may involve a further 3 hours per week)

#### 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

Prerequisites: MJB120 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 processes, events and places to exploit their human-interest news value.

Courses: BS50, BS72

Prerequisites: MJB121 for BS50 (JOU); MJB120 or MJP100 for all other students

Credit Points: 12 Contact Hours: 3 per week MJB126 VIDEO PRODUCTION

The theory and practise of communication through the electronic media; 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, IF52, IF54, IS43, IT20 Credit Points: 12

Contact Hours: 3 (Workshops may involve a further 3 hours per week)

#### 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 Credit Points: 12 Contact Hours: 3 (Workshops may involve a further 3 hours per week)

#### **MJB129 FILM & TELEVISION** SCRIPTWRITING

Writing through analysis of features, documentaries and drama; in-depth approach to writing through analysis of audiences and the industry; dialogue and character development; use of film in television and public relations: analysis of scripts and script requirements in contemporary markets.

Courses: BS50, BS72

Prerequisites: MJB127 or 96 credit points in a degree program.

Credit Points: 12 Contact Hours: 3 per week

#### 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, magazine and drama; the roles of producer, director, art director, camera and audio operator, vision mixer, floor manager, technical director, production assistant and VTRs; the production crew as a team.

**Courses:** BS50; Not available to Cross Institutional students

Prerequisites: MJB126, MJB129

Credit Points: 12

Contact Hours: 3 (Workshops may involve a further 3 hours per week)

#### **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; shooting and editing practice in workshops throughout the semester; production of a documentary or corporate video.

Courses: BS50, BS72

Prerequisites: MJB126 and (MJP100 or MJB129 or MJB124)

Credit Points: 12

Contact Hours: 3 (Workshops may involve a further 3 hours per week)



#### 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 contract the completion of a progressive assessment program. The student's result is determined on the basis of reports, continuous assessment and the employer's report.

Courses: BS50; Not available to Cross Institutional students

Prerequisites: MJB122 or MJB138 for BS50 (JNL) majors; MJB113 or MJB134 for BS50 (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 Credit Points: 12 Prerequisite: MJB124 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, BS72

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

Prerequisites: MJB130 (or AAB052 or COB113) Credit Points: 12 Contact Hours: 3 per week Incompatible with: MJB104

#### 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

Prerequisites: MJB130 (or AAB052 or COB113) Credit Points: 12 Contact Hours: 3 per week

#### MJB143 AUSTRALIAN FILM

An examination of films of the 70's, 80's and 90's; historical/social context; construction of cultural discourses in film; national identity, class, ethnicity and gender; the politics of production in Australia. **Course:** BS50

Prerequisites: 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

#### MJB146 AUSTRALIAN DOCUMENTARY FILM

The newsreel in Australia; Fox Movietone News and Cinesound Review; Film Australia, alternative documentary in the work of the Waterside Workers Film Unit; the impact of television on documentary film making; the Sydney Women's Film Group; radical film makers, Bradbury, Zubrycki and Pilger. Course: BS50

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 Incompatible with: MJB116

#### 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. 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 Prerequisites: 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: MJN100 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: MJN100 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 & 識 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

#### 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 qualitative 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, IF64

Credit Points: 12 Contact Hours: 3 per week

#### MJP105 THEORIES OF JOURNALISM

The body of 'classical' literature pertaining to the theories of journalism; identification of individual research interests.

Courses: BS61, BS72, BS84

Credit Points: 12 Contact Hours: 3 per week

#### MKB104 ADVANCED MARKETING **RESEARCH TECHNIQUES**

A market research project utilising concepts and techniques gained from market research.

Course: BS50 Prerequisites: MKB151, MKB137 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 the 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 F/T semesters 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 the 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: MKB126 and students must have completed 5 F/T semesters or equivalent.

Credit Points: 12 Contact Hours: 3 per week

MKB108 MARKET PRACTICES

Quantitative marketing practices in: inventory control; queuing; LP programming; market simulation; causal regression analysis; market applications.

Course: BS50 Prerequisites: MKB140, 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

Prerequisites: 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, 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 and 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 storyboarding; electronic copywriting; graphic production; production of radio and TV commercials; campaign development and presentation of campaigns.

Courses: BS50, BS72 Prerequisite: MKB118 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 speech making. 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 Credit Points: 12 Prerequisite: MKB123 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

Prerequisites: MKB118 or MKB145 (may be a corequisite)

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 Credit Points: 12 Co

Prerequisite: MKB116 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. Note: Students are required to undertake an additional 20 hours of desktop publishing training during the semester. Courses: BS50, BS72 Prerequisite: MKB129 Credit Points: 12 Contact Hours: 3 per week

#### 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, IF52, IF54, 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: B\$50, B\$72 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 Prerequisites: 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 Prerequisites: MKB126 or MKB157

Credit Points: 12 Contact Hours: 3 per week

#### MKB129 PUBLICITY & PROMOTION – PRINT

Focus on communication within 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. Grad Dip students should substitute MJP100 for MJB120.

Credit Points: 12 Contact Hours: 3 per week

#### MKB130 PUBLICITY & PROMOTION -ELECTRONIC

Production skills in video as they apply to public

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relations in organisations. Students produce a complex video news magazine for a client organisation. This includes scripting, presenting, and production management. Techniques for producing and placing community service announcements are covered.

#### 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

Prerequisites: MKB126 and Advertising major units 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, MKB108 Credit Points: 12 Contact Hours: 3 per week

#### MKB136 MARKETING LOGISTICS

Marketing logistics is concerned with the planning, development, maintenance and control of the system of supply and distribution activities that place the organisation's product or service in the hands of its customers. The unit enables students to understand the importance of logistics and to study improvements that will increase customer service and reduce distribution costs. Involves the application of mainly quantitative models and techniques concerned with product flow from purchasing to consumption; covers distribution strategies, quality, inventory costs and control, warehousing and transportation, project network analysis, location and logistics planning. Plant visits are an important part of the learning process in this unit. **Course:** BS50, IF56

Prerequisites: (MKB140 and EPB109) or MKN106 Credit Points: 12 Contact Hours: 3 per week

#### MKB137 COMPUTER APPLICATIONS IN MARKETING

Techniques in market research; univariate and bivariate

analysis; non-parametric 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 multi-dimensional scaling.

Course: BS50 Prerequisites: EPB109, 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, IF54, IF56, 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, IF56

Prerequisites: 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, and the consumer decision process and their impact on marketing strategy.

Courses: BS50, IF56

Prerequisites: 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, IF56

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 **Prerequisites:** 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 Prerequisites: 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 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, IF56

Prerequisites: 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 Prerequisites: 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, IF56

Prerequisites: MKB140 and ISB892 for undergraduate students; MKN106 for postgraduate students.

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, IF56

Prerequisites: 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, IF56

Prerequisites: 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 Prerequisites: 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 minithis 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, IF56

Prerequisites: 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

Prerequisites: MKB140 (may be a co-requisite) Credit Points: 12 Contact Hours: 3 per week

#### MKB166 MARKETING TOURISM DESTINATIONS & ATTRACTIONS

Note: A quota of 100 applies to this unit. The marketing of tourism destinations, elements of the destination mix and industry attractions is explored. Services marketing principles and strategies are examined in the tourism sector within domestic and international contexts. The marketing of transport, hospitality, entertainment, events and attractions provide opportunities for knowledge development in tourism growth areas.

#### Course: BS50

Prerequisites: MKB140 (nil for postgraduate) Credit Points: 12 Contact Hours: 3 per week

#### MKN100 SEMINARS IN MARKETING THEORY & RESEARCH METHODS

The primary objective of this unit is to prepare students for their thesis in MKN112 and MKN113. More generally, the unit helps students to develop practical knowledge and skills to plan, carry out and report their own research projects in business and in academia, and to understand and evaluate reports of research in academic journals and elsewhere. Among the topics covered are: identifying a research problem, building a theoretical framework and generating hypotheses, choosing a methodology, collecting and analysing quantitative and qualitative data, and writing a structured report.

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#### Courses: BS61, BS85

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

#### MKN101 SEMINARS IN BUSINESS 圜 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

Contact Hours: 3 per week Credit Points: 12

#### 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. The unit provides an understanding of the importance, variety and value of both quantitative and qualitative deci-sion 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 analysts. 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

#### 10 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, 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, BS85

Credit Points: 12 Contact Hours: 3 per week

#### MKN108 SEMINARS IN CONSUMER BEHAVIOUR

Introduction to the area of consumer behaviour and

provides a forum for the discussion of theory and research in the field. Students will do research projects and be involved in discussions about the interdisciplinary nature of consumer behaviour. Issues from past classes include: children as consumers, consumerism, ethical decision making, gender representation in advertising, emotions research, time, hedonism and materialism, and cross-cultural research.

Course: BS85

Credit Points: 12 Contact Hours: 3 per week

#### **MKN109 PRODUCT INNOVATION &** DEVELOPMENT

This unit deals with the dynamics of product innovation and product development within the mix of core marketing activities in organisations. Products are defined in the broadest sense to include both tangible and intangible offerings and the various categories of consumer and industrial, services, and events. The unit covers areas such as product market analysis, design, innovation, evaluating and testing product ideas, branding and packaging, market testing and investment analysis. Learning methodologies are mostly experiential and include hands-on computer use, visits to organisations and practical exercises.

