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

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
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<tbody>
<tr>
<td>AA</td>
<td>Academy of the Arts</td>
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<tr>
<td>AL</td>
<td>Accounting Legal Studies</td>
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<tr>
<td>AR</td>
<td>Architecture, Interior and Industrial Design</td>
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<td>AT</td>
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<td>Communication and Organisational Studies</td>
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<td>CP</td>
<td>Cultural and Policy Studies</td>
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<td>CS</td>
<td>Computing Science</td>
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<td>CU</td>
<td>Curriculum and Professional Studies</td>
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Level Indicators

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

**Course: AAB001 RESEARCH PROJECT**
Credit Points: 48

**Course: 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.
Credit Points: 12

**Course: AAB021 ADVANCED RESEARCH METHODS**
Familiarisation with a range of (mostly) quantitative methodological tools. Methodologies selected tend to meet the students requirements.
Credit Points: 12

**Course: AAB023 ADVANCED READINGS IN AUSTRALIAN ART**
Examination of contemporary issues about Australian art practice and context; articulation of the Australian situation with international trends.
Credit Points: 12

**Course: AAB051 ARTS IN SOCIETY**
Images of the artist in various cultures; artistic modes (music, dance, drama, visual arts); functions of the arts (ritual, celebration, research); the role and place of the arts in contemporary Australian society.
Credit Points: 12

**Course: 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.
Credit Points: 12

**Course: 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.
Credit Points: 8

**Course: AAB101 DANCE KINESIOLOGY & ALIGNMENT**
The anatomical structure and alignment techniques, their function and application to increase dance technique facility and lessen dance injuries.
Credit Points: 12

**Course: AAB104 MUSIC**
Elements of music: beat, accent, rhythm and phrasing; nineteenth and twentieth century musical styles; notation, score reading, vocal and improvisation studies.
Credit Points: 8

**Course: 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.
Credit Points: 12

**Course: AAB109 PRACTICUM**
Consolidation of the student’s knowledge and skills in direct artistic experience in real contexts.
Credit Points: 12

**Course: AAB111 DANCE RESEARCH**
Practical training in scholarly methods and professional skills in research.
Credit Points: 8

**Course: AAB112 HISTORY OF AUSTRALIAN THEATRE DANCE**
A study of the development of dance as an art form in Australia in the twentieth century.
Credit Points: 12

**Course: AAB113 WRITINGS ON DANCE**
Strategies for reading and writing exposition and argument with emphasis on clarity of expression and presentation of thought.
Credit Points: 12

**Course: AAB114 DANCE IN AUSTRALIAN SOCIETY**
The role of dance in the community; procedures for establishing a dance project; basic program planning; teaching approaches for community dance.
Credit Points: 12

**Course: AAB115 PROFESSIONAL DEVELOPMENT STUDIES**
Preparation for the dance industry; preparation of curriculum vitae and funding applications; auditions; contracts; press relations and management.
Credit Points: 12

**Course: AAB116 DANCE IN THE COMMUNITY**
Introductory studies of dance in the community; role of dance in the community; procedures for establishing a dance project; basic program planning; teaching approaches for community dance.
Credit Points: 12

**Course: 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.
Credit Points: 12

**Course: 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.
Credit Points: 12

**Course: AAB121 CONTEMPORARY TECHNIQUE 1**
The basic contemporary dance vocabulary; study of Graham, Cunningham or Limon Technique; reference to development of strength, flexibility and placement...
of spine and limbs; basic combinations of movements; analysis of dance sequences. Designated Unit.

Course: AA11
Credit Points: 16
Contact Hours: 7.5 per week

- AAB122 CONTEMPORARY TECHNIQUE 2
  Technical work: off-balance turns and rapid changes of weight, level and direction; exploration of rhythm; emphasis on performance of sequence work. Designated Unit.
  Course: AA11
  Prerequisite: AAB121
  Credit Points: 16
  Contact Hours: 7.5 per week

- AAB123 CLASSICAL TECHNIQUE 1
  Review and consolidation of the fundamental technique and its application designed to reinforce and develop an appropriate range of technical skills within the four-tier practical level system. Designated Unit.
  Course: AA11
  Credit Points: 16
  Contact Hours: 6 per week

- AAB124 CLASSICAL TECHNIQUE 2
  Consolidation of technique; study of variety of selected approaches to classical ballet and development of appropriate range of technical skills within the four-tier practical level system. Designated Unit.
  Course: AA11
  Prerequisite: AAB123
  Credit Points: 16
  Contact Hours: 6 per week

- AAB125 DANCE ANALYSIS & HISTORY 1
  Introduction to the analysis of dance through a concentration on the dance as text; a study of various historical contexts of dance as art. Focus on ballet.
  Course: AA11
  Credit Points: 12
  Contact Hours: 3 per week

- AAB126 COMPOSITION & PRODUCTION TECHNIQUES
  The conceptual base of the medium and of the heuristic principles governing the making of dance; exploration of more formal dynamic, temporal and spatial structures, deemed historically appropriate as a means of structuring movement and conveying the choreographer's intention; elements of theatre production; lighting, sound and costume.
  Course: AA11
  Prerequisite: AAB100
  Credit Points: 16
  Contact Hours: 5 per week

- AAB151 CONTEMPORARY TECHNIQUE 1
  The basic contemporary dance vocabulary (contraction, release, etc.); reference to development of strength, flexibility and placement of spine and limbs.
  Course: AA11
  Credit Points: 12

- AAB152 CONTEMPORARY TECHNIQUE 2
  Continuation of AAB102. Basic combinations of movements; analysis of dance sequences.
  Course: AA11
  Prerequisite: AAB121
  Credit Points: 12

- AAB153 ADVANCED PERFORMANCE 1
  Attainment of outstanding practical skills combining use of aesthetic quality and artistry.
  Course: AA11
  Prerequisites: Grade of 6 or 7 in AAB121 and AAB123.
  Credit Points: 20

- AAB154 ADVANCED PERFORMANCE 2
  Continuation of AAB153.
  Course: AA11
  Prerequisite: AAB153
  Credit Points: 36

- AAB155 ADVANCED ANALYSIS: BALLET
  The skills involved in the aesthetic appreciation and analysis of the masterworks of ballet.
  Course: AA11
  Prerequisite: AAB106
  Credit Points: 12
  Contact Hours: 3 per week

- AAB156 ADVANCED ANALYSIS: MODERN DANCE
  The aesthetic appreciation and analysis of the masterworks of modern/contemporary dance.
  Course: AA11
  Prerequisite: AAB106
  Credit Points: 12
  Contact Hours: 3 per week

- AAB157 ADVANCED ANALYSIS: COMPARATIVE STUDY
  The skills involved in the aesthetic appreciation and analysis of the masterworks of ballet or modern/contemporary dance used to engage in a comparison of features of specific dances chosen for detailed study.
  Course: AA11
  Prerequisites: AAB155, AAB156
  Credit Points: 12
  Contact Hours: 5 per week

- AAB158 ADVANCED COMPOSITION 1
  Exploration of how dance creates meaning; the aesthetic questions that have emerged out of the last major choreographic movement; an exploration of possible future directions.
  Course: AA11
  Co-requisite: AAB155
  Credit Points: 8
  Contact Hours: 5 per week

- AAB159 ADVANCED COMPOSITION 2
  Contact improvisation and its use as a basis for the development of partner work; the range of traditional and non-traditional forms available to the choreographer when working with groups of varying sizes.
  Course: AA11
  Co-requisite: AAB156
  Credit Points: 12
  Contact Hours: 5 per week

- AAB160 ADVANCED COMPOSITION 3
  The links between technology and dance in the areas of light and sound – the principal elements of dance design; a major individual project that involves the application and integration of a range of technology.
  Course: AA11
  Prerequisites: AAB158, AAB159
  Credit Points: 12
  Contact Hours: 5 per week

- AAB161 DANCE IN THE COMMUNITY 1
  In depth studies in teaching dance: program planning and teaching approaches for specific dance groups.
  Course: AA11
  Credit Points: 16
  Contact Hours: 3 per week

- AAB162 DANCE IN THE COMMUNITY 2
  Students are required as a group to initiate, devise, develop and produce a dance within the community with the emphasis on management skills.
  Course: AA11
  Prerequisite: AAB161
  Credit Points: 16
  Contact Hours: 3 per week

- AAB163 DANCE IN THE COMMUNITY 3
  Students are required to individually initiate, devise, develop and produce a dance project within the community with the emphasis on the creativity and production of the project.
  Course: AA11
  Prerequisite: AAB162
  Credit Points: 16
  Contact Hours: 3 per week

- AAB164 DANCE ELECTIVE
  Students are required to select topics for further study in consultation with the course coordinator.
  Course: AA11
  Credit Points: 8
AAB202 ACTING 1
Psychological and non-psychological approaches to acting and the actor’s preparation techniques; Stanislavski-based approaches to realism; elimination of bad habits and theatrical dishonesty; Brecht-based approaches to issue-based theatre and their presentation styles. Lectures, tutorials and rehearsals involving selected extracts from modern plays, with in-house performances. Exploration of appropriate actor’s exercises.
Courses: AA21, ED22, ED50
Credit Points: 12 Contact Hours: 4 per week

AAB203 ACTING 2
Focus on Shakespeare; work on verse, small scenes and soliloquies. Designated Unit (for AA21 Acting Strand).
Courses: AA21, ED22 Prerequisite: AAB202
Credit Points: 12 Contact Hours: 4 per week

AAB204 VOICE & MOVEMENT 1
Body awareness; sense of space; breathing; expression and articulation; text and context; research.
Courses: AA21, ED50
Credit Points: 12 Contact Hours: 4 per week

AAB205 VOICE & MOVEMENT 2
Awareness through movement; freeing the natural voice; development of holistic response to text; exploration of physical and emotional levels in characterisation; review of research relative to the study of voice and movement; alternative teaching styles; comparative analysis and personal synthesis.
Courses: AA21, ED50
Credit Points: 12 Contact Hours: 4 per week

AAB206 STAGECRAFT 1
Scenery construction; stage properties: budget and purchasing, hiring and borrowing, categorisation, storage and use; stage lighting: electricity, rigging and focusing of lanterns, maintenance and repairs, operating principles; stage costumes: hire of costumes, pattern styling, use of sewing machine, fabric construction to create costumes.
Course: AA21
Credit Points: 12 Contact Hours: 4 per week

AAB207 STAGECRAFT 2
Theatre sound: sound effects, live and recorded, stage sound equipment. Stage management: coordinating and enhancing theatre production. Basic lighting design: use of colour and lighting angles, painting with light, computer controlled equipment, stage lighting organisation and documentation. Theatre administration: funding applications, front-of-house organisation, systems of ordering, purchasing, petty cash.
Course: AA21
Credit Points: 12 Contact Hours: 4 per week

AAB208 ELEMENTS OF DRAMA
Minimal drama: fiction plus tension; three dimensions of expression: light/dark, movement/stillness, sound/silence; three elements of dramatic form: space, time, communication; symbols and meaning; distance from the action; communicating ideas.
Courses: AA21, ED50
Credit Points: 12 Contact Hours: 4 per week