Courses: BS61, BS85 Credit Points: 12 Contact Hours: 3 per week

#### MKN110 SEMINARS IN STRATEGIC MARKETING

This unit provides an in-depth understanding of strategic marketing, which is how an organisation can adapt to a changing external environment through marketdriven strategic planning. Topics covered include: environmental analysis, segmentation and competition analysis, strategic positioning, new developments including international strategic marketing, and the strategic role of market information. The unit usually includes groups of students creating strategic marketing plans for real-world organisations.

Course: BS85

Credit Points: 12 Contact Hours: 3 per week

#### MKN111 MARKETING FOR QUALITY MANAGEMENT

Introduction to advanced marketing theories and practice, the importance of quality to marketing and the role of the marketing function in quality management. Courses: BS85, BS86

Credit Points: 6 Contact Hours: 3 per week

#### MKN112 THESIS (1-4)

This unit is the culmination of the Bachelor of Business (Honours) degree in Marketing and the first step towards the thesis in the Master of Business degree in Marketing (MKN113). 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 up to about 20,000 words. 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: BS61, BS85

Credit Points: Students enrol in four sequential 12 credit point units commencing with MKN112/1 until they have completed 48 credit points. Progress is assessed at the end of each semester. Note that the Bachelor of Business (Honours) thesis is assessed on one major report submitted at the completion of MKN112.

#### MKN113 THESIS (1-8)

This unit follows on from MKN112 for Masters of Business students. Ordinarily the thesis would involve a report of up to 60,000 words for the Masters thesis. Course: BS85 Prerequisites: MKN112/1-4 Credit Points: Students enrol in eight sequential 12 credit point units commencing with MKN113/1 until they have completed 96 credit points. Progress is assessed at the end of each semester. Note that the Masters thesis is assessed on one major report submitted at the completion of all necessary thesis units in MKN112 and MKN113.

#### 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: AA21, BS72, BS78

Credit Points: 12 Contact Hours: 3 per week

#### MKP101 FUNDRAISING CAMPAIGNS

Fundraising leadership for increasing campaign productivity is the focus of this unit. Topics include: leadership and the 'Big Gift'; building staff and board leadership teams; using the mission statement to develop campaign strategy, planning and implementation. Fundraising campaign topics include: defining relevant constituencies and vehicles, budgeting and managing campaign elements, strategic management and ethical fundraising, evaluating fundraising. Students undertake a group project in the form of the analysis of a fundraising program. 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 are required to develop and write a business plan based on an entrepreneurial idea, incorporating a hands on practical approach.

Courses: BS78, BS81, ED23

Prerequisites: Four postgraduate business units Contact Hours: 3 per week Credit Points: 12

#### MKP107 MARKETING FOR ARTS ADMINISTRATORS

This unit provides students of arts administration with an understanding of the principles of marketing and strategies for application; marketing statistics and audience research; segmentation and consumer behaviour; and the steps involved in developing marketing plans and campaigns for arts organisations.

Courses: BS30, BS78, BS85

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.

Courses: BS30, BS78, BS85

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.

Courses: BS30, BS78, BS85

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 Credit Points: 8

Contact Hours: 60 per 2 week block following semester

#### NSB151 FOUNDATIONS OF NURSING **3**87 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

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

#### Prerequisite: NSB151 Contact Hours: 3 per week

NSB201 PRINCIPLES OF PATIENT CARE

Emphasises the ethical, legal and clinical accountability of the radiographer for safe patient care; develops in radiography students an awareness of their responsibilities in protecting patients and promoting their wellbeing.

Course: PH38 Credit Points: 4

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Contact Hours: 2 per week

# UNIT SYNOPSES

#### 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 (oncampus) 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

#### **INSB215 CLINICAL PRACTICE 2B**

Provides students with the opportunity to consolidate the skills which they have acquired during the preceding units; 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 Credit Points: 8

Contact Hours: 60 per 2 week block following semester

#### ■ 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: NS40Prerequisites: NSB151, NSB152Credit Points: 8Contact 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 provides a framework for nursing care which acknowledges the importance of promoting, maintaining and restoring mental health. It addresses contemporary concepts of mental health. It addresses contemporary concepts of mental health and mental illness; biological and socio-cultural 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; development of an understanding, acceptance and appreciation of culture such that students are better able to provide peoplecentred care within a multicultural health care context. Topics include: nature of culture and behavioural practices of societies, fundamental aspects of socioanthropological 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 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

#### NSB349 COUNSELLING & CRISIS MANAGEMENT

The basic theories and principles of crisis intervention methodology. Focuses 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 perspective 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

Contact Hours: 3 per week

#### NSB350 HEALTH EDUCATION IN NURSING

An exploration of the theoretical bases of education, including concepts and issues within educational research. Topics to be explored include historical perspective of educational developments; educational research; educational theories, their utilisation; and elient education in a health care context.

Course: NS48

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Credit Points: 8 Contact Hours: 3 per week

NSB360 CLINICAL PRACTICE 3A/BH NSB361 CLINICAL PRACTICE 3B/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

NSB371 CLINICAL PRACTICE 3B/MH See NSB215.

Course: NS40 Co-requisites: NSB360 or NSB370 Credit Points: 8

Contact Hours: 60 per 2 week block following semester



#### NSB401 NURSING & BIOPHYSICAL HEALTH 2

Further develops an appreciation of the effects of selected pathophysiologic 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, facilitating 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; perspective 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 NSB461 CLINICAL PRACTICE 4B/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 problemsolving skills, technical skills and health teaching skills in both the University (on-campus) and clinical (offcampus) laboratories. The clinical laboratory experiences takes 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

NSB471 CLINICAL PRACTICE 4B/MH

See NSB215.

Course: NS40 Co-requisites: NSB460 or NSB470 Credit Points: 8

Contact Hours: 60 per 2 week block following semester

#### 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.

Course: NS40 Credit Points: 8

Contact Hours: 3 per week

- NSB560 CLINICAL PRACTICE 5A/BH
- NSB561 CLINICAL PRACTICE 5B/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 Credit Points: 8 Co-requisites: NSB214, NSB215 Contact Hours: 3 per week

#### 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-requisites:** NSB560 or NSB570

Credit Points: 8

Contact Hours: 60 per 2 week block following semester

#### 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 寥 **\$** 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; 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

Credit Points: 8

Contact Hours: 60 per 2 week block following semester

#### 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 section of the three step-locked dissertation units in the Master of Nursing. Course: NS85

Credit Points: 24

#### NSN411 RESEARCH SEMINAR

This unit is 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: NS64, NS85

Credit Points: 12 Contact Hours: 3 per week

#### NSN412 RESEARCH PROJECT

Students design and implement research and gather and analyse data. This is the second of three step-locked dissertation units in the Master of Nursing. Course: NS85

Credit Points: 12

#### NSN501 ADVANCED CLINICAL STRATEGIES

This unit provides registered nurses with advanced skills in the area of clinical problem solving across a variety of clinical contexts. Students undertake the unit in the initial stages of their specialisation course, and the knowledge and skills which they develop are extended and applied through the specialty units. Students develop advanced problem solving and assessment skills, reflect upon contextual influences on the health experiences of clients, demonstrate advanced skills in applying interpreted data to client care situations and critically evaluate clinical performance and client care. Courses: NS64, NS85

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

#### NSN502 NURSING KNOWLEDGE

Students explore content related to the historical and current development of nursing knowledge. Contemporary nursing practice is examined in relation to the development of nursing as a discipline in order to assist each student to reflect upon their conceptions of nursing as a field of study and practice.

Courses: NS64, NS85

Credit Points: 12 Contact Hours: 3 per week

#### **NSN505 QUANTITATIVE APPROACHES** TO NURSING RESEARCH

Students develop skills in research design and data collection processes related to clinical phenomena. Students have the opportunity to apply statistical concepts and a computer package to the analysis of numerical data.

Course: NS64, NS85 Credit Points: 12

Contact Hours: 3 per week

#### NSN506 CLINICAL PROJECT

Offers students the opportunity to implement a project of clinical relevance. It advances and extend the student's learning within their clinical speciality and provide opportunities to integrate knowledge from the clinical and theoretical units.

#### Course: NS85

#### Credit Points: 24

#### NSN507 CONTEMPORARY ISSUES IN NURSING

This unit explores, through the application of relevant theoretical frameworks, contemporary political insight, social, economic and organisational issues in nursing practice. These issues have a major impact on the context within which nurses provide care. The unit content provides students with a body of knowledge to support their further development in the discipline and practice of nursing. Courses: NS64, NS85

Credit Points: 12

#### NSN508 ADVANCED READINGS IN NURSING

Provides the opportunity for students to review and analyse a body of literature relevant to an area of individual interest in nursing. This enable students to extend their knowledge and understanding a topic which is not specifically addressed elsewhere in the course.

Courses: NS64, NS85

Credit Points: 12

#### NSN509 SPECIAL TOPIC

Provides the opportunity for students to engage in a group learning process to explore, in depth, an area of professional relevance which may be from local or visiting scholars with particular expertise or knowledge of specific areas.

Courses: NS64, NS85

Credit Points:12

#### NSN521 CLINICAL SPECIALISATION 1

Provides an introduction to the theory, process and practice of nursing in a designated specialty area. Although a range of knowledge and skills is addressed, an emphasis is placed upon health promotion within the context of a specialty area of health care. Develops in students an understanding of nursing practice in a designated specialty area; explores the theoretical, conceptual and practical knowledge required to provide effective nursing care.

Courses: NS64, NS85

#### Credit Points: 12

#### NSN522 CLINICAL SPECIALISATION 2

Develop students' understanding of the theory, process and practice of nursing in a designated specialty area of nursing. Although a health promotion framework is reinforced, the emphasis in this unit is placed on the development of strategies to assist clients who are experiencing particular health dysfunctions. Further develops an understanding of nursing practice in a designated specialty area; explores the theoretical, conceptual and practical knowledge required to provide effective nursing care.

Courses: NS64, NS85

Credit Points: 12

#### NSN523 CLINICAL SPECIALISATION 3

Provides the opportunity for students to further develop and consolidate professional knowledge and skills which have been acquired during the previous clinical units. Students are facilitated to incorporate theoretical, conceptual and practical knowledge into the assessment, planning, implementation and evaluation of the are required by clients. They are expected to demonstrate competent clinical judgment, decision making and technical ability in a specialty area of practice, provide client education based on identified learning needs and conduct a case conference in a manner which fosters intellectual inquiry and creative thought.

Courses: NS64, NS85 Credit Points: 12

#### NSN581 CLINICAL STUDIES 1

An exploration of nursing practice in specialty areas of health care at a level which is not possible within the ambit of introductory studies. It enables students to address current trends, changing perspective of practice and issues of national and international significance. The broad perspective which is utilised in this unit equips students to select a specific area(s) of practice to be examined in more detail in NSN582 and NSN583.

Courses: NS64, NS85 Credit Points: 12

#### NSN582 CLINICAL STUDIES 2

Provides students with the opportunity to build upon their learning in NSN581 by choosing an area of specialised nursing practice which they would like to explore and examine in greater detail. This allows students to deepen their appreciation of the clinical issues which relate to their practice in a particular specialty area of nursing.

Courses: NS64, NS85

Credit Points: 12

#### NSN583 CLINICAL STUDIES 3

Designed to complement NSN581 and NSN582. Enables the student to examine, from a clinical perspective, an area of specialised nursing practice. This approach not only develops student's awareness of the theoretical aspects of nursing issues, but highlights the clinical implications as well. Provides the opportunity for students to further develop clinical skills which complement their theoretical knowledge of the selected area.

Courses: NS64, NS85 Credit Points: 12

#### 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

Optical concepts, refraction and notation; neutralisation, transportation, prismatic effects, multifocals; frame and lens materials, quality, dimensions; vertometers, ordering, prescription writing; protection against radiation and mechanical hazards; special lens types.

Course: OP42 Credit Points: 12 Prerequisite: OPB132 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 ab solute and relative thresholds, dark and light adaptation and relative luminous efficiency curves.

Course: OP42 Prerequisite: PHB240

#### Co-requisite: PHB340

Credit Points: 12 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: 10 Contact Hours: 4 per week

#### OPB405 CLINICAL OPTOMETRY 4

Provides students with an understanding of the scope of clinical practice. Students are taught the basics of communicating with patients, how to understand prescriptions and frame selection and adjustment procedures. Measurement of vision, and correct recording procedures will also be covered.

Course: OP42 Prerequisite: OPB320 Co-requisite: OPB412

Credit Points:4 Contact Hours: 2 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: 12 Contact Hours: 5 per week

#### OPB415 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: LSB230, LSB451 Co-requisite: OPB430

Credit Points: 12 Contact Hours: 4 per week

#### OPB504 OPHTHALMIC OPTICS 5

A continuation of OPB132, emphasising problems with spectacle lenses. Practical application of theory to oph-thalmic 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



## OPB709 OPTOMETRY 7

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. Topics include the physiological consequences of contact lens wear; management of contact lens patients; 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 is 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

Prerequisites: OPB705, OPB717, OPB709 Co-requisites: OPB750, OPB803

Credit Points: 32 Contact Hours: 17 per week

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

# 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

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 Context Bainter & Context Neuron 4 are unable

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

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

associated with contact lens wear is also covered in detail.

Course: HL88

Credit Points: 12 Contact Hours: 3 per week

OPN602 ADVANCED CLINICAL METHODS Exploration of the 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 electrophysiology.

Course: HL88 Credit Points: 12

Contact Hours: 3 per week

#### OPN603 ADVANCED OCULAR PHARMACOLOGY

Exploration of 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 antianxiety 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

#### PHA154 INTRODUCTORY PHYSICS

An introduction to the basic concepts involved in the study of linear mechanics, ideal gases, liquids and solids, elasticity, surfuace tension, temperature and its measurements, heat content, heat transfer, reflection and refraction of light at plane surfaces, use of lenses in simple optical instruments, current electricity, e.m.f. resistance, circuit analysis, heating effects, electrical measurements using moving coil galvanometers, potentiometers and Wheatstone bridge, magnetic field with simple applications. A series of laboratory experiments emphasises the above concepts.

Course: LS12 Credit Points: 8

Contact Hours: 3 per week

#### PHA213 MEDICAL INSTRUMENTATION 2

Basic concepts and procedures in diagnostic instrumentation; transducer principles; characteristics of physiological signals; methods of measurement and instrumentation principles. Hospital visits may be included. Course: LS12 Prerequisite: PHA154

Contact Hours: 4 per week

#### PHB001 INTRODUCTORY PHYSICS

Gives students without Senior Physics a basic grounding. Topics include: kinematics, mechanics, electricity and magnetism.

Course: SC30

Credit Points: 8

Credit Points: 6 Contact Hours: 3 per week Incompatible with: SA or better in Senior Physics.

#### 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 **Prerequisites:** SA – Senior Physics. **Co-requisites:** 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

Prerequisites: SA - Senior Physics

Co-requisites: PHB001 or SA - 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

#### PHB134 ENGINEERING PHYSICS 1B

A basic unit in the physics of waves and optics: moving and stationary waves in various media, interference of waves, beat 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, IF52, IF54, IF56, ME23, ME45, ME46

Credit Points: 8 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



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#### PHB172 PHYSICS FOR SURVEYORS

Mechanics; physics of materials; physics of the lower atmosphere; sound; electromagnetic fields; topics in electronics.

Courses: IF52, 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: 12 Contact Hours: 6 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

Prerequisites: SA - Senior Physics

Co-requisites: PHB001 unless SA - Senior Physics Credit Points: 12 Contact Hours: 5 per week

#### PHB234 ENGINEERING PHYSICS 2B

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, IF56, ME23,

ME45, ME46

**Credit Points: 8** 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, sphero-cylindrical 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 AC, DC circuit theory, with emphasis on electronics and instrumentation, fields, modern and nuclear physics.

Course: LS36, PU45

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: ED50, PU42, PU44, PU45, SC30

Credit Points: 12 Contact Hours: 6 per week

#### PHB272 RADIATION PHYSICS 1

Electrostatics, electromagnetism, the production of Xrays 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: 12 Contact Hours: 6 per week PHB278 GENERAL RADIOGRAPHY

## PRACTICE 1

A program of lectures and practical sessions relating to radiography of the skeletal system.

Courses: PH38, PH90

**Credit Points: 8** Contact Hours: 3 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.

Prerequisites: PHB125, PHB178 Course: PH38 **Credit Points: 8** Contact Hours: 4 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

Prerequisites: MAB222, PHB122, PHB222 Co-requisite: MAB432

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 spherical 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 Contact Hours: 7 per week Credit Points: 12

#### 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 **Prerequisites:** PHB286, LSB241

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

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, PHB287 Co-requisite: PHB387

Credit Points: 10 Contact Hours: 5 per week

Vibration and noise, electrical hazards, sources and hazards of ionising and non-ionising radiation.

Course: PU44 Prerequisites: 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

Prerequisites: 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, PHB378 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: PHB476, 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 Prerequisite: PHB382 Credit Points: 6 Contact Hours: 3 per week

#### 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



# UNIT

#### ■ 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

#### PHB500 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: 14

#### ■ PHB504 INSTRUMENTATION

Transducers; noise, guarding and shielding; signal conditioning; digital filters; intelligent instruments and standard busses.

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

Prerequisites: 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

Prerequisites: 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, SC30Prerequisite: PHB342Credit Points: 12Contact 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/IMAGE EVALUATION

The principles and techniques used in the quality assurance of medical imaging apparatus and ancillary equipment.

Course: PH90

#### Credit Points: 8 Contact Hours: 4 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

B 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, PH90

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

Lectures and practical exercises on image interpretation including technical and diagnostic quality. **Courses:** PH38, PH90

Credit Points: 4 Contact Hours: 2 per week

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 02 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

#### PHB600 ADVANCED RADIOGRAPHIC PRACTICE 2

See PHB500 Course: PH90

Credit Points: 12 Contact Hours: 4 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, par-

ticle 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

Prerequisites: 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 nonionising 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: 12

#### PHB673 PROJECT

A supervised project involving either application of existing theoretical practical knowledge or a literature survey of a selected relevent topic.