AAB211 DEVELOPMENT OF THEATRE 1
Origins of theatre: Greek drama/theatre; medieval theatres in Europe; theatre in Asia; theatre of the English Renaissance; theatre of the Italian Renais-
sance; royal theatre of France and of England; England’s popular theatre of the nineteenth century.
Course: AA21
Credit Points: 12 Contact Hours: 3 per week

AAB212 DEVELOPMENT OF THEATRE 2
Realism; naturalism; symbolism/expressionism; epic theatre; absurd; current theatre; South East Asian theatre; Australian theatre before and after World War II; community theatre.
Courses: AA21, ED50
Credit Points: 12 Contact Hours: 3 per week

AAB213 DIRECTING
Functions of the director from casting to rehearsal to performance; organisation procedures and relationship to other production staff; the director’s role as intermediary between text, actor and audience; differing definitions of that role; personal style; seminars on contemporary directors.
Course: AA21
Credit Points: 12 Contact Hours: 3 per week

AAB214 DRAMA PROCESS
Workshops involving individual, face-to-face and group role play; participant enrolment, leader-in-role and intervention; identification with role; negotiation, devising and subsequent decision-making; dramatic tension and resolution; structuring for the theme and for the dramatic moment; distancing devices; reflection, re-enactment and remaking.
Courses: AA21, ED50
Credit Points: 12 Contact Hours: 3 per week

AAB215 THEATRE DESIGN
Establishing the scene; staging alternatives; lighting and scenery; costume design; scale models; drawings.
Course: AA21
Credit Points: 12 Contact Hours: 3 per week

AAB216 PLAYWRITING
Dramatic structure: tension, climax and resolution; focus and audience distance; fitting an appropriate style to a dramatic theme; the relationship between action, theme and character; developing a scenario; imagery: the relationship between the visual and the linguistic; dramatic writing, dialogue and staging.
Course: AA21
Credit Points: 12 Contact Hours: 3 per week

AAB217 ARTS RESEARCH & EVALUATION 1
Accessing and collation of pertinent resources, critical observation techniques; case study methods.
Course: AA21
Credit Points: 12 Contact Hours: 3 per week

AAB218 ARTS RESEARCH & EVALUATION 2
Study of a major play in production or a project involving performance from one frame of reference.
Course: AA21 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
Credit Points: 12 Contact Hours: 3 per week
AAB220 THEATRE STUDIES OPTION
Specialised work in one of the theatre studies areas: directing, design, playwriting or theatre in education, or a related area by negotiation.
Course: AA21
Credit Points: 12

AAB225 PRACTICUM 1
Students have an opportunity to practise as artists within a specific community and to participate in an artistic/advocacy project in the community. Elective unit studies influence the emphasis of the practicum, which involves one of the three main communities identified: artistic, public, institutional.
Course: AA21, ED30
Credit Points: 12

AAB226 PRACTICUM 2
See AAB225.
Course: AA21
Credit Points: 12

AAB227 PRACTICUM 3
See AAB225.
Course: AA21
Credit Points: 12

AAB233 VOICE & MOVEMENT 3
The psychological and physiological underpinning of voice and body work required by actors; development of voice and speech fluency; development of physical awareness and corporeal skills required to begin character work. Designated unit.
Course: AA21
Prerequisite: AAB205
Credit Points: 12
Contact Hours: 6 per week

AAB234 VOICE & MOVEMENT 4
The application of a range of text and physical styles; the use of performance space; continual development of the actor’s physical and vocal skills; video and film techniques. Designated unit.
Course: AA21
Prerequisite: AAB233
Credit Points: 12
Contact Hours: 6 per week

AAB235 VOICE & MOVEMENT 5
Development of an audition portfolio; voice and movement work for the camera.
Course: AA21
Prerequisite: AAB234
Credit Points: 12
Contact Hours: 6 per week

AAB236 VOICE & MOVEMENT 6
Work in productions; consolidation of skills required in the Voice and Movement program.
Course: AA21
Prerequisite: AAB235
Credit Points: 12
Contact Hours: 3 per week

AAB246 MUSIC & DANCE
Physical skills including: elongation of the spine; movement from the centre; alignment; articulation; opposition; lift and placement; basic combinations of locomotor movements; elements of dance; style, performance skills. Aural comprehension and notation of rhythm and pitch; vocal technique; principles of style.
Course: AA21
Credit Points: 12
Contact Hours: 3 per week

AAB247 ACTING 3
Philosophies of theatre and their relation to performance; exercises, research and practical work on selected texts. Introduction to acting for the camera.
Designated Unit.
Course: AA21
Prerequisite: AAB203
Credit Points: 12
Contact Hours: 6 per week

AAB248 ACTING 4
Research, rehearsal and performance.
Course: AA21
Prerequisite: AAB247
Credit Points: 12
Contact Hours: 6 per week

AAB250 THEATRE PRODUCTION
Specific major tasks of acting, stage or management or administration duties for two or more productions by the drama program, requiring a high level of personal responsibility.
Course: AA21
Credit Points: 36

AAB261 THE ARTS ENVIRONMENT
Introduction to the context for arts management; economics of the arts; formation of national and state arts policy; interplay amongst arts organisations and related fields of endeavour like the media, the education system, business and recreation.
Course: AA21
Credit Points: 12
Contact Hours: 3 per week

AAB262 ARTS FINANCE
Planning and monitoring the use of money in the arts, including the preparation of funding submissions in non-profit situations.
Course: AA21
Credit Points: 12
Contact Hours: 3 per week

AAB263 ARTS MARKETING
General principles of marketing; the marketing plan; applications in performing arts situations; planning, targeting, costing and implementation up to point of sale contact in the front of house.
Course: AA21
Credit Points: 12
Contact Hours: 3 per week

AAB264 ARTS EVENTS PROMOTION
Publicity, public relations and advertising in the arts context. Practical skills for low-budget operations.
Course: AA21
Credit Points: 12
Contact Hours: 3 per week

AAB265 ISSUES IN ARTS MANAGEMENT
Fundraising and sponsorship; law and the arts; issues and current issues, eg. multiculturalism, tourism.
Course: AA21
Credit Points: 12
Contact Hours: 3 per week

AAB266 ARTS EVENTS PLANNING
Opportunity for students to apply the theory and practice learnt in other units to production situations; the planning and initial preparations for productions being undertaken in theatre, or other arts disciplines.
Course: AA21
Credit Points: 12
Contact Hours: 3 per week

AAB289 PRODUCTION TECHNIQUES 1
Lighting - rigging and focussing; operation of manual and basic memory control systems; operator paperwork; basic colour theory. Sound - recording and editing effects; set up of basic theatre sound system; playback techniques; operator paperwork. Set construction; interpreting working drawings; costing and material selection; safety procedures.
Course: AA21
Prerequisite: AAB206, AAB207
Credit Points: 12
Contact Hours: 6 per week

AAB290 PRODUCTION TECHNIQUES 2
Lighting design theory; procedures and planning; practical application of theory; communication in the production team; current practice.
Course: AA21
Prerequisite: AAB289
Credit Points: 12
Contact Hours: 6 per week
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• 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
Credit Points: 12
Contact Hours: 3 per week

• AAB414 DRAMA CURRICULUM STUDIES 2
Extends on AAB414; curriculum development within the context of contemporary policies, frameworks and agencies; principles of measurement, assessment and evaluation; teaching and learning strategies; directions in curriculum development.
Course: ED50
Prerequisite: AAB414
Credit Points: 12
Contact Hours: 3 per week

• AAB415 DRAMA CURRICULUM STUDIES 2
Extends on AAB414; curriculum development within the context of contemporary policies, frameworks and agencies; principles of measurement, assessment and evaluation; teaching and learning strategies; directions in curriculum development.
Course: ED50
Prerequisite: AAB414
Credit Points: 12
Contact Hours: 3 per week

• AAB421 FOUNDATION ART STUDIES
Participation in the process of solving broad ranging visual problems through developing ideas, recording information and forming solutions to visual problems; seeks to develop genuine enquiry and the attainment of appropriate levels of competence in techniques, materials and resources to bring ideas to fruition.
Course: ED50
Credit Points: 12
Contact Hours: 4 per week

• AAB444 VISUAL ARTS OF ASIA
As a reflection of the maker's culture, the visual arts of Asia provides one means of understanding these diverse cultures. Historical backgrounds, philosophical beliefs and trade have influenced the symbolism, forms, techniques and uses of these various artefacts. Development of an understanding and awareness of non-western art forms.
Course: 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. Incompatible with Art major at Diploma of Teaching (Secondary Art) level.
Course: ED50
Credit Points: 12
Contact Hours: 3 per week

• AAB449 EDUCATIONAL DRAMA
Practical introduction to educational drama techniques; teacher-in-role; enrollment 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: ED50
Credit Points: 12
Contact Hours: 3 per week

• AAB455 COMPUTER GRAPHICS 1
An introduction to the processes and possibilities for computer-generated imaging. Undertaking of projects to develop understanding of the relationship between the historical, cultural, aesthetic and productive aspects of computer-generated art forms.
Course: ED26, ED50
Credit Points: 12
Contact Hours: 3 per week

• AAB456 COMPUTER GRAPHICS 2
Advanced level study enabling students to utilise core understandings and pursue specialised computer graphic applications in image enhancement, animation, presentation or video interaction.
Course: ED50
Credit Points: 12
Contact Hours: 3 per week

• AAB457 SCULPTURE 1
Students will be expected to observe, question and explore issues to reach solutions that will reflect an individual imagination. Knowledge and skills that apply to sculpture will be pursued.
Course: ED50
Credit Points: 12
Contact Hours: 3 per week

• AAB458 SCULPTURE 2
Enables the student to explore issues to reach advanced solutions; individual imagination. Knowledge and skills that apply to works will be incorporated.
Course: ED50
Credit Points: 12
Contact Hours: 3 per week

• AAB459 VISUAL ARTS DESIGN 1
The fundamentals of design thinking and practice; undertaking of projects within and outside the studio to provide understanding of the relationship between the historical, cultural, aesthetic and productive aspects of design strategies and applications; development of a personal philosophical basis for design practice; professional attitudes and innovative and reflective thinking; research into the knowledge and resources available to design practice.
Course: ED50
Credit Points: 12
Contact Hours: 3 per week

• AAB460 VISUAL ARTS DESIGN 2
Advanced exploration of design thinking and practice. Undertaking of selected projects enhancing core understandings and enabling the student to develop specialist knowledge and understanding in an elected domain of design practice.
Course: ED50
Credit Points: 12
Contact Hours: 3 per week

• AAB502 CHIEF PRACTICAL STUDY 3
Consolidation and extension of studies from AAB501; performance seminar, participation in performance activities; open recitals.
Course: AA51
Prerequisite: AAB501
Credit Points: 16
Contact Hours: 2 per week