Courses: PH38, PH90

Credit Points: 12

PHB674 RADIATION SAFETY & BIOLOGY 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. This biological effects on ionising and non-ionising radiation. Courses: PH38, PH90

Credit Points: 8 Contact Hours: 4 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 Credit Points: 8 Contact Hours: 3 per week

#### PHB679 CLINICAL RADIOGRAPHY 5

Clinical experience in advanced radiographic techniques. Course: 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 982. 1 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, threedimensional 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 Co-requisite: PHB687

Credit Points: 8 Contact Hours: 4 per week

#### PHB705 PROJECT

A research project in which the student initiates and undertake an investigation of some magnitude and originality. Topics are 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 are included. The content is 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: 16

#### 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; and digital image processing.

Course: PH80, SC60 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 & 额 INSTRUMENTATION

The capabilities and limitations of a given instrument; design of interfaces between microcomputers and transducers; signal conditioning and signal conversion circuits for data acquisition. Course: PH80, \$C60

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 Co-requisite: PHN154 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 Contact Hours: 4 per week

#### 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

100

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 38 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 minimized in the new dusting of

The physical principles involved in the production of the radiographic, ultrasonic and nuclear medicine images; quality control protocols.

Course: PH80 Credit Points: 12

ts: 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, SC60

Credit Points: 12 Contact Hours: 4 per week

#### 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

2 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.

Course: PH80

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 management 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

#### 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

Prerequisite: PHN257 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

Credit Points: 6

Contact Hours: 4 per week



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#### PHN397 CLINICAL ATTACHMENT 3

A period of additional supervised clinical practice designed to expand and refine skills acquired in PHN 197 and PHN297.

Course: PH80

Credit Points: 12

#### PHN520 PROJECT (48cp) PHN540 PROJECT (24cp)

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 is one year for full-time and two years for part-time students.

Course: PH80

Credit Points: 96 (48 FT and 24 PT per semester) Contact Hours: 18 (FT) and 9 (PT) per week

#### PHN715 ADVANCED TOPICS IN PHYSICS 1

This unit provides a focussed theoretical foundation for each student's research program and develops 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 Credit Points: 20

Prerequisite: PSB010 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

Confirms 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** 鍦 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 plantscapes, gardens and broad scale regeneration and stabilisation.

Course: BN30 Prerequisite: PSB057 Credit Points: 3 Contact Hours: I 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.

Courses: 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

t 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

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.

Courses: 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. Precis. Use of tables, charts, and illustrations in written presentation. Clarity and the selection of data.

Course: BN30Prerequisites: COB163, PSB400Credit Points: 2Contact Hours: 1 per week

#### PSB050 THE HUMAN ENVIRONMENT 1 See ARB141, Commun. PN20

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 Credit Points: 6 Prerequisite: PSB051 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: BN30Prerequisite: PSB052Credit Points: 4Contact 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 phosphorous 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, IF52, IF54, PS47

Credit Points: 4 Contact Hours: 2 per week

#### PSB056 APPLIED LAND SCIENCE FOR DESIGNERS

The foundations of a scientific understanding of the earth's surface. Topics include 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

#### 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 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 Con

Contact Hours: 2 per week

## UNIT SYNOPSES

#### ■ 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

#### 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

ints: 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

#### SB077 TRANSPORT PLANNING

Studies include alternative modes of transport; methods for predicting future urban transport patterns; techniques of transport planning and management. 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.

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 Credit Points: 6

#### Prerequisite: PSB071 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 development exercises in a grading workbook concluding with the preparation of two set grading plans.

Prerequisite: PSB071 Course: BN30 Contact Hours: 2 per week Credit Points: 4

#### 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: IF52, IF54, 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: IF54, 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 coordinate 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: IF54, 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: IF52, IF54, 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: offset lithography; gravure letterpress; requirements of originals; type and typesetting layout design; paper technology: ink technology, colour separation techniques and procedures for map production; halftone photography for relief shading; desktop publishing: software capability and limitations.

Courses: IF52, IF54, 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: IF54, 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 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 epherides; orbital characteristics for communication, remote sensing and position fixing satellites; the GPS system, configuration, availability, reliability, epherides, error sources and error budgets: GPS receivers and software; GPS applications in point positioning, differential and kinematic mode; non-geodetic applications.

Course: IF54, PS47

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Prerequisites: PHB172, MEB221, PSB327, MAB498 Co-requisites: PSB346, PSB329

Credit Points: 6 Contact Hours: 3 per week PSB311 GEODESY 2

Further work on spherical and ellipsoidal harmonics; Gauss' and Green's formulae, Legvandie'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

UNIT SYNOPSES

Courses: IF54, 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 ownership; 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: IF54, PS47

Credit Points: 8 Contact Hours: 3 per week

#### PSB317 LAND ADMINISTRATION 3

The legal aspects of reinstatement of boundaries; case law associated with reinstatement; 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: IF54, PS47 Credit Points: 8 Prerequisite: PSB316 Contact Hours: 3 per week

Prerequisites: PSB319, PSB323

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 Credit Points: 6

#### PSB319 LAND ADMINISTRATION 5

The role of organisation, learning as a function of time, tendencies towards specialisation, the concept of synergy, problems of coordinating 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 system; 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

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 valua-



#### tion; duties and liabilities of a valuer. Course: IF54, 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; calculations; close and Bowditch adjustment; areas and volumes. Introduction to mapping; map numbering system used in Queensland; interpretation of cadastral and topographical 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; IF54, PS47

Credit Points: 8 Contact Hours: 3 per week

#### PSB326 LAND SURVEYING 2

Calculations; missing element closes; horizontal curves (simple, compound, reverse); cutting off areas; 'Horner type' plane calculations; earth work estimation; errors; further work on random errors, measures of precision, errors and residuals; simple propagations; theory, tests and adjustments of optical theodolites; tacheometry, 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 coordination with Physics). Traversing and further non-Least Square adjustments; investigation and detail surveys. Longitude and crosssections; theory and practice of barometric and hydrostatic levelling. Further work on contours and contouring.

Course: IF54, 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: IF52, IF54, 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: IF52, IF54, PS47 Prerequisites: PSB316, PSB325 Co-requisite: PSB317

Credit Points: 8 Contact Hours: 3 per week

#### PSB329 LAND SURVEYING 5

Reconnaissance for geodetic surveys; geodetic obser-

vations 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: IF54, PS47 Credit Points: 8 Prerequisite: PSB327 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: IF54, 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 Credit Points: 8 Prerequisite: PSB328 Contact Hours: 3 per week

#### PSB333 MAP PROJECTIONS

Mapping terms and definitions; the mapping problem. Distortion, linear, angular and areal. Tessot'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 (1 - T) for short and long lines. Mutual transformation of polar and AMG coordinates.

Course: IF54, PS47 Prerequisite: MAB497 Co-requisites: PSB306, PSB346

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 process-



PSES 0

ing: 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 description of sensors; processing of image grey levels; classification; mapping with space borne imagery.

Course: IF52, IF54, 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: threedimensional 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: IF52, IF54, PS47

Prerequisites: MAB497, MAB498, PSB334 Co-requisites: PSB304, MAB795

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: IF54, 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

Contact Hours: 3 per week Credit Points: 6

#### 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; contact; torts; business organisations: sole trader, partnership, company, joint venture, association and trusts, business names.

Course: IF54, 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 is 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: IF54, 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 Credit Points: 8 PSB342 SPATIAL INFORMATION

Prerequisite: PSB340 Contact Hours: 3 per week

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: IF54, 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; hierarchal 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: IF54, 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: IF54, PS47 Credit Points: 8

Prerequisite: PSB343 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: IF54, PS47 Credit Points: 8

Prerequisite: PSB344 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 coordinates. Seven parameter coordinate 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: IF54, PS47Prerequisites: 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 PSB910 CONSTRUCTION SURVEYING

Concepts of surveying and measuring, revision of trigonometry functions. Levels and levelling, reading and recording observations, 2-peg test. Linear measurement, correction to measurements. The theodolite, angles and bearings, traverses and traverse calculations. Setting out, contours and volumes. Maps. Cadastre. The practical sessions include, levelling, measurement, traversing, setting out, and use of construction instruments, checking verticality etc.

Courses: CN41, CN43

Credit Points: 8 Contact Hours:4 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

Contact Hours: 2 per week Credit Points: 8

#### PSN004 APPLIED RESEARCH TECHNIQUES

Research techniques, including surveys of various types, statistical analysis, remote sensing and others. Course: BN73, PS69

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

#### 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: IF64, 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, IF64

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, IF64

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

#### PSN125 HOUSING POLICY & HOUSING PROBLEMS: AN INTERNATIONAL PERSPECTIVE

Seminar course focusing on the various social and economic contexts within which housing systems operate through a comparative transnational perspective of housing problems and the range and effectiveness of policies. The economic institutions, social goals, policy processes, and actual outcomes of programs. The distribution of housing, the role of the market and the degree of intervention by public sector agencies. Case studies from free market environments, such as the USA; more regulated markets, such as those of Western Europe; and the rapidly changing circumstances of Eastern Europe.

Course: IF64 Credit Points: 12

Contact Hours: 3 per week



#### PSN126 THE AUSTRALIAN HOUSING SYSTEM & POLICIES

Demographic, social and economic trends impacting housing markets in Australia, the evolution of post World War II government housing policies, including public/social housing programs of States, the Commonwealth States Housing Agreement, and the community and Local Government Programs. Access to affordable housing. Housing finance and subsidy schemes for home ownership, private rental and public housing. Housing management issues for public sector housing agencies and community housing schemes.

#### Course: IF64

Credit Points: 12 Contact Hours: 3 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

Contact Hours: 1 per week Credit Points: 4

#### 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 plantscapes, gardens, and broad scale 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



## UNIT SYNOPSES

#### 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: 6 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

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

#### 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

Contact Hours: 3 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

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. Multipurpose 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; environnental and social implications of design decisions; siting and integrating activities, structures, and services; land form manipulation.

Course: PS66 Prerequisite: PSP212 Credit Points: 12 Contact Hours: 4 per week

DESIGN

Theory: introduction to the range of housing and subdivision types; consequences for design; controls, bylaws, 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;

Prerequisite: PSP222 Contact Hours: 2 per week

#### PSP230 LANDSCAPE ECOLOGY 1

Course: PS66

Credit Points: 3

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 function and significance for conservation planning; landscape ecology and landscape planning practice.



Prerequisite: PSP230 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 Credit Points: 3

Prerequisite: PSP230 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;

space theory and principles of spatial design. Studio: a medium scale intensive/multiple use project which demands redesign 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 Prerequisite: PSP213 Credit Points: 12 Contact Hours: 4 per week

#### PSP217 LANDSCAPE DESIGN

Cultural Values: concepts of garden, 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 at broad scale; contextual concepts; detailed resolution; professional communication.

Course: PS66Prerequisites: PSP214, PSP215Credit Points: 18Contact 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.



UNIT SYNOPSES conservation strategies; resource management policies. Course: PS66 Prerequisite: PLP514 Co-requisite: PSP216 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. Integration 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; threedimensional 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 Credit Points: 6

Prerequisite: PSP241 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, carparks, sports ovals, and surface drainage. Technical Drawing and Documentation: establishment of sound techniques of technical drawing in the preparation of construction documents.

Course: PS66 Credit Points: 9 each unit Contact Hours: PSP251: 4 per week; PSP252: 3 per week

#### PSP253 ADVANCED LANDSCAPE CONSTRUCTION 1

#### PSP254 ADVANCED LANDSCAPE **CONSTRUCTION 2**

Landscape Construction: platforms; land stability and stabilisation; clearing; demolition; earth dams; lakes; broad scale 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 Credit Points: 6 each unit

Contact Hours: 3 per week 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 1 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

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 placement 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

Contact Hours: 9 per week Credit Points: 12 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

Contact Hours: 3 per week Credit Points: 12

#### 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 is related to this unit.

Courses: BN73, PS69

Credit Points: 12 Contact Hours: 3 per week

#### PSP403 URBAN DESIGN CONJECTURE 1.0 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 is 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 kunstlerichsen Grundsatzen 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 nurturing 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, IF64, 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 stadis.

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 agenciesat 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

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, PU44

Prerequisites: 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.

Course: PU44, PU48

Credit Points: 12 Contact Hours: 4 per week

#### PUB220 MEDICAL TERMINOLOGY

Exploration of the language of medicine; analyses medical terms into Latin and Greek word roots, prefixes, suffixes, suffixes and combining forms. Medical terms which relate to specific body systems are defined, spelled and pronounced accurately; common abbreviations and symbols used in medicine are identified; abstracts from patient records are explained and interpreted 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

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

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: 3 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: 4 per week

The causes, effects, control measures, standards and legislation relating to land contamination and solid waste management.

Course: PU42Prerequisites: CHB242, PHB250Credit Points: 8Contact Hours: 4 per week

PUB301 ENVIRONMENT PROTECTION 2

The causes, effects, control measures, standards, legislation and management strategies relating to air and noise pollution.

Course: PU42

Prerequisites: PUB207, CHB242, PHB263

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 preclinical student in the diagnosis and treatment of conditions commonly manifest in the foot.

Course: PU45 Credit Points: 8 Co-requisite: PUB303 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 Co-requisite: PUB302 Credit Points: 12

Prerequisite: MEB031

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, contraindications 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-requisites: 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 Prerequisites: 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, ED54

Prerequisites: 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 learn-

ing 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 are developed.

Course: ED50, ED54 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: 4 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** 820) 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

#### 32 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. Prerequisites: SSB922, PUB327 Course: ED50

Credit Points: 12 Contact Hours: 3 per week

#### PUB331 SHELTER STUDIES 2

The linking of human physical and psychosocial 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

#### 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 foodrelated 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 Prerequisite: PUB327

Course: ED50 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

#### PUB349 FAMILIES & HOUSEHOLDS IN AUSTRALIA

Examination of 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.

Course: ED50, SC30

Prerequisites: Any Level 1 Science unit Credit Points: 12 Contact Hours: 4 per week PUB355 FOOD SERVICE: PRINCIPLES

## AND PRACTICES

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.

Course: ED50 Prerequisite: PUB319 Credit Points: 12 Contact Hours: 4 per week

#### PUB356 CLINICAL CLASSIFICATION I

Development of skills in one of the major specialities 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.



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 combining skills in pattern development with advanced techniques in constructing textile articles.

Prerequisite: PUB321 Course: ED50 Credit Points: 12 Contact Hours: 4 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

Prerequisites: 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, SSB961 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: SSB961, SSB912 or equivalent Credit Points: 12 Contact Hours: 3 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: ED50Prerequisite: PUB361Credit Points: 12Contact Hours: 4 per week

#### PUB399 HEALTH INFORMATION MANAGEMENT 2

Continuation of PUB299. There is an emphasis on analysis and improvement of health information management throughout hospitals. The examination of health information services will move outside the medical record department of hospitals to 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. Skills in health data management, forms design and statistical presentation of hospital or health service activities are developed. **Course:** PU48

Prerequisites: PUB299 and a 1 week practicum Credit Points: 12 Contact Hours: 4 per week

#### PUB404 CLINICAL SCIENCE 2

At this stage students are 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

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.

Courses: PU49, SC30

Prerequisites: LSB305 or LSB308

Credit Points: 12 Contact Hours: 5 per week

#### PUB410 MEDICINE

Following completion of this unit, 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

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

Credit Points: 8

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 presented to the podiatrist. On completion, students should have developed 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

Course: PU45 Co-requisite: PUB404 Credit Points: 12

Contact Hours: 6 per week

**PUB422 PODIATRIC ANAESTHESIOLOGY** Provides 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

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 Prerequisite: LSB281 Credit Points: 8 Contact Hours: 3 per week

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 Contact Hours: 3 per week PUB440 CLOTHING DESIGN

This unit an opportunity for teachers to study in this area at a greater depth than that available in the preservice 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. Develop an understanding of 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 become proficient in the art of clinical classification using ICD-9-CM.

Course: PU48

Prerequisites: LSB242, LSB361, PUB220, PUB356 Contact Hours: 4 per week Credit Points: 12

#### **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 enduse; principles and practice of textile performance evaluation

Course: PU49 Prerequisites: CHB259 or equivalent Co-requisite: PUB405

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, and water 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 Credit Points: 12

Prerequisite: LSB242 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). (Not offered in 1995).

Course: PU48 Credit Points: 12

#### Prerequisite: PUB399 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, vasculities, 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 Contact Hours: 3 per week Credit Points: 8

#### 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: 6 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

Prerequisites: MEB035, PHB404, PUB483 Co-requisite: PUB485

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 ad-

mitted 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 are 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

#### PUB529 HEALTH PLANNING & EVALUATION

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 1995.) Course: PU48

Credit Points: 12 Contact Hours: 3 per week

#### PUB531 HEALTH CARE ECONOMICS

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

## 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, SSB961, 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

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Prerequisites: PUB319, PUB405, or equivalent Credit Points: 12 Contact Hours: 4 per week

#### PUB556 FOOD PRESENTATION & PROMOTION

Advanced techniques and complex skills of food pro-

duction 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 Prerequisites: PUB276 or equivalent Credit Points: 12 Contact Hours: 4 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 Prerequisites: 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

Prerequisites: 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 Prerequisites: AYB105 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 Credit Points: 12 Prerequisite: PUB572 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 Prerequisites: PUB478 or equivalent Credit Points: 12 Contact Hours: 3 per week

#### PUB592 HOME ECONOMICS

INDEPENDENT STUDY 1

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 PUB594 HOME ECONOMICS

## INDEPENDENT STUDY 2

Self-initiated and self-directed academic study in an interest area consistent with the course 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. (Only offered to students in the pre-1994 intake.)

Course: PU48 Prerequisites: 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. (Only offered to students in the pre-1994 intake.)