• AAB505 ENSEMBLE STUDIES C3
Group tuition on an orchestral instrument; further development of performing technique. Directed ensemble activities: membership of instrumental or vocal ensemble, and one other elective ensemble.
Course: AA51
Credit Points: 12
Contact Hours: 6 per week

• AAB511 TWENTIETH-CENTURY MUSIC 3
Theatre and concert music from 1950 to the present day. Electronic and computer music, aleatoric and minimalist techniques; the return to tonality.
Course: AA51
Credit Points: 8
Contact Hours: 4 per week
AAB514 MUSIC STUDIES 3
Development of special skills and knowledge in one of the following: choral arranging and conducting, instrumental arranging and conducting, popular music composition; advanced conducting; introduction to non-western music; professional studies.
Course: AA51
Credit Points: 8 Contact Hours: 2-4 per week

AAB515 MUSIC STUDIES 4
Development of special skills and knowledge in one of the following: choral arranging and conducting, instrumental arranging and conducting, popular music composition; advanced arranging; introduction to non-western music; independent study; studio music teaching.
Course: AA51
Credit Points: 8 Contact Hours: 2-4 per week

AAB517 SYSTEMS OF PART WRITING 2
Chromatic harmony; nineteenth- and early twentieth-century writing techniques.
Course: AA51 Prerequisite: AAB516
Credit Points: 12 Contact Hours: 2 per week

AAB520 LITERATURE & ANALYSIS OF MUSIC 3
Romantic and impressionist music; development of research and analytical skills; forms studied include: the lied, symphony, orchestral music, instrumental and keyboard music, and musical drama.
Course: AA51 Prerequisite: AAB519
Credit Points: 8 Contact Hours: 4 per week

AAB521 MUSIC ELECTIVE 1
Development of special skills and knowledge of the following: choral arranging and conducting; instrumental arranging and conducting; introduction to non-western music.
Course: AA51
Credit Points: 12 Contact Hours: 2-4 per week

AAB522 MUSIC ELECTIVE 2
See AAB521.
Course: AA51
Credit Points: 12 Contact Hours: 2-4 per week

AAB544 POPULAR MUSIC COMPOSITION 4
Continued use of MIDI systems in a personal composition project, focusing on multimedia presentation forms; time management and collaborative work; live performance project.
Course: AA51 Prerequisite: AAB553
Credit Points: 12 Contact Hours: 3 per week

AAB556 PROFESSIONAL STUDIES
Music and Australian society; different manifestations of music: professional, amateur, community; historical patterns; music technology as an industry; pathways to established and new careers in music.
Course: AA51 Prerequisite: AAB5051
Credit Points: 12 Contact Hours: 2 per week

AAB561 PRACTICAL STUDIES A1
Development of strong and reliable technique, interpretation and performance skills on the chief practical instrument or voice; performance seminar; participation in a large directed ensemble.
Course: AA51
Credit Points: 12 Contact Hours: 5 per week

AAB562 PRACTICAL STUDIES A2
Continuation of AAB561 with added emphasis on interpretation, analysis and appropriate public presentation in performance. Designated Unit.
Course: AA51 Prerequisite: AAB562
Credit Points: 24 Contact Hours: 5 per week

AAB563 AURAL & WRITTEN MUSICIANSHP 1
Writing techniques: diatonic harmony, choice of chords, dominant 7th, harmonisation, melodic decoration, contrapuntal techniques; Aural perception: rhythmic, harmonic and melodic decoration, rhythm, recognition or intervals, diatonic chords, imitation and sequence; sight-reading: playing in unison; homophony in minor keys, two-part counterpoint.
Course: AA51
Credit Points: 12 Contact Hours: 4 per week

AAB564 AURAL & WRITTEN MUSICIANSHP 2
Continuation of AAB563; development of advanced skills in music writing, contrapuntal and diatonic harmony.
Course: AA51 Prerequisite: AAB563
Credit Points: 12 Contact Hours: 4 per week

AAB566 PRACTICAL STUDIES B1
Membership of two performing ensembles. Keyboard musicianship: students with limited keyboard facility undertake weekly individual tutorials designed to improve personal capabilities on keyboard. Group Second Study: students exempted from keyboard musicianship undertake studies on a second instrument or voice in a small group tutorial situation.
Course: AA51
Credit Points: 12 Contact Hours: 5-6 per week

AAB567 PRACTICAL STUDIES B2
Membership of two performing ensembles. Keyboard musicianship: students requiring further development of their facility on keyboard undertake weekly individual tutorials designed to reach an acceptable exit level on keyboard at the end of first year. Group Second Study: students exempted from further studies in keyboard musicianship undertake new or continuing studies in a second instrument or voice in small group tutorials.
Course: AA51 Prerequisite: AAB566
Credit Points: 12 Contact Hours: 5-6 per week

AAB569 COMPOSITION & TECHNOLOGY 1
Introduction to music computers, synthesisers, MIDI sequencing, music publishing, recording studio techniques and keyboard musicianship.
Course: AA51
Credit Points: 12 Contact Hours: 3 per week

AAB570 COMPOSITION & TECHNOLOGY 2
Introduction to the principles and practices of popular song composition and arrangement and norms of the genre. Continuation of keyboard musicianship and advanced music publishing.
Course: AA51 Prerequisite: AAB569
Credit Points: 12 Contact Hours: 3 per week

AAB571 PRACTICAL STUDIES A3
The study of a range of solo repertoire on a chief practical instrument or voice; repertoire is chosen appropriate to students' developing technical and interpretative skills, and encompasses a variety of styles and/or periods of music; performance seminar; participation in rehearsals and concerts in a large directed ensemble. Designated Unit.
Course: AA51 Prerequisite: AAB562
Credit Points: 24 Contact Hours: 5 per week
AAB573 AURAL & WRITTEN MUSICIANSHIP 3
Aural perception: auditory memorisation, sight singing and playing of diatonic and chromatic melodies; chord sequence recognition. Written musicianship: diatonic and chromatic harmony; nineteenth- and early twentieth-century writing techniques.

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

AAB574 AURAL & WRITTEN MUSICIANSHIP 4
Continuation of AAB573, with emphasis on complex chromatic harmony and late twentieth-century writing techniques.

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

AAB575 MUSIC FROM 1600-1750
Music from the late Renaissance to early Classical periods; development of research and analysis skills; special emphasis on fugue, binary, ritornello and sonata forms of the period.

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

AAB576 MUSIC FROM 1750-1900
Classical and Romantic music including symphony concerto, sonata, orchestral music; instrumental and vocal music of the period.

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

AAB579 PRACTICAL STUDIES B3
Group tuition on an orchestral instrument as a second study; development of performing technique; membership of two ensembles appropriate to the instrumental or vocal skills of the student.

Course: AA51
Prerequisite: AAB579
Credit Points: 12
Contact Hours: 5-6 per week

AAB580 PRACTICAL STUDIES B4
Continuation of AAB579.

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

AAB583 COMPOSITION & TECHNOLOGY 3
Composing techniques for film, television and the media using MIDI systems and computer/video timecode formats, including semiotic analysis of music for film.

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

AAB584 COMPOSITION & TECHNOLOGY 4
Continuation of AAB583, with emphasis on the production of broadcast quality material for the audio and visual music/entertainment industry.

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

AAB587 MUSIC IN WESTERN CIVILIZATION
The place of music in Western civilization from the beginnings of polyphony to the present day. Survey of music repertoire, styles and forms with emphasis on established masterworks from the repertoire.

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

AAB701 THE MAKING OF MODERNISM
The birth of modern art from French Impressionism to the eve of the World War 2; the major movements and their theoretical underpinnings.

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

AAB702 FOUNDATION MEDIA STUDIES 1
Familiarisation with resources available within and outside the University; exhibition spaces, working environments, institutions, art-making facilities, printed and visual resources; individual and group projects introducing a variety of visual art problems.

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

AAB703 FOUNDATION MEDIA STUDIES 2
Development of a visual dialogue through a series of projects within and outside the studio with a view to understanding relationships between the theoretical and practical aspects of art and developing a philosophical basis for professional attitudes and original thinking; research into the knowledge and resources available; development of the ability to evaluate aesthetic qualities in the student's own work.

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

AAB704 ART SINCE 1945
Major developments in the visual arts since 1945 with a particular examination of post-modernism: the role of the artist in contemporary society; the role of the media/artist critic in shaping contemporary art practice.

Course: AA71
Credit Points: 12

AAB705 PRACTICUM 1
Four weeks work experience in visual arts related locations such as public and commercial galleries, conservation, State Library, Queensland Museum.

Course: AA71
Credit Points: 12

AAB706 PRACTICUM 2
Shared responsibility by graduating students for all aspects of their graduation exhibition.

Course: AA71
Credit Points: 12

AAB707 ADVANCED MEDIA STUDIES 1
Students are expected to research their own personal directions, formulate and develop self-generated enquiry and demonstrate the acquisition of working methods, skills and knowledge required for the successful realisation of their concepts. Students present a program to the course coordinator which indicates specific studies in the two-dimensional or three-dimensional areas or a combination of these.

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

AAB708 ADVANCED MEDIA STUDIES 2
Students present a plan of studies based on their own specific interest; rigorous questioning of concept and artefact is required with the level of realisation and the ways in which media are used reflecting a high level of achievement. Further workshops in areas where the acquisition of skills is essential.

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

AAB709 ADVANCED MEDIA STUDIES 3
Students are expected to work independently demonstrating sound habits of research and sustained studio practice; skills developed in AAB703 and AAB707 should enable concepts to be expressed with confidence; intensive studio work to draw together the
students' interest in the visual arts in general and their specific study in particular.

**Course: AAB710 ADVANCED MEDIA STUDIES 4**

Independent work in preparation for an exhibition.

Course: AAB710
Credit Points: 24
Contact Hours: 12 per week

**Course: 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: AAB71, ED26, ED50
Credit Points: 12
Contact Hours: 3 per week

**Course: AAB712 CONTEMPORARY ART ISSUES**

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

Courses: AAB71, ED26
Credit Points: 12
Contact Hours: 3 per week

**Course: 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: AAB71
Credit Points: 12

**Course: AAB714 PROFESSIONAL STUDIES**

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

Course: AAB71
Credit Points: 12
Contact Hours: 4 per week

**Course: AAB720 EXTENDED MEDIA STUDY 1**

Extension of studio work in conjunction with AAB708.

Course: AAB71
Credit Points: 12
Contact Hours: 3 per week

**Course: AAB721 EXTENDED MEDIA STUDY 2**

Extension of studio work in conjunction with AAB709.

Course: AAB71
Credit Points: 12
Contact Hours: 3 per week

**Course: AAB722 EXTENDED MEDIA STUDY 3**

Extension of studio work in conjunction with AAB710.

Course: AAB71
Credit Points: 12
Contact Hours: 3 per week

**Course: 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.

Course: AAB71
Credit Points: 12
Contact Hours: 3 per week

**Course: AAB726 INTRODUCTION TO ART HISTORY**

The theories and methods of art history; the processes of art production and exhibition; views of art, historical interpretations and contemporary theories about art as cultural codes and semiotics.