Course: PU48 Credit Points: 12 Prerequisite: PUB600 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 develops 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 Credit Points: 12 Prerequisite: PHB404 Contact Hours: 4 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. **Courses:** PU44 PU42 **Prerequisite:** SSB914

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: PU44Prerequisite: PUB516Credit Points: 8Contact Hours: 2 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 Prerequisite: PUB516 **Credit Points:** 8 **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: 5 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 Prerequisites: PUB499, PUB456 Credit Points: 12 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

#### 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 unit. Addresses topics such as quality assurance, utilisation, review and accreditation. (Only offered to students in the pre-1994 intake.)

Course: PU48 Credit Points: 12 Prerequisite: PUB646 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. (Only offered to students in the pre-1994 intake.)

Course: PU48Prerequisites: PUB130, PUB430Credit Points: 12Contact 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 inpatients; data quality issues; casemix grouping software; current casemix initiatives and applications. (Not offered in 1995.)

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



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medical, administrative and allied health professionals; reinforcement of clinical classification skills by coding from medical records. (Not offered in 1995.) **Course:** PU48 **Prerequisites:** PUB399, PUB956

Credit Points: 12 Contact Hours: 6 per week

■ PUB655 HEALTH POLICY AND PLANNING 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 1995.) Course: PU48

Credit Points: 12 Contact Hours: 3 per week

#### PUB657 HUMAN RESOURCES IN HEALTH

The development of skills in human resource management in the health care industry. Topics include: human resource needs analysis; human resource planning; supply and demand of health personnel; recruitment, selection and training of health personnel; job descriptions; industrial relations in the health industry; health worker performance and job satisfaction; health teams and multi-skilling; leadership and management in the health industry.

Course: PU48 Credit Points: 12 Prerequisite: HRB131 Contact Hours: 3 per week

#### PUB659 MANAGEMENT OF HEALTH SERVICES

This unit represents the capstone core unit for both the health administration and health information management majors. This unit will exercise the "manager" in the student and prepare them for middle and senior level management positions. Topics include: SWOT analysis; vision, mission and culture; stakeholder analysis and achieving win-win negotiations; thinking strategically; best practice and benchmarking in health.

Course: PU48

**Prerequisites:** 16 units in the health administration or HIM major

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 Prerequisites: 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:** PUB574

Course: PU49 Prerequisite: PUB574 Credit Points: 12 Contact Hours: 3 per week

#### EXPERIENCE

Ten to twelve months placement in paid employment related to the Bachelor of Applied Science (Occupational Health and Safety) under the joint supervision of an industry supervisor and an academic adviser. The 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. **Course:** PU44

Prerequisites: Satisfactory completion of the first 2

years (96 credit points) of the Bachelor of Applied Science (Occupational Health & Safety), normally with a GPA of not less than 4.5 overall. **Credit Points:** 20

#### 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

#### 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, IF64, 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 course-work. The unit is intended as a practicum, offering experience in investigating and/or solving a public health problem.

#### Course: PU85

Credit Points: 48

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, IF64, 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, IF64, 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, IF64, 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 unit will previously have studied the determination of health needs using epidemiological methods. This unit 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: IF64, 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: IF64, PU85

Prerequisites: PUN604, PUN605, PUN606 Credit Points: 12 Contact Hours: 3 per week

PUN617 ENVIRONMENTAL HEALTH MANAGEMENT 1

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 coordinating 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 are 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: ED13, 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, psychosocial, economic, technical and ethical aspects affecting the supply of food to the consumer. Students are directed to research nutritional practices, and to uncover the factors influencing such practices. This research will then form the basis for, not only develop-

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ing 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

An examination of relevant political, social, economic, technological and ethical issues which influence the 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: ED13, HL88

Credit Points: 12 Contact Hours: 3 per week

#### PUN626 HOME ECONOMICS FIELD STUDY

Enables students to develop an area of their own choosing and to explore this in depth. The format and content of the program is 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; technology. Areas available are 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, contraindications, adverse reactions, drug interactions and dosages; indications and contraindications and adverse effects of the use of antibiotics, sedatives, NSAIDs analgesics, corticosteroids, 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

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

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 is explored; designed to enhance the theoretical and clinical knowledge gained from the advanced pharmacology and clinical pathology/diagnosis units. 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 is achieved using computerised video motion assessment and foot force assessment systems. Particular emphasis is 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 unit 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

ints: 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.

Courses: HL88, NS62, NS85

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 are included. **Course:** HL88, NS64, NS85

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 are based on re-



cent 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: IF64, PU85 Credit Points: 12

Contact Hours: 3 per week

#### PUP007 SOCIAL & BEHAVIOURAL EPIDEMIOLOGY

Introduction to the field of social and behavioural 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, IF64, PU65, 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** 

5.5 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, NS64, NS85 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, NS64, NS85, 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 behavioural 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, IF64, 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. This unit 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 腦 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, NS85 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

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

# UNIT

#### 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: 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, 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

The dietetic process; the gathering of information using dietary histories; anthropometry; biochemical indices. It builds on basic studies in nutrition; biochemiistry and physiology; integrates medical, biochemical and dietary aspects of inborn errors of metabolism, energy imbalances, cardiovascular disorders and metabolic disorders. As part of the unit 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

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

Credit Points: 12

**Prerequisites:** Completion of all Semester 1 and Semester 2 units.

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, ie., between health educators and promoters and other health professionals.

Courses: HL88, PU62, NS85

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

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,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

Exploration of 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

#### 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 are 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 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.

Courses: ED50, ED54

**Prerequisites:** 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

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.

Courses: ED50, ED54 Prerequisite: SBB325 Credit Points: 12 Contact Hours: 3 per week

#### SBB327 OFFICE COMMUNICATIONS TECHNOLOGY CURRICULUM STUDIES 1

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. Courses: ED50, ED54 Prerequisites: 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

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.

Courses: ED50, ED54 Prerequisite: SBB327 Credit Points: 12 Contact Hours: 3 per week

#### SBB329 ECONOMICS CURRICULUM STUDIES 1

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. Courses: ED50, ED54

**Prerequisites:** 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

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.

Courses: ED50, ED54 Prerequisite: SBB329 Credit Points: 12 Contact Hours: 3 per week

#### SBB331 GEOGRAPHY CURRICULUM STUDIES 1

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.

Courses: ED50, ED54

**Prerequisites:** 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

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.

Courses: ED50, ED54 Prerequisite: SBB331 Credit Points: 12 Contact Hours: 3 per week

#### SBB333 HISTORY CURRICULUM STUDIES 1

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. Courses: ED50, ED54

Prerequisites: 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

Curriculum development within the context of contem-

UNIT

Courses: ED50, ED54 Prerequisite: SBB333 Credit Points: 12 Contact Hours: 3 per week

#### SBB335 LEGAL STUDIES CURRICULUM STUDIES 1

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.

Courses: ED50, ED54

**Prerequisites:** 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

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.

Courses: ED50, ED54 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.

Courses: ED50, ED54

**Prerequisites:** 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

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.

Courses: ED50, ED54 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

**BSB340 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

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

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 Examination of those forces which have shaped contemporary Australia. Through a consideration of this

historical legacy a better understanding of those social, economic and constitutional developments which are currently taking place in Australia can be achieved. **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. An examination of 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

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

#### SBB347 ORGANISATION AND ADMINISTRATION OF ADULT AND WORKPLACE EDUCATION

Explores and analyses organisational structures and administrative practices found to be successful in adult and workplace education settings. Special attention is given to the impact of organisational form and function, financial provision, and organisational policy on servicing the needs of clients. The effect of national and international policies and current legislative requirements on organisational and administrative designs and processes are examined closely. **Course:** ED54

Credit Points: 12 Contact Hours: 3 per week

#### SBB348 IMPLICATIONS OF THE

NATIONAL TRAINING REFORM AGENDA The National Standards and competency based training; occupational health and safety; access and equity in workplace and community settings; principles and practices of recognising prior learning.

Course: ED54 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

#### 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. Participants are encouraged to pursue the objectives of environmental education within their own subject specialisations.

Courses: ED26, ED54, NS48

Credit Points: 12 Contact Hours: 3 per week

#### SBN603 CRITICAL APPROACHES IN SOCIAL EDUCATION

The most exciting initiatives in social education over the past two decades have reflected visions of a world that is more peaceful, just and ecologically sustainable. These initiatives have been in areas including Development Education, Human Rights Education, Peace Education, Futures Studies and Global Education/ World Studies. In this unit, students initially explore social theory and theories of knowledge to develop a basis for such initiatives; investigate and evaluate policy formulation, curriculum development, materials production and pedagogical practice in terms of their critical approaches; evaluate the applicability of these initiatives and approaches to current curricular offerings in secondary discipline areas such as History, Geography and Economics, primary Social Studies, integrated social science subjects, and other areas of the school curriculum.

Courses: ED13

#### Credit Points: 12

#### SBN604 ENVIRONMENTAL EDUCATION & INTERPRETATION

Provides opportunities for students to investigate approaches to social education which are based on significant disciplines within the field – for example, history, geography and economics. There is scope for students to focus their work in this unit on one selected disciplinary area. Studies focus on recent epistemological developments within the selected discipline(s), and on pedagogical debates about the nature and value of disciplinary approaches to social education. Students analyse the ways those debates are reflected in policy formulation and curriculum practice in schools. Courses: ED13 Credit Points: 12

## SBN605 DISCIPLINARY APPROACHES IN SOCIAL EDUCATION

Provides teachers and interpreters with the theoretical and practical knowledge and skills to take a leadership role in the fields of environmental education and interpretation. Students examine concepts of society and environment, the impact these have on teaching/learning approaches, the design and evaluation of environmental and interpretive learning experiences, the use of museums, exhibits and environmental centres as learning resources as well as teaching/interpreting controversial environmental issues and sites.

Courses: ED13 Prerequisites: SBN603 Credit Points: 12

#### SBN606 ISSUES IN ENVIRONMENT EDUCATION AND INTERPRETATION

The development of research skills in students and providing them with the opportunity to critically explore issues in environmental education and make interpretations of personal professional relevance. Students

undertake reading and research in an area of their choice and produce their findings in a seminar. In these seminars students critically evaluate current literature, controversial issues and debates in their area of study as well as present their findings in the form of a research report.

Courses: ED13

Credit Points: 12

#### SBN607 ADVANCED METHODS IN OFFICE COMMUNICATIONS TECHNOLOGY EDUCATION

The exploration of the major issues related to curriculum and teaching due to environmental changes; and confront the office communications technology educator/trainer with the need to develop new knowledge and understandings. These include: advanced teaching methods, and in particular a knowledge and understanding of research design and procedures, in order to develop the necessary research skills to meet these opportunities and challenges and to guide best practice in the field.

Courses: ED13,ED11 Credit Points: 12

#### SBN608 ADVANCED METHODS FOR TRAINING IN EDUCATION AND INDUSTRY

Provides an opportunity to understand issues and trends impacting on human resource development, and in particular training and consulting. This unit is designed for educators and trainers employed in a human resource development and training role within business and industry. It incorporates foundations of training; advanced training methods; human resource management of the training and development function; and elements of consulting as applied to business education.

Courses: ED13,ED11 Credit Points: 12

Courses: ED13,ED11

Prerequisites: CUN605

#### SBN609 ADVANCED METHODS IN ACCOUNTING AND BUSINESS MANAGEMENT EDUCATION

An opportunity for accounting and business principles, organisation and management educators to bring themselves up to date with the rapid changes occurring in the business world as a result of social, environmental, political and economic pressures. Students are provided an opportunity to explore changes as they relate to business education in order to adapt or develop curriculum and refine their teaching strategies. The focus of the unit is on the building of a strong research base in order that students are able to provide leading edge programs to their students using contemporary teaching methods and technology.

Credit Points: 12

#### SBN610 TRENDS AND CRITICAL ISSUES IN BUSINESS EDUCATION AND TRAINING

Identification, analysis, and discussion of recent trends and critical issues in business education, with particular emphasis on their impact on the field of business education and training. Courses: ED13,ED11

Credit Points: 12

#### SBP401 ACCOUNTING CURRICULUM 5. 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

Contact Hours: 3 per week Credit Points: 12

#### 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.

Prerequisite: SBP403 Course: ED37 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 inquirybased 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

Credit Points: 12

Prerequisite: SBP407 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 Credit Points: 12 Prerequisite: SBP409 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 Credit Points: 12 Prerequisite: SBP411 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. **Courses:** ED22, ED26

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.

Courses: ED22, ED26

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.

Courses: ED22, ED26

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 decisionmaking about the effective and sustainable use of urban environments; strategies to promote effective practices in the urban environment.

Courses: ED22, ED26

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; 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, ED26

#### 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, ED26

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


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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; 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; 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

#### SBP517 FINANCIAL MANAGEMENT IN EDUCATION SETTINGS

The financial aspect of managing an educational setting; various financial management control problems; the basic accounting principles and skills used in the recording and management of school financial transactions; guidelines for the efficient and effective use of limited school financial resources.

Course: ED23, ED26 Credit Points: 12

#### 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 submit a written report on the conclusion of their placement. Results are determined on the basis of these reports and the employer's evaluation of the student's performance and development.

Courses: CH32, MA34, SC30

**Prerequisites:** 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.

Course: ED50

#### Credit Points: 12 Contact Hours: 4 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

#### SCB246 ENGINEERING PHYSICS & CHEMISTRY

The physics of heat and properties of matter; including heat, energy transfer, heat engines, thermodynamics, entropy and order. The chemistry of materials including such topics as PH control; polymers and composites and corrosion and its prevention.

Note: Students must pass both Physics and Chemistry modules to obtain credit in this unit.

Course: CE42

Prerequisites: CHB002 or equivalent

Credit Points: 8 Contact Hours: 3 per week

#### SCB510 INTRODUCTION TO QUALITY MANAGEMENT

Management: concepts, systems, costs and total quality management. Improvement: techniques and procedures.

Courses: SC30, MA34

Prerequisites: 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 are introduced and applied in an analysis of the key institutions and structures in Australian society. Students are 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 examines the idea 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 Prerequisite: SSB000 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 Prerequisite: SSB001

Credit Points: 12

Contact Hours: 3 per week

#### 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 Prerequisite: SSB002 Credit Points: 12 Contact Hours: 3 per week

#### 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 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, 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

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youthwork 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 the 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: SS07Prerequisite: SSB012Credit Points: 12Contact 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: SS07Prerequisite: SSB013Credit Points: 12Contact 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 Credit Points: 12 Prerequisite: SSB016 Contact Hours: 3 per week

#### SSB026 FIELDWORK PRACTICE 1

A two-stage program of pre-placement tutorials, a tenweek 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/Corequisites 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

nts: 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: SS07Prerequisite: SSB020Credit Points: 12Contact 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 Credit Points: 12 Prerequisite: SSB021 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 Credit Points: 12 Prerequisite: SSB023 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. 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 nonstatutory, government and non-government focusses on youth policy development and analysis; contemporary policy and practice issues relating to the juvenile justice system.

Course: SS07 Credit Points: 12 Prerequisite: SSB025 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/Corequisites 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 degredation 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

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: SS07Prerequisite: COB018Credit Points: 12Contact 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

2 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 Prerequisites: SSB003 or SSB932 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



# UNIT SYNOPSES

#### 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

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 Co

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; syles 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: HM42, PU49

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: SSB003 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 Prerequisites: 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

Prerequisites: SSB912 or 96 credit points of approved study.

Credit Points: 12 Contact Hours: 3 per week Incompatible with: SSB934

#### 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 providing a framework for individuals wishing to develop professional skills in health education.

Course: ED50

Credit Points: 12

#### 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

Contact Hours: 3 per week

#### SSB931 HUMAN LEARNING AND MOTIVATION

Classical conditioning; operant conditioning; reinforcement theory; social learning theory; early approaches to motivation, Freud and instinct theories, ethology, biological theories of motivation; intrinsic and extrinsic motivation; motivation & personality theory; the work of Murray; Atkinson and Feathers expectancy theory; Nuttin's theory; Bandura and incentive motivation. **Course:** SS07 **Prerequisites:** SSB003, SSB932 **Credit Points:** 12 **Contact Hours:** 3 per week

#### SSB932 INTRODUCTION TO PSYCHOLOGY B

Introduction to physiological, cognitive and developmental bases to human behaviour. An overview of biology and behaviour; the brain, neurones and neurotransmitter; alcohol and other drugs and neurotransmitters; sensation and perception; memory and cognition; human motivation and emotion; personality: an overview of human development; theoretical and research approaches to human development; research questions about adulthood.

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 Prerequisites: SSB003 or SSB912 Credit Points: 12 Contact Hours: 3 per week Incompatible with: SSB937

#### 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 Prerequisites: 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 Credit Points: 12 Prerequisite: SSB915 Contact Hours: 3 per week

#### SSB937 APPLIED COGNITIVE PSYCHOLOGY

An introduction to cognitive psychology; perception processes in cognition; memory processes; problemsolving and decision-making; the development of intelligence application of cognitive psychology. Artificial intelligence, ergonomics and job design also included as topics.



SYNO

Courses: IF52, IF54, IS43, IT20

Prerequisites: SSB912 or 96 credit points of approved study.

Credit Points: 12 Contact Hours: 3 per week **Incompatible with: SSB933** 

#### 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: SSB934, SSB946 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

Prerequisites: 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

Prerequisites: 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

Prerequisites: 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 & 121 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

Prerequisites: 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 Credit Points: 12

Prerequisite: SSB008 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 Credit Points: 12

Prerequisite: SSB930 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 ACSPRI 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 Credit Points: 12

Prerequisite: SSB950 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 Credit Points: 12

Prerequisite: SSB000 Contact Hours: 3 per week

#### SSB961 AUSTRALIAN SOCIETY: INTRODUCTION TO SOCIOLOGY

Placing sociology in its own socio-historical context, tracing the origins and development of the discipline and identifing the forces that shaped the various perspectives and theories of sociology and the associated reasearch methodologies. Major theoritical perspectives are introduced, compared and contrasted, and sociological concepts, theories and debatesare discussed within the context of the analysis of contemporary Australia. A particular emphasis in the course is directed towards those factors that appear to promote, constrain or influence social stability, social change and social inequality.