Course: AAB71
Credit Points: 12
Contact Hours: 3 per week

**Course: 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: AAB71
Credit Points: 12
Contact Hours: 3 per week

**Course: 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: AAB71
Prerequisite: AAB052
Credit Points: 12
Contact Hours: 3 per week

**Course: AAB902 VISUAL ARTS 1**

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

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

**Course: AAB903 VISUAL ARTS 2**

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

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

**Course: AAB904 VISUAL ARTS 3**

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

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

**Course: AAB905 DRAMA EDUCATION**

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

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

**Course: AAB907 MUSIC EDUCATION 2**

The study of the music curriculum at a more advanced level. Familiarity with the philosophy, objectives, content strategies and evaluation techniques of selected programs gives students a broad base on
which they can design their own music programs. Creativity and practical skills develop through issues raised in studies of selected programs.

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

■ AAB909 PERFORMING ARTS 2
Students explore specific elements of the dramatic- playing mode; planning and leading of dramatic genres based around improvisatory approaches; students conduct a series of improvisation for their peers. Particular skills in the shaping of drama include those of leader-in-role, participant enrolment, negotiation, distancing devices and means of reflection.

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

■ AAB910 PERFORMING ARTS 3
The performance of a major choral work; analysis of interpretation, style, techniques of conducting and rehearsing. Students select an historical topic for research and develop further techniques on composition or solo/ensemble performance.

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

■ AAB911 EXPLORING MUSIC 1
Aural awareness, literacy and musicianship through vocal skills both solo and ensemble.

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

■ AAB912 EXPLORING MUSIC 2
Instrumental music forms with emphasis on recorder ensembles as a means of developing composition and arranging skills, and an awareness of stylistic developments. Conducting, rehearsing and performing techniques will be developed.

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

■ AAB913 EXPLORING MUSIC 3
This unit involves a series of lectures on score reading, sight-singing, ensemble singing techniques, rehearsal and conducting skills. Aural training and music writing techniques will be developed through a series of graded experiences throughout the semester.

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

■ AAB914 VISUAL & PERFORMING ARTS CURRICULUM 1
An in-depth study of either dance and drama, music or the visual arts; the place of the arts in a balanced curriculum; defining the arts; differences and commonalities; the arts and knowledge; the arts and integration across the primary curriculum.

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

■ AAB915 VISUAL & PERFORMING ARTS CURRICULUM 2
An in-depth study of either dance and drama, music or the visual arts; the place of the arts in a balanced curriculum; resourcing the arts; assessment and the arts; the arts and students with special needs; artists and education; the arts in a multicultural society.

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

■ AAB916 ADVANCED VISUAL & PERFORMING ARTS CURRICULUM ELECTIVE
The curriculum of dance, drama, music or visual arts to an advanced level; designing and implementing programs in one of the disciplines for the primary school; action research in the classroom to monitor and evaluate an arts curriculum project.

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

■ AAB917 THE ARTS & THE WHOLE CURRICULUM
Using the arts in the primary school to integrate and synthesise cultural and historical movements, facts and values; models for planning and delivering an integrated curriculum driven by arts processes; forming multi-disciplinary teams to design, implement and evaluate a curriculum project in schools.

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

■ AAB918 ARTS FOUNDATION STUDIES
Foundation experiences introducing the art forms of dance, drama, music and the visual arts; the purposes and functions of the arts in society; practical workshops in each discipline; visits to galleries and theatres in a range of community contexts.

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

■ AAN001 ARTS RESEARCH METHODS 1
Research in the arts; defining the research tradition; qualitative research; emerging arts research processes; reporting of research findings.

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

■ AAN002 ARTS RESEARCH METHODS 2
An application of the understandings gained in Arts Research Methods 1 to a selected area. Normally, the student will produce an interpretive analysis in a written presentation of 5,000 words.

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

■ AAN003 AESTHETIC CODES IN CONTEMPORARY SOCIETY
Theories of art within the discipline of aesthetics. Five key questions are addressed, against a background of contemporary western society.

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

■ AAN004 GRADUATE SEMINAR
A seminar series for Honours and Masters students involving presentations by guests; in addition, staff discuss current research interests, and students report on issues arising in their own thesis work.

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

■ AAN005 ADVANCED ARTS PROJECT
This unit may be preparatory to the major research project of the Masters course. The project may be articulated with the final major project, in order to establish the initial framework of the major project, and involve technical and conceptual guidance from the relevant supervisor as required. Length of written presentation (or alternative format) to be determined in consultation with the supervisor.

Course: AT22
Credit Points: 24

■ AAN006 INDEPENDENT STUDY
Independent work of an artistic or scholarly nature which is of limited scope compared with the research project. The student devises an outline of study and/or action in consultation with a staff supervisor. Artistic outcomes would normally be expected to be to the
standard of public showing. Written presentation requires a minimum of 6,000 – 10,000 words, or equivalent if other media/reportage is used.

Course: AA40
Credit Points: 12

■ AAN101 ADVANCED DANCE ANALYSIS
Students make an in-depth study of the life and work of a chosen 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 dramaturgy on a current production.
Course: AA40
Credit Points: 12  Contact Hours: 3 per week

■ AAN201 CONTEMPORARY AUSTRALIAN PLAYWRIGHTS
Students study a number of current Australian playwrights; seminar papers focus on each writer, with input from directors, actors and writers.
Course: AA40
Credit Points: 12  Contact Hours: 3 per week

■ AAN202 TEXTUAL ANALYSIS
Students apply analytical frameworks to dramatic texts. This includes: interaction of various codes within a dramatic text, historical and cultural factors, additional codes operating in a film version of a play text, and the semiotic codes in dramatic performance.
Course: AA40
Credit Points: 12  Contact Hours: 3 per week

■ AAN203 DRAMA AS SOCIAL ACTION
A range of theories of cultural production; the interpretation of meanings from a dramatic art work; works of leading theatre directors, playwrights and companies are viewed and analysed to determine their aesthetic, moral and cognitive value; links with political values.
Course: AT22
Credit Points: 12  Contact Hours: 3 per week

■ AAN204 DRAMA & THE NATURE OF LEARNING
Cross-discipline studies from education, developmental psychology, philosophy and theatre; the place of creativity in art and learning.
Course: AT22
Credit Points: 12  Contact Hours: 3 per week

■ AAN205 EPISTEMOLOGICAL FOUNDATIONS OF DRAMA
A re-evaluation of the origins and foundations of educational drama; drama and the new education movement; progressive education and modernism in art; learning through drama; towards an enabling drama aesthetic.
Course: AT22
Credit Points: 12  Contact Hours: 3 per week

■ AAN501 MUSIC HISTORY, LITERATURE & ANALYSIS
Study of the history and stylistic development of romantic and impressionist music in its social and cultural context; analytical studies (dealing particularly with stylistic characteristics and compositional processes) of a range of representative works.
Course: AT22
Credit Points: 12  Contact Hours: 3 per week

■ AAN502 INSTRUMENTAL ARRANGING
Development of arranging skills, using music of various styles; theory of arranging; practical arranging (small group); arrangement performance for large group (orchestra or band).
Course: AT22
Credit Points: 12  Contact Hours: 3 per week

■ AAN700 CONTEMPORARY DEBATES ON THE NATURE OF ART
Contemporary trends in the visual arts, nationally or internationally. The effect of the information revolution, technology and changing modes of world government and their economic/marketing implications. The relationship between modernism and post-modernism. The development of new conventions and values. A broad sense of post-structuralist critical tools employed in visual analysis.
Course: AA40
Credit Points: 12  Contact Hours: 3 per week

■ AAP421 DANCE CURRICULUM STUDIES 1
Provides a theoretical context and considers practical applications in curriculum planning and teaching and learning strategies; examines the roles of the teacher in the community and the profession.
Course: ED32
Prerequisite: AAP420  Co-requisite: EDP451
Credit Points: 12  Contact Hours: 3 per week

■ AAP422 DRAMA CURRICULUM STUDIES 1
See AAP421.
Course: ED32
Prerequisite: AAP420  Co-requisite: EDP451
Credit Points: 12  Contact Hours: 3 per week

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

■ AAP424 VISUAL ARTS CURRICULUM STUDIES 1
See AAP421.
Course: ED32
Prerequisite: AAP420  Co-requisite: EDP451
Credit Points: 12  Contact Hours: 3 per week

■ AAP428 MUSIC CURRICULUM STUDIES 1A
A specialist extension study in curriculum for students planning a career as a primary, secondary or instrumental music specialist in schools; materials and appropriate methods of teaching related to music in the wider school curriculum outside the classroom.
Course: ED37
Credit Points: 12

■ AAP429 DANCE CURRICULUM STUDIES 2
Development of understanding and skills for learning; assessment issues and techniques; philosophical concepts relevant to dance education.
Course: ED37
Credit Points: 12  Contact Hours: 3 per week
AAP430 DRAMA CURRICULUM STUDIES 2
Advanced practical applications in assessment, curriculum planning and teaching/learning strategies in the relevant visual and performing arts area.
Course: ED32
Credit Points: 12
Contact Hours: 3 per week

AAP431 MUSIC CURRICULUM STUDIES 2
See AAP430.
Course: ED32
Credit Points: 12
Contact Hours: 3 per week

AAP432 VISUAL ARTS CURRICULUM STUDIES 2
See AAP430.
Course: ED32
Credit Points: 12
Contact Hours: 3 per week

AAP433 MUSIC CURRICULUM STUDIES 2A
See AAP428.
Course: ED37
Prerequisite: AAP428
Credit Points: 12

AAP501 ART CURRICULUM FOUNDATIONS
The aims, content and agenda of historical and contemporary art education orientations; assumptions by movements in relation to art theories, child development, teachers' role and classroom practice; investigation of strengths and weaknesses, theory and practice and historical, social and intellectual influence on past and present art education philosophies.
Courses: ED22, ED32
Credit Points: 12
Contact Hours: 3 per week

AAP502 ART EDUCATION PROGRAM DESIGN & PRACTICE
Design and implementation of defensible art education programs at broad and specific school levels; the learning outcomes of art activities; classroom practice and evaluation across all levels of schooling.
Course: ED22
Prerequisite: AAP501
Credit Points: 12
Contact Hours: 3 per week

AAP503 CLAY MATERIALS 1
Develop ceramic knowledge, artistic concepts, and practical/technical skills; investigation of selected historical ceramic eras; understanding of the relationship between ceramics and the maker's culture; development of personal imagery and design.
Courses: ED22, ED26, ED50
Credit Points: 12
Contact Hours: 3 per week

AAP504 CLAY MATERIALS 2
Detailed specialisation in individually selected styles; emphasis on conceptual matters and imagery; expansion of ceramic knowledge and technical formats; investigation of contemporary trends, influences and issues in Australian ceramics.
Courses: ED22, ED50
Prerequisite: AAP503
Credit Points: 12
Contact Hours: 3 per week

AAP505 FIBRE ARTS 1
Historical and contemporary textile media; development of technical and conceptual textile knowledge; utilisation of fibre/textile materials and processes to develop both 2 and 3 Dimensional textile artefacts/objects; the relationship between textile arts and selected cultures; particularly in relation to fashion design, individual development of design, construction and decoration techniques and textile imagery.
Courses: ED22, ED26, ED50
Credit Points: 12
Contact Hours: 3 per week

AAP506 FIBRE ARTS 2
Continuation of AAP505; self-initiated projects in consultation with lecturer, are developed in this unit. Provides an overview of relationship between theory, practice and criticism.
Courses: ED22, ED50
Credit Points: 12
Contact Hours: 3 per week

AAP507 PAINTING 1
Introducing and developing an active awareness of both historical and contemporary issues in painting and drawing through studio practice and tutorials; the skills appropriate to the range of available media pursued in studio classes and professional practice.
Courses: ED22, ED26, ED50
Credit Points: 12
Contact Hours: 3 per week

AAP508 PAINTING 2
Further development of traditional and experimental imagery through studio workshops, discussions and professional practice.

AAP509 PHOTOGRAPHIC MEDIA 1
Photographic processes; aesthetic aspects of photography; history of art and photography; personal approaches to photography.
Courses: ED22, ED26, ED50
Credit Points: 12
Contact Hours: 3 per week

AAP510 PHOTOGRAPHIC MEDIA 2
Continuation of AAP509. Photographic techniques; innovative approaches to photography; history of photography; personal approaches to photography.
Courses: ED22, ED26, ED50
Credit Points: 12
Contact Hours: 3 per week

AAP511 PRINTMAKING 1
Relief printmaking: raised and incised blocks in lino; wood and glued materials; intaglio printmaking: etching, engraving, dry point and aquatint; planographic printmaking: lithography, monoprints and transfer prints; stencil printmaking: silk screening and photographic stencils; presentation of prints.
Courses: ED22, ED50
Credit Points: 12
Contact Hours: 3 per week

AAP512 PRINTMAKING 2
Continuation of AAP511. Motivational sources; creation and applications of techniques and media related to printmaking; exploration of related art areas.
Courses: ED22, ED50
Prerequisite: AAP511
Credit Points: 12
Contact Hours: 3 per week

AAP530 CURRICULUM ANALYSIS & MODIFICATION
Detailed study of six programs: teacher-devised programs; critical analysis; basic elements of curriculum design; design of programs in music for information and evaluation.
Course: ED22
Credit Points: 12
Contact Hours: 3 per week

AAP531 ISSUES IN MUSIC EDUCATION
Arts education in Queensland within P-10 framework; role of arts/music education; the process of learning; contributions made by history, sociology, psychology and philosophy to arts education.
Course: ED22
Credit Points: 12
Contact Hours: 3 per week

AAP532 APPLIED STUDIES
Movement, voice and classroom instruments and literature; writing and arranging music for classroom
AAX106 Music \( \text{study of character and jazz styles; practical work} \)

AAX103 Music \( \text{selected parts of the world; tap and jazz dance} \)

Credit Points: 8 Contact Hours: 2 per week

Course: AA

Development of dancing and singing skills; composition of dance routines for chorus; dramatic aspects of music comedy; tap dance combinations and routines, study of character and jazz styles; practical work includes basic technique, step combinations, solo and group choreographic work.

Course: AA10
Credit Points: 8 Contact Hours: 3 per week

AAX111 Repertoire & Practice

PERIOD 1

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

Course: AA10
Credit Points: 12

AAX112 Repertoire & Practice

PERIOD 2

Continuation of studies initiated in AAX111. Designated Unit.

Course: AA10  Prerequisite: AAX111
Credit Points: 16

AAX113 Repertoire & Practice

PERIOD 3

Continuation of AAX112. Designated Unit.

Course: AA10  Prerequisite: AAX112
Credit Points: 16

AAX114 Repertoire & Practice

PERIOD 4

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

Course: AA10  Prerequisite: AAX113
Credit Points: 16

AAX115 Dance History

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

Course: AA10
Credit Points: 8 Contact Hours: 1.5 per week

AAX116 Stagecraft

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

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

AAX117 Ballet Technique

1

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

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

AAX118 Ballet Technique

2

Continuation of study initiated in AAX117. Designated Unit.

Course: AA10  Prerequisite: AAX117
Credit Points: 8 Contact Hours: 7.5 per week

AAX119 Ballet Technique

3

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

Course: AA10  Prerequisite: AAX118
Credit Points: 8 Contact Hours: 7.5 per week
AAX120 BALLET TECHNIQUE 4
Technique classes of advanced standard incorporating difficult exercise combinations, with an emphasis on performance quality and style within the four-tier levels system. Designated Unit.
Course: AAX10 Prerequisite: AAX119
Credit Points: 8 Contact Hours: 7.5 per week

AAX121 CONTEMPORARY TECHNIQUE 1
The study of contemporary dance techniques within the four-tier levels system. Practical work includes floor work, centre work and basic combinations to develop flexibility, strength and coordination; vocabulary of contemporary dance techniques. Designated Unit.
Course: AAX10 Credit Points: 8 Contact Hours: 7.5 per week

AAX122 CONTEMPORARY TECHNIQUE 2
Continuation of study initiated in AAX121. Designated Unit.
Course: AAX10 Prerequisite: AAX121 Credit Points: 8 Contact Hours: 7.5 per week

AAX123 CONTEMPORARY TECHNIQUE 3
Consolidation of technical knowledge: increased degree of difficulty in turning and jumping sequences; rapid changes of weight and off-balance work within the four-tier levels system. Designated Unit.
Course: AAX10 Prerequisite: AAX122 Credit Points: 8 Contact Hours: 7.5 per week

AAX124 CONTEMPORARY TECHNIQUE 4
Advanced technique classes incorporating difficult exercise combinations with rapid changes of weight, level, direction; performance quality and style. Designated Unit.
Course: AAX10 Prerequisite: AAX123 Credit Points: 8 Contact Hours: 7.5 per week

ALB100 TAXATION DISPUTES
The increasing role played by administrative law and policy in taxation law and practice; accountants who engage in the provision of tax advice, lodgement of returns and tax planning need an understanding of the underlying principles; accordingly, the unit examines the following: the nature and effect of taxation policy statements and rulings; the self-assessment system and the administrative appeals process; the rights of practitioners and clients in relation to audits and investigations; the Australian Taxation Office.
Course: BS50 Prerequisite: ALB122 Credit Points: 12 Contact Hours: 3 per week

ALB101 COMMERCIAL LAW
Commercial transactions: viz agency, bailment guarantees, cheques and other negotiable instruments, insurance and banking; aspects of partnerships and company law; especially for ED50 students.
Courses: ED50, BS50 Prerequisite: ALB107 Credit Points: 12 Contact Hours: 3 per week

ALB102 CONSUMER STUDIES
The consumer in the Australian economy: the interdependent roles of the consumer, business and government; consumer behaviour; products and services; marketing; advertising; consumer protection.
Course: BS50 Credit Points: 12 Contact Hours: 3 per week

ALB103 FINANCIAL INSTITUTIONS - LAW
The legal framework of banking and other financial transactions: legal constraints upon the operations of financial institutions; bank-customer relationship; Cheque Act, Credit Act, liability for negligent advice.
Course: BS50 Prerequisite: ALB110 or ALN103 Credit Points: 12 Contact Hours: 3 per week

ALB104 INDUSTRIAL LAW
The system of industrial law in Australia; the development and role of law in industrial relations; industrial relations legislation; common law; contract of employment and industrial torts.
Course: BS50 Prerequisite: HRB131 Credit Points: 12 Contact Hours: 3 per week

ALB106 LAW & COMMUNICATION
Outlines the legal system; legislation and its interpretation; legal reasoning; limits on freedom of expression: torts, crimes, defamation, obscenity; laws affecting the media; contempt of court.
Course: BS50 Credit Points: 12 Contact Hours: 3 per week

ALB107 LEGAL ENVIRONMENT OF BUSINESS
The rights and major statutory laws affecting an individual's legal responsibilities upon attaining the age of 18; current legislation affecting family relationships; the renting and/or buying of a house; relationships between employer and employee.
Course: ED50 Credit Points: 12 Contact Hours: 3 per week

ALB108 PUBLIC ADMINISTRATIVE LAW
Nature and development of law; precedent; interpretation of deeds and statutes; torts; criminal law; constitutional law; foundations of administrative law; judicial review of administrative action, natural justice, ultra vires; common law remedies; legal position of the Crown and government instrumentalities; Administrative Appeals Tribunal; the Ombudsman; the Federal Court; the Judicial Review Act; freedom of information; law and reform.
Course: BS50 Credit Points: 12 Contact Hours: 3 per week

ALB110 BUSINESS LAW
Australian legal and constitutional system; sources of law, including doctrines and methodology of the law; statutory interpretation; a study of the law of contract; introduction to the law of torts with emphasis on the tort of negligence; aspects of consumer protection.
Courses: BS50, ED50, IF53, PU48 Credit Points: 12 Contact Hours: 3 per week

ALB111 COMMERCIAL & SECURITIES LAW
Commercial transactions; specific types of contract: sales of goods, credit contracts, agency, bailment and insurance; aspects of the Trade Practices Act and negotiable instruments.
Course: BS50 Prerequisite: ALB110 or ALN103 Credit Points: 12 Contact Hours: 3 per week

ALB120 COMPANY LAW & PRACTICE
Advanced topics in company law including: protection of minority interests; dividend policy; insider
trading, takeovers and buy-backs, law relating to financially troubled companies.

Course: BS30  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: BS30  Prerequisite: ALB122  Credit Points: 12  Contact Hours: 3 per week

■ ALB122 LAW OF BUSINESS ASSOCIATIONS
The law relating to the establishment, operation and dissolution of business associations; the forms of business associations; partnerships, joint ventures, trusts, companies and voluntary associations. A focus on companies: share capital prospectuses, directors’ duties, corporation and registration requirements.

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

■ ALB130 INDIRECT TAXATION
Taxes other than those imposed upon income; sales tax; customs and excise duties; stamp duty; payroll tax; land tax; training guarantee levy, superannuation guarantee charge.

Course: BS30  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: BS30  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: BS30  Prerequisite: ALB132  Credit Points: 12  Contact Hours: 3 per week

■ ALN101 ADVANCED TAX PLANNING
Application of technical expertise in income tax and other revenue laws to specific tax planning situations including employment, retirement, investment, business and professional practice; the professional responsibilities of tax advisers.

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

■ ALN102 ADVANCED TAXATION
Analysis of specific and complex issues arising from the operation of the Income Tax Assessment Act and related legislation. The issues are drawn from the following general areas:- Framework of the Australian taxation system and the interpretation of taxation legislation; Income and deductions; Tax accounting; and Taxation of business entities.

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

■ ALN103 BUSINESS LAW & ETHICS
Introduction to business law and to morality in the business context. Interpretation of statutes, law of torts, contract law, industrial law and the utility of business structures; morality and how it works as an aspect of the business community; the origins of moral belief, and the motives which lead people to abide by what they believe to be morally right and to persuade others to do likewise. The functioning morality in society drawing on psychological, sociological and philosophical perspectives with special emphasis on business aspects of morality.

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

■ ALN104 COMMERCIAL LAW HONOURS
The law, policy and practice of financial disclosure; students have the opportunity to obtain a detailed understanding of the rules governing the preparation and audit of financial information whether for annual accounts, experts’ reports, or for use in prospectuses or take-overs. It examines the respective theories governing accountants, auditors’ and directors’ liabilities. Sources of law considered include the Corporations Law, the Australian Stock Exchange listing rules, accounting standards and the Common Law.

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

■ ALN105 INDIRECT TAXATION
Examination of tax relevant to the conduct of a business other than taxes directly imposed on a taxpayer’s income and capital gains. Specific taxes covered include sales tax, payroll tax, land tax, stamp duty, customs, excise duties, the training guarantee levy and the superannuation guarantee charge.

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

■ ALN106 INTERNATIONAL TAXATION
Application of Australian income tax law and practice to situations and transactions with an international element; root principles of jurisdiction, residence and source; substantive taxing provisions governing residents and non-residents; tax planning arrangements and applicable anti-avoidance legislation.

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

■ ALN107 LIQUIDATIONS & RECEIVERSHIPS
The law and practice of corporate insolvency; comparisons between schemes of arrangement and reconstruction, receiverships and liquidation. Topics include: the rights of secured and unsecured creditors; rights of members and employees; duties and obligations of scheme administrators, receivers and liquidators; collection and distribution of assets; public examination: actions against company officers.

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

■ ALN109 SPECIAL TOPIC – COMMERCIAL LAW
Examination of issues in business law, company law and taxation areas. In particular, company takeovers, issues of management law, disclosure of information
and the new conceptual framework for accounting and professional liability.

Course: BS87  
Credit Points: 12  
Contact Hours: 3 per week

- **ALN110 TAXATION POLICY HONOURS**  
The Australian taxation system as it has evolved under the policy-making powers of the Australian Government. Generally accepted principles governing the formation of taxation policy are analysed and then reviewed in the light of the various tax reform initiatives adopted by the Government as a result of the recommendations of committees of enquiry into the taxation system over the past two decades. The current reform agenda is critically assessed.

Courses: BS60, BS70, BS87  
Credit Points: 12  
Contact Hours: 3 per week

- **ALN300 INSOLVENCY & RECONSTRUCTION (PY)**  
Examination of the law and practice of corporate insolvency; comparisons between schemes of arrangement and reconstruction, receiverships and liquidation; the rights of secured and unsecured creditors; collection and distribution of assets; public examination; actions against company officers.

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

- **ALN301 TAXATION 1 (PY)**  
Prepares candidates enrolled in the Institute of Chartered Accountants Professional Year for the examination and workshops in the taxation module. Topics as prescribed by the Institute are covered in a cursory fashion or in depth according to the particular knowledge level requirements specified.

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

- **ALN302 TAXATION 2 (PY)**  
A study program for candidates enrolled in the advanced taxation module of the Institute of Chartered Accountants Professional Year. Topics prescribed by the Institute are covered in sufficient depth to meet the requirements as specified in the module.

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

- **ALP101 EMPLOYMENT LAW**  
Understanding of institutions, doctrines and methodology of general and industrial law; analysis of employment relationships; common law contract of employment; workers’ compensation; legal liability for industrial action; the structure of Federal and Queensland industrial relations laws.

Course: BS74  
Credit Points: 12  
Contact Hours: 3 per week

- **ALP102 AUSTRALIAN INDUSTRIAL LAW**  
An introduction to industrial law; detailed study of law relating to trade unions and employer organisations; current developments in industrial law.

Course: BS74  
Credit Points: 12  
Contact Hours: 3 per week

- **ALX101 AUSTRALIAN INDUSTRIAL LAW**  
Conciliation and arbitration laws; the Federal laws on dispute resolution, the Labor Court, special tribunals, State systems; functioning and regulation of industrial organisations and trade unions; laws relating to strikes and industrial disputes.

Course: BS10  
Credit Points: 12  
Contact Hours: 3 per week

- **ARB140 INTRODUCTORY DESIGN 1**  
Mechanical drawing techniques; topics include: contour, texture and tone; depth perception, optical illusions and the principles of perspective; techniques of prospective drawing; the organisation of the visual field and the gestalt ‘laws of pragnanz’; pattern in two and three dimensions; visual interest and attention; visual dynamics; principles of scale drawing.

Courses: AR48, BN30  
Credit Points: 16  
Contact Hours: 8 per week

- **ARB141 THE HUMAN ENVIRONMENT 1**  
The dimensions and movement of the human body, and of its perceptual systems, as an essential preliminary to the design of all artefacts for human use. Topics include: static and dynamic anthropometry; human sensory systems; ergonomics; applications of anthropometrics and ergonomics to design.

Courses: BN30  
Credit Points: 6  
Contact Hours: 3 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: 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 bearing and skeletal construction systems.

Course: AR48  
Credit Points: 6  
Contact Hours: 3 per week

- **ARB191 THE HUMAN ENVIRONMENT 1**  
The dimensions and movement of the human body as a perpetual system for human use; static and dynamic anthropometry; human sensory systems; introduction
to ergonomics; applications of anthropometrics and ergonomics to design.

Courses: AR41, AR48, BN30
Credit Points: 4 Contact Hours: 2 per week

ARB192 THE HUMAN ENVIRONMENT 2
Human needs and the influence of selected interpersonal and physical variables on human behaviour; the characteristics and dynamics of group behaviour, communication process types, and networks; concepts of power, leadership and conflict; observations of behaviour, research methods, interpretation and presentation of research; environmental stressors and their mediation by individual differences.

Courses: AR41, AR48
Credit Points: 4 Contact Hours: 2 per week

ARB193 DESIGN 1
Design theory: design definition; perception; elements and principles of design; effects of colour, texture, contour, pattern; human dimensions; anthropometrics, elements of aesthetics. Graphics: descriptive geometry; architectural graphics and rendering; freehand drawing and sketching. Design projects: two-dimensional and three-dimensional objects; personal working and living space.

Courses: AR41
Credit Points: 8 Contact Hours: 5 per week

ARB194 DESIGN 2
See ARB193.
Course: AR41
Credit Points: 14 Contact Hours: 7 per week

ARB195 TECHNOLOGY 1

Courses: AR41, AR48
Credit Points: 4 Contact Hours: 2.5 per week

ARB196 TECHNOLOGY 2
See ARB195.
Courses: AR41, AR48
Credit Points: 6 Contact Hours: 2 per week

ARB197 HISTORY OF ARCHITECTURE & ART 1
The development of the artificial environment and its relationship to ideas, technology, architecture and the fine arts from the earliest times to the present.

Courses: AR41, AR48
Credit Points: 2 Contact Hours: 1 per week

ARB198 HISTORY OF ARCHITECTURE & ART 2
See ARB197.
Courses: AR41, AR48
Credit Points: 2 Contact Hours: 1 per week

ARB199 TECHNOLOGY 1
See ARB195.
Courses: AR41, BN30
Credit Points: 8 Contact Hours: 4 per week

ARB241 HISTORY OF THE BUILT ENVIRONMENT 2
A continuation of ARB197. History of the following from circa 1600 AD: ideas, art, and two of the following (one of which must be the student’s major discipline): town and country planning, landscape architecture, architecture, interior and industrial design.

Course: BN30
Credit Points: 6 Contact Hours: 3 per week

ARB242 TECHNOLOGY 2
See ARB195.
Course: BN30
Credit Points: 14 Contact Hours: 5 per week

ARB246 INTRODUCTION TO INTERIOR TECHNOLOGY 2

Course: BN30
Prerequisite: ARB161
Credit Points: 14 Contact Hours: 5 per week

ARB248 INTRODUCTORY DESIGN 2
Continuation of ARB140 Introductory Design 1; studio work involving three-dimensional design tasks of a variety of scales; workshop and field teaching; techniques of oral and written 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 heliodon and artificial sky.

Courses: AR41, AR48, BN30
Credit Points: 2 Contact Hours: 1 per week

ARB290 INTRODUCTION TO COMPUTING 2
Computer as tool for drafting; line graphics; plotting, symbol libraries; dimensioning; computer drafting
and office organisation; comparison of available software packages.
Courses: AR41, AR48, BN30
Credit Points: 2 Contact Hours: 1 per week

ARB291 THE HUMAN ENVIRONMENT 3
The social and cultural development of Australian urban environments, local built environments; study of human functioning in urban environments, privacy, personal space, territoriality, environmental meaning and cognition, cognitive maps and wayfinding, inter-cultural and intracultural differences. Application via examination and analysis of an urban environment with respect to its sociocultural function.
Courses: AR41, AR48, BN30
Credit Points: 4 Contact Hours: 2 per week

ARB292 THE HUMAN ENVIRONMENT 4
The interaction of formal organisations and institutions especially the organisation of work and government and the built environment; small group theory and the effective group; work and motivation. Management, style and bureaucracy, its character and influence; social analysis and social forecasting; social interest groups in a pluralist society; mechanisms and processes of compromise; Australia's government system as relating to public policy and the electoral system; modern society and the individual.
Courses: AR41, AR48, BN30
Credit Points: 4 Contact Hours: 2 per week

ARB293 DESIGN 3
Theory: scope of design; Reitman's State Transformation model, problem-solving methods; precedence diagrams; testing; general design heuristic; the art of design. Planning objectives and techniques, privacy and convenience, intelligibility, forms and order, history of planning techniques, the vertical dimension, safety, external constraints. Architectural projects: single-storey to low-rise buildings of domestic or semi-domestic nature. Graphics: use of media for presentation of architectural projects; use of colour, shade, shadow in architectural drawings; three-dimensional presentation and modelling.
Course: AR41
Credit Points: 10 Contact Hours: 5 per week

ARB294 DESIGN 4
See ARB293.
Course: AR41
Credit Points: 8 Contact Hours: 4 per week

ARB295 BUILDING CONSTRUCTION 1
Building construction of domestic and semi-domestic buildings with upper floors, excavation, retaining walls, culverts, site and soil investigations, footings, frames and load bearing walls, construction of low-rise buildings, roofing of medium and large spans; environmental factors, building defects and remedies.
Courses: AR41, AR48
Credit Points: 4 Contact Hours: 2 per week

ARB296 BUILDING CONSTRUCTION 2
See ARB295.
Courses: AR41, AR48
Credit Points: 4 Contact Hours: 2 per week

ARB299 INTRODUCTION TO COMPUTING 1
The computer as a tool; introduction to micro-computer hardware and software; architectural application overview, specialised graphics hardware, files, computer access and operating systems; simple computer graphics production symbols, colour control, printer control, transformation and deformation.
Courses: AR41, AR48, BN30
Credit Points: 2 Contact Hours: 1 per week

ARB340 ARCHITECTURAL DESIGN 1
Theory: concepts of design process, systematic methodology in architectural design. Studio: developing skills in site surveys, adjacency analysis, brief formation, application of architectural science; safety, comfort, construction, content, form and order.
Courses: AR48, BN30 Prerequisite: PSB011
Credit Points: 18 Contact Hours: 7 per week

ARB341 BUILDING CONSTRUCTION 1
Introduction to common building materials, their properties and behaviour in use; the building as a system; elements of the small building and their function in the building system. Studio work will consist of exercises in construction drawing related to the lecture topics. Lectures and studio work will be complemented by site visits and workshop practice.
Course: BN30
Credit Points: 16 Contact Hours: 6 per week

ARB343 VISUAL COMMUNICATION FOR ARCHITECTS 1
Introduction to presenting architectural works using manual skills and computer techniques.
Course: BN30
Credit Points: 4 Contact Hours: 2 per week

ARB350 INDUSTRIAL DESIGN 1
Scope of problem solving theory; special characteristics of design problems; the task environment, design heuristics; creativity and innovation and general psychological theories of creativity. The studio exercises to which most of the time is devoted are aimed at a range of different product designs. The complexity and depth of the design project will increase systematically according to the semester level. Course: BN30 Prerequisites: ARB200, PSB011
Credit Points: 18 Contact Hours: 8 per week

ARB351 ERGONOMICS FOR INDUSTRIAL DESIGNERS 2
Person-machine system models; human capabilities; hearing and signal detection theory; vision; and user modelling. Practical exercises cover application of lecture topics to product design.
Course: BN30 Prerequisite: ARB251
Credit Points: 4 Contact Hours: 2 per week

ARB352 VISUAL COMMUNICATION FOR INDUSTRIAL DESIGNERS 1
The development of visual communication techniques; introduction to rendering techniques and the use of different media including computer graphics.
Course: BN30
Credit Points: 4 Contact Hours: 2 per week

ARB353 MANUFACTURING TECHNOLOGY 1
Metals, glass, wood, ceramics and plastics technologies: the relation between the properties of materials and the industrial processes available for their fabrication. Application of the study of materials and their fabrication to design problems in studio exercises. Introduction of computers (CAD).
Course: BN30
Credit Points: 14 Contact Hours: 6 per week

ARB354 COMPUTER-AIDED INDUSTRIAL DESIGN 1
PC computer operation, DOS, file and disk management; the use of graphics and CAD by industrial designers. Applications in design, presentation
The control of noise and aural conditions in buildings; the evolution of building materials and the evaluation of material performance and suitability.

**ARB360 INTERIOR DESIGN 1**
Introduction to a systematic design process related to interior design problems. Theory and studio exercises upholding and solving interior design problems.

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

**ARB361 INTERIOR TECHNOLOGY 1**
Upgrades the technical drawing skills developed in ARB261 and introduces students to the building codes and by-laws regulating the design and construction of building interiors at the domestic level; issues such as the evolution of building materials and the evaluation of material performance and suitability.

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

**ARB362 FURNITURE & FITTINGS 1**
Fabrics and textiles in interior design; wall to wall carpeting; curtains and blinds; upholstery; in each case materials, properties and techniques are discussed; fabrics and textiles in interior design.

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

**ARB363 VISUAL COMMUNICATION FOR INTERIOR DESIGNERS 1**
Visual thinking and drawing and basic rendering skills; rough mock-ups and scale model making.

**Course:** BN30  
**Prerequisite:** PSB011  
**Credit Points:** 4  
**Contact Hours:** 2 per week

**ARB388 DESIGN SCIENCE 4**
The control of noise and aural conditions in buildings; basic acoustic design and noise control in buildings. Electrical lighting of interiors, lamp characteristics, colour rendering, modelling, lighting quality, simplified lighting design methods, external lighting.

**Course:** AR41, AR48, BN30  
**Credit Points:** 2  
**Contact Hours:** 1 per week

**ARB389 DESIGN SCIENCE 3**
Thermal performance of buildings; energy conservation and low energy design; calculation of heat flow and indoor temperatures under steady state and fluctuating conditions; quantitative monitoring of thermal performance of building elements. Computer-aided planning analysis and environmental control analysis; integration with design.

**Courses:** AR41, AR48, BN30  
**Credit Points:** 4  
**Contact Hours:** 2 per week

**ARB391 BUILDING SERVICES 1**
Hydraulics: water; gas; plumbing; drainage and sewerage in domestic and low-rise buildings. Fire services; sprinklers; alarms; extinguishers; emergency systems.

**Courses:** AR41, AR48, BN30  
**Credit Points:** 4  
**Contact Hours:** 1.5 per week

**ARB392 BUILDING SERVICES 2**
Electricity: supply and transmission systems; sub-stations; metering; reticulation. Vertical transportation; lifts; escalator hoists. Air-conditioning; refrigeration cycle, principles of air-conditioning, equipment components, domestic and commercial systems; approximate sizing of plant rooms and ductwork; cooling load estimate; choice of systems.

**Courses:** AR41, AR48, BN30  
**Credit Points:** 4  
**Contact Hours:** 2 per week

**ARB393 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
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<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Prerequisite(s)</th>
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This unit gives the major time allocation to the studio and workshop. Students develop their knowledge of systematic interior design processes and apply knowledge gained in support and co-requisite units.

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

This unit gives 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.

The program consists of a series of studio exercises and mock-up presentations in a 'forum' environment.

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.

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

Course: ARB41
Credit Points: 20
Contact Hours: 6 per week

ARB595 PROFESSIONAL STUDIES 2
Building economics; practice management and accounting systems; legal aspects of practice, contracts; building procurement systems.

Courses: ARB41, ARB48
Credit Points: 16
Contact Hours: 4 per week

ARB598 ELECTIVE 1B
See ARB590.

Courses: ARB41, ARB48
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: ARB48, BN30
Prerequisite: ARB540
Credit Points: 18
Contact Hours: 6 per week

ARB641 BUILDING CONSTRUCTION 4
Review the construction of non-domestic buildings of intermediate size. Each case study will discuss the system characteristics of the building type, the human and environmental factors which constrain the solution, and the associated building systems. Studio work will be complemented by field work.

Course: BN30
Prerequisite: ARB541
Credit Points: 17
Contact Hours: 6.5 per week

ARB646 LAW OF THE BUILT ENVIRONMENT
The law as a constraint in the design and construction process. Australian and Queensland acts, by-laws and regulations of statutory authorities as they affect the built environment. Legal aspects of land and land transfer. Introduction to professional liability, design registration, patents and copyrights.

Courses: ARB41, ARB48, BN30
Credit Points: 4
Contact Hours: 2 per week

ARB647 ARCHITECTURAL RESEARCH 2
Studies on approved topics to sufficient depth to demonstrate the student's ability to define and logically analyse proposition, and to conduct research to prove its validity.

Courses: ARB41, ARB48
Credit Points: 24
Contact Hours: 6 per week

ARB650 INDUSTRIAL DESIGN 4
Design studio projects; there are usually two projects per semester and they are done in depth. The interdisciplinary expertise is included when appropriate. Most of the projects are industry based.

Course: BN30
Prerequisite: ARB550
Credit Points: 20
Contact Hours: 6 per week

ARB652 VISUAL COMMUNICATION FOR INDUSTRIAL DESIGNERS 4
Structure of professional presentation, with selection of appropriate visual communication media particularly computer graphics; advanced renderings and their application to product design concepts; professional portfolio organisation.

Course: BN30
Prerequisite: ARB552
Credit Points: 4
Contact Hours: 2 per week

ARB653 MANUFACTURING TECHNOLOGY 4
Organisation, planning the technologies required for CIM (Computer-integrated Manufacturing). The impact of CIM on product design solutions. Field studies complement the lecture series. Studio exercises will utilise computer applications.

Course: BN30
Prerequisite: ARB553
Credit Points: 14
Contact Hours: 5 per week

ARB654 COMPUTER-AIDED INDUSTRIAL DESIGN 4
Advanced three-dimensional animation techniques; application of project management and evaluation techniques to design projects; two-dimensional and three-dimensional CAD used for the development of design concepts through to engineering drawings.

Course: BN30
Prerequisite: ARB554
Credit Points: 6
Contact Hours: 2 per week

ARB660 INTERIOR DESIGN 4
Students select and develop one complex design problem from brief stage to developed design studio stage. Theory studies will be cross-referenced to studio projects and exercises.

Course: BN30
Prerequisite: ARB660
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: 2 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: ARB48, 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: ARB48, BN30
Credit Points: 4
Contact Hours: 2 per week

ARB681 PROFESSIONAL STUDIES 3
See ARB695.

Course: ARB48
Credit Points: 16
Contact Hours: 2 per week

ARB690 ARCHITECTURAL PROJECT
See ARB693.

Course: ARB48
Credit Points: 12
Contact Hours: 6 per week

ARB693 DESIGN 9
Theory: contemporary architects' theories and ideas, their influence in architectural design and practice.
Projects: process of brief, functional and space programming; urban values, design principles and landscape-townscapes; civic and formal planning; urban quality. A comprehensive project of groups of complex buildings as a design vehicle to develop planning skills; brief formation; building programming; quality evaluation; planning and presentation.

Course: AR41
Credit Points: 16 Contact Hours: 6 per week

ARP695 PROFESSIONAL STUDIES 3
Alternative methods of building procurement; management of all phases of the building project. The Architect Act 1962 and amendments; Board of Architects Queensland Practice Examination.

Course: AR41
Credit Points: 8 Contact Hours: 2 per week

ARP697 ELECTIVE 2
Studies on approved topics to sufficient depth to demonstrate the student’s ability to define and to logically analyse proposition, and to conduct research to prove its validity.

Course: AR41
Contact Hours: Semester 1: 2 per week; Semester 2: 5 per week
Credit Points: Semester 1: 4; Semester 2: 20

ARP151 ARCHITECTURAL PRACTICE
Pre-design activities, brief formulation and evaluation; development and building approvals; programming and staffing; the documentation process; office systems; building procurement systems; contract administration; quality control; post occupancy evaluation; risk management.

Course: AR62
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: AR62
Credit Points: 12 Contact Hours: 2 per week

ARP153 LEGAL STUDIES IN ARCHITECTURE
Contract and tort: architect’s liability; building legislation update; trades practices act; intellectual property law; heritage and environment law; subcontractors changes act; workplace health and safety act; bankruptcy; company law; dispute resolution.

Course: AR62
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: AR62
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 arc: using the QUT library and other information services; accessing information through indexes and abstracts; computerised information retrieval; current awareness strategies; organising and evaluating information.

Course: AR62
Credit Points: 18 Contact Hours: 7 per week

ARP503 ADVANCED INTERIOR DESIGN 2
The issues of environmental communications; the physiological, psychological and sociological aspects of workplace interiors.

Course: AR62
Credit Points: 18 Contact Hours: 6 per week

ARP506 BRIEF DEVELOPMENT
Explores the fundamentals of brief development and its implications for design efficiency and effectiveness; the nature of design; problem definition; brief development - a traditional view; brief development: an evolutionary view; participatory design; decision-making and the organisational structure; setting up the information network; information gathering and recording; developing a client structure; and design process and problem type.

Course: AR62
Credit Points: 8 Contact Hours: 2 per week

ARP507 PROFESSIONAL PRACTICE FOR INTERIOR DESIGNERS
The role and responsibilities of the interior designer in professional practice; job administration, liability, copyright, designer and client relationships; communication management and organisation of a project. The fundamentals of task scheduling; planning systems and control models; program evaluation and review techniques; critical path monitoring; organisational developments; recruitment staffing structures; concepts of marketing related to the profession.

Course: AR62
Credit Points: 12 Contact Hours: 4 per week

ARP601 SETTING THE SCENE
Incorporates a series of case studies of significant film and theatre sets; students explore the influence of design on emotive behaviour and interpret the implication of this for interior design of a more conventional kind; use will be made of the current projects in the unit Environmental Communications.

Course: AR62
Credit Points: 10 Contact Hours: 3 per week

ARP604 CONSERVATION OF HISTORIC INTERIORS
The ethics and the role of the designer in the conservation of interiors. An introduction to building technologies as required by a practising designer working on conservation and restoration projects.

Course: AR62
Credit Points: 14 Contact Hours: 6 per week

ARP605 BUILDING EVALUATION
Strategies for evaluation of building interior physical characteristics and user responses to utilisation of such areas from technical, sociological and psychological perspectives; students assess existing sites to foster an appreciation of client and user requirements, compilation of strategies and reports, statistical analysis and application of data.

Course: AR62
Credit Points: 8 Contact Hours: 2 per week
ARP613 ADVANCED ERGONOMICS 1
Man-machine systems and their relations with living and working environments; the importance of ergonomics (human factors) criteria and their application to industrial design. The course consists of series of seminars relevant to case studies concerned. Typical case studies are concentrated on the ergonomic evaluation of consumer products.
Course: AR61
Credit Points: 2  Contact Hours: 1 per week

ARP623 ADVANCED ERGONOMICS 2
Systematic ergonomic evaluation methods and their application to design problems. Lectures and seminars relevant to case studies on the ergonomic evaluation of the working and living environment, eg. key-punch operator work station, bus driver work station and ergonomic evaluation of an assembly line.
Course: AR61  Prerequisite: ARP613
Credit Points: 4  Contact Hours: 2 per week

ARP642 CASE STUDIES
Case study evaluation by practising designers; study of different evaluation methods and techniques; the application of evaluation methods through individual case studies. All design factors of manufactured products are evaluated in depth.
Course: AR61
Credit Points: 4  Contact Hours: 2 per week

ARP652 DESIGN MANAGEMENT & DECISION THEORY
Meaning of the design process, control and the design process, complexity of design problems, types of contracts, design and business, project team, design responsibility, management, documentation, concept of evaluation and management action, application of design theory to design management.
Course: AR61
Credit Points: 2  Contact Hours: 1 per week

ARP653 PROFESSIONAL PRACTICE
The role and responsibilities of the industrial designer in professional practice; job administration, liability, design protection, designer and client relationships.
Course: AR61
Credit Points: 2  Contact Hours: 1 per week

ARP671 HISTORY, THEORY & CRITICISM OF INDUSTRIAL DESIGN
The development of industrial design and its relationship to ideas, technology and arts; the development of industrial design from eighteenth century to the present day; Australian inventions and their impact on product design in Australia.
Course: AR61
Credit Points: 2  Contact Hours: 1 per week

ARP672 INDUSTRIAL DESIGN 1
ARP673 INDUSTRIAL DESIGN 2
These units consist of studio work in which students design a range of products or systems. The emphasis is on projects generated from local industry and community. The complexity and depth of the design project increases according to the semester level.
Course: AR61  Prerequisite: ARP672
Credit Points: 16  Contact Hours: 6 per week

ARP674 INDUSTRIAL DESIGN RESEARCH 1
A topic is selected by a student and approved and supervised by industrial design staff. Examples are: microsurgical equipment design, bushfire safety equipment, mobile dental clinic in isolated regions and interactive display in psychological testing.
Course: AR61  Prerequisite: ARP673
Credit Points: 20  Contact Hours: 8 per week

ARP675 INDUSTRIAL DESIGN RESEARCH 2
This course depends on the topic selected by a student in the previous semester. Students are responsible for the program as a part of their project work, which will be approved and supervised by industrial design staff.
Course: AR61  Prerequisites: ARP672, ARP674
Credit Points: 20  Contact Hours: 8 per week

ARP676 ADVANCED COMPUTER-AIDED INDUSTRIAL DESIGN 1
CAD in the design process. Two-dimensional and three-dimensional application of appropriate CAD programs. Development of a design project through the interactive use of CAD and related engineering programs as an aid to design analyses and finalisation.
Course: AR61
Credit Points: 4  Contact Hours: 2 per week

ARP677 ADVANCED COMPUTER-AIDED INDUSTRIAL DESIGN 2
CAD/CAM in the design, analysis and manufacturing process. Three-dimensional solid modelling, finite analyses, and CAM will be employed. A project will be taken from first concept through final documentation. The presentation, technical description, engineering analyses and finalisation to Computer Numerically Controlled (CNC) testing and prototype production of a small product.
Course: AR61
Credit Points: 4  Contact Hours: 2 per week

ATN001 RESEARCH PROJECT - 1 UNIT
Repeatable unit indicating the rate at which the Research Project within AT22 is being undertaken.
Course: AT22
Credit Points: 12

ATN002 RESEARCH PROJECT - 2 UNITS
See ATN001.
Course: AT22
Credit Points: 24

ATN003 RESEARCH PROJECT - 3 UNITS
See ATN001.
Course: AT22
Credit Points: 36

ATN004 RESEARCH PROJECT - 4 UNITS
See ATN001.
Course: AT22
Credit Points: 48

AYB100 ACCOUNTING FOR MANAGERS
Accounting in the business world; fundamental accounting recording systems, preparation of financial statements for servicing and merchandising firms, financial statements of partnership and limited companies; internal control of cash, inventories and non-current assets; analysis and interpretation of financial statements; introduction to managerial accounting, cost-volume-profit analysis, the nature of planning and control, and managerial decision making.
Courses: AA21, BS50, ED23, IF52, IF53, IS43, NS48
Incompatible with: AYB104
Credit Points: 12  Contact Hours: 3 per week

AYB101 COMPUTERISED ACCOUNTING SYSTEMS
Management information systems and accounting systems; database and files; systems development life
cycle; design of accounting systems including sales, accounts receivable, inventory, purchases, accounts payable, non-current assets, payroll and general ledger systems; accounting software such as ACCPAC, and spreadsheet software such as LOTUS 1-2-3; internal controls in computer systems.

Courses: BS50, ED50, IF31  Prerequisite: ISB892
Incompatible with: FNB117
Credit Points: 12  Contact Hours: 4 per week

■ AYB102 ACCOUNTING DISCLOSURE & AUDITING
This unit provides students with an extended study in company accounting and audit. Topics include: tax effect accounting; consolidations; liquidations; acquisition of assets; company disclosure; overview of auditing and audit reports; ethics, legal liability and audit objectives; overall audit plan and audit program involving: evidence and documentation, materiality and risk, internal controls and the procedures for the audit of various applications - sales, purchases, etc.
Course: ED50  Prerequisite: AYB111
Credit Points: 12  Contact Hours: 4 per week

■ AYB103 GOVERNMENT ACCOUNTING
The structure of government economic and fiscal activities; elements of government accounting: the concept of public accountability; fiscal federalism and theory of budgeting fund accounting; public accounting of Commonwealth, State and Local Government levels; zero-based budgets and program budgets; budget strategies and financial decision making; project review; statutory corporations; guan­gos and committees; government financial reporting; external, internal and efficiency auditing; accounting for government business enterprises.
Course: BS50  Prerequisite: AYB110
Credit Points: 12  Contact Hours: 3 per week

■ AYB105 PRINCIPLES OF ACCOUNTING
Accounting in the business world; recording and classifying transactions; end of period adjustments; preparation of financial statements for service and merchandising firms; preparation of a worksheet to assist in preparing financial statements; internal control of cash; accounting for merchandising operations, accounts receivable and bad debts, inventories and non-current assets; the use of special journals; preparation of cash flow statements for sole trader; analysis and interpretation of financial statements; introduction to management accounting, cost-volume profit analysis, planning, budgeting, control and managerial decision-making.
Course: PU48  Incompatible with: AYB100
Credit Points: 12  Contact Hours: 3 per week

■ AYB110 ACCOUNTING
Financial statements; characteristics of financial information; recording and classifying transactions; end of period adjustments; financial statements for service and merchandising firms; accounting for cash, receivables, inventory and non-current assets.
Courses: BS50, ED50, IF31, NS48, PU48
Incompatible with: AYB100, AYB104
Credit Points: 12  Contact Hours: 4 per week

■ AYB111 FINANCIAL ACCOUNTING
The procedures and principles relevant to both partnerships and companies for: formation, operations, reporting, dissolution, cashflow; statements and analysis and interpretation of financial statements; an introduction to the conceptual framework.
Courses: BS50, ED50, IF31, NS48
Prerequisite: AYB110  Credit Points: 12  Contact Hours: 4 per week

■ AYB112 COMPANY ACCOUNTING
Accounting for company income tax (tax effect accounting); acquisition of assets; consolidated financial statements; equity accounting and disclosure in company financial statements.
Courses: BS50, ED50, IF31
Prerequisite: AYB111
Credit Points: 12  Contact Hours: 4 per week

■ AYB113 ACCOUNTING THEORY & APPLICATIONS
The evaluation and development of accounting theory; regulatory framework and the theories of regulation; development of the conceptual framework; contracting cost framework; critique of historical cost and alternative theories; asset and liability definition and recognition; revenue and expense recognition and measurement.
Courses: BS50, IF31  Prerequisite: AYB112
Credit Points: 12  Contact Hours: 4 per week

■ AYB210 AUDITING
The audit environment; legal liability of auditors; professional ethics; study and evaluation of audit planning and programming, evidence, internal control theory and review techniques; audit program applications; revenue, receivables, cash inventory; audit in EDP environment and evaluation of EDP controls; computer-assisted audit techniques, computer fraud, sampling techniques; the audit report.
Courses: BS50, ED50, IF31
Prerequisite: AYB112
Credit Points: 12  Contact Hours: 3 per week

■ AYB212 COMPUTER SECURITY & AUDIT
Impact of EDP on auditing, general EDP controls, EDP application controls, generalised audit software (GAS), computer-assisted audit techniques, special EDP environments, fraud and privacy.
Course: BS50  Prerequisite: AYB210
Credit Points: 12  Contact Hours: 3 per week

■ AYB214 COMPANY ACCOUNTING FOR EDUCATORS
Accounting procedures and records required on formation of a company; procedures for alteration of capital structure and for liquidations, amalgamations and consolidations of companies; professional and legal requirements of accounting reporting.
Prerequisite: Tertiary studies in accounting or relevant teaching experience.
Course: ED26
Credit Points: 12  Contact Hours: 3 per week

■ AYB217 INTRODUCTORY ACCOUNTING