Course: PU49 Credit Points: 12

Contact Hours: 3 per week

#### SSB969 COMPARATIVE 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: SS07Prerequisite: SSB000Credit Points: 12Contact 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 Credit Points: 12 Prerequisite: SSB000 Contact Hours: 3 per week

# SSB980 ADVANCED SOCIOLOGICAL

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 Credit Points: 12 Prerequisite: SSB969 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. **Courses:** ED26, ED50

Credit Points: 12 Contact Hours: 3 per week

#### SSN000 COUNSELLING STUDIES 1

Provides a conceptual overview of the history of counselling and the most significant contemporary developments in the field; selected models of brief problem-oriented and solution-focussed therapies, and their application across a variety of counselling contexts; the analysis of human problems in lifespan developmental and social contexts, and on the conceptual understanding, practical skills, and critical evaluation of the above therapeutic approaches.

Course: SS12

Credit Points: 12 Contact Hours: 3 per week

#### SSN001 PROFESSIONAL STUDIES 1

The development of foundational interpersonal and relationship-building skills which are viewed as relevant to the counselling process regardless of theoretical orientation. Interpersonal skills and insights are developed through an introduction to groupwork, together with micro-skills workshops involving interpersonal process recall. The development of ethical practices in counselling and an ongoing commitment to critical reflection on counselling (e.g. the ideology of counselling, the status of counselling knowledge, and issues relating to gender, ethnicity and class). **Course:** SS12

Credit Points: 12 Contact Hours: 3 per week

#### SSN002 COUNSELLING STUDIES 2

The historical development of psychoanalysis; psychodynamics in counselling practice; hypnosis and unconscious phenomena in counselling; scientific credibility of psychoanalytic psychotherapy; assessment of neurosis and psychosis in counselling.

Course: SS12 Prerequisites: SSN000 Credit Points: 12 Contact Hours: 3 per week

#### SSN003 GROUP STUDIES

The development of skills and experience in organising and facilitating group work, in the context of personal support and therapeutic groups. Establishing group norms; facilitating stages of group development; responding to member behaviour and facilitator interventions; planning, implementing and evaluating ethical group work practices; dealing with defensiveness and hidden agendas; applying brief solutions-focussed and other counselling theory to groups; examining the motion of the "therapeutic milieu". **Course:** SS12 **Prerequisites:** SSN001

Course: SS12Prerequisites: SSN001Credit Points: 12Contact Hours: 3 per week

#### SSN004 COUNSELLING STUDIES 3

The theory and research relating to family/marital developmental transitions, contemporary changes to family life, and the field of relational or systemic therapies. A selective emphasis is made on models which build on the knowledge and skills developed in SSN000 and SSN002. Thus, major emphases will include solution-oriented and psychodynamic approaches to relationship counselling.

Course: SS12 Prerequisites: SSN002 Credit Points: 12 Contact Hours: 3 per week

#### SSN005 RESEARCH METHODS AND ISSUES

Different approaches to, and perspectives on research used across the disciplines of social science. Philosophical and ethical issues will be related to questions of methodology. The unit consists of formal teaching input from lecturers, together with a seminar component in which students will present preliminary proposals for their independent project for group discussion and feedback.

Prerequisites: SSN002 (for Counselling major only) Credit Points: 12 Contact Hours: 3 per week

#### SSN006 PROFESSIONAL STUDIES 2

This unit continues the themes of integration and reflection introduced in SSN001. It has two related parts: (a) The experience of group supervision is used as a context for reflection, critical analysis and integration in relation to both specific counselling skills and broader issues of professional practice (e.g. professional ethics, case management, assessment and referral). (b) As well as meeting fortnightly for group supervision, students attend seminars on selected topics and issues relating to the theme of critical reflection on counselling practice. This will involve perspectives from outside traditional counselling discourse (e.g. sociology, history, political theory, gender studies) and will focus on their relevance and implications for counselling practice. The student's experience of ongoing casework and the supervisory process will be used to focus critical reflection in these areas.

Course: SS12 Prere Credit Points: 12 Contact H

Prerequisites: SSN001 Contact Hours: 3 per week

#### SSN007 PROFESSIONAL STUDIES 3

Continuation of SSN006. Additionally, however, there is an emphasis on students learning and demonstrating supervision skills. The other major aspect of the subject consists of a graduate seminar in which students will present work based on their research projects. **Prerequisites:** SSN005

Credit Points: 12 Contact Hours: 3 per week

#### SSN008 PROJECT

Students undertake an individual project of theoretical and/or empirical research in a selected area of counselling. The project is supervised by a member of the teaching staff. The completed project is to be presented in the form of a dissertation of not more than 15,000 words.

Course: SS12 Prerequisite: SSN006 Credit Points: 36

#### SSN009 FAMILY THERAPY PRACTICE

This unit builds upon and extends the family therapy concepts and skills provided in SSN004. Greater emphasis is placed on tailoring a family therapy role to the needs of the student's individual work context. Where practicable, students will also have the opportunity to participate in the actual practice of family therapy sessions in the School's Family Therapy and Counselling Clinic. Students will either conduct therapy sessions under supervision, or participate as members of consulting teams.

Course: SS12 Credit Points: 12

Prerequisites: SSN004 Contact Hours: 3 per week

#### SSN010 CAREER COUNSELLING

Theoretical approaches to career guidance; resources and information for career guidance; the development and implementation of career education programs; and specific counselling skills related to career guidance. Major areas of study will include developmental theory, contemporary changes to the world of work (e.g. industrial relations, workplace changes) and computer applications (e.g. the Job and Course Explorer Program). Provision is made for students to carry out independent research in the field.

Course: SS12Prerequisites: SSN000Credit Points: 12Contact Hours: 3 per week

SSN011 INDEPENDENT STUDY

Students may elect to undertake an individual reading or research studies in an area of counselling which is of personal or professional interest, and which is not covered in other parts of the course. The project must be approved by the course co-ordinator, and will be supervised by a member of staff, with whom the student will negotiate the precise topic and mode of assessment. Courses: SS12 Person Person SS1000

Course: SS12 Prerequisites: SSN000 Credit Points: 12

#### SSN012 COUNSELLING AND ORGANISATIONS

Examination of helping organisations as bureaucracies; organisational responses to social change; stress within helping organisations, issues of teamwork among professional helpers; and the negotiation of effective counselling roles within organisations.

Course: SS12	Prerequisites: SSN000
Credit Points: 12	Contact Hours: 3 per week

#### SSN013 ADVANCED COUNSELLING STUDIES

This unit provides for advanced studies in a chosen area of counselling theory and practice. It is designed to either provide a greater depth of study in one of the major theoretical covered in the course (e.g. brief therapy, psychodynamic therapy, group work) or to allow specialised studies in orientations which are not heavily emphasised in the course. Such areas could include experiential therapies (e.g. Gestalt, Process-Oriented Psychotherapy, Psychodrama), Art Therapy, Couples Therapy, etc. The particular focus of this elective in any year would depend upon student interest plus the availability of suitable staff and resources.

Course: SS12 Prerequisites: SSN004 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 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 Prerequisite: SSP001 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 Credit Points: 12 Contact Hours: 3 per week SSP009 CAREER GUIDANCE &

### COUNSELLING

Theoretical approaches to career guidance; developmental theories and opportunity structive 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 Prerequisite: SSP007 Credit Points: 8 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: S\$10 Prerequisite: SSP005 Credit Points: 8

#### 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

#### SVB121 LAND SURVEYING 1

Principles of surveying; surveying instrumentation; traversing; levelling; elements of tacheometry; contouring; elementary theory of error; plane surveying computations.

Courses: IF52, SV34

Credit Points: 13 Contact Hours: 6 per week

#### SVB212 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; set-

ting out surveys; earthworks computation; elements of cadastral surveying

Courses: 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 Prerequisites: MAB495, MAB499 Co-requisite: MAB795

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; halfday 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

# PSES ONYS

#### 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

Prerequisites: MAB495, SVB121

Co-requisite: SVB430

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 Prerequisites: MAB795, SVB343

Co-requisite: SVB431

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

Contact Hours: 2 per week Credit Points: 4

#### 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

Prerequisite: SVB451 Courses: IF52, SV34 Credit Points: 6 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 Contact Hours: 2 per week **Credit Points: 4** 

#### 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

#### Contact Hours: 2 per week Credit Points: 4 SVB634 TOPICS IN ENGINEERING

## SURVEYING

Network reliability; deformation surveys; subsidence monitoring; precision alignment and distance measurement; jig surveys; high rise buildings.

Prerequisite: SVB431 Course: SV34 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 (twodimensional) 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

Prerequisites: PHB170, SVB430, SVB442 Co-requisite: SVB639

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 Co-requisite: SVB431 Prerequisite: SVB443

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 Credit Points: 5

Prerequisite: SVB343 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.

Prerequisites: SVB451, SVB470 Course: SV34 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 Credit Points: 6

Prerequisite: SVB470 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.

Prerequisites: SVB412, SVB443 Course: SV34 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.

Courses: IF51, IF52

1

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 Credit Points: 9

Prerequisite: SVB911 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 Credit Points: 8

Contact Hours: 3 per week

Prerequisite: SVT343

#### SVT992 COMPUTER GRAPHICS 2

Data for computer-assisted mapping; programming techniques for automated drafting; HP graphics language for driving plotters.

Prerequisites: SVT315, SVT991 Course: SV24 Credit Points: 8 Contact Hours: 3 per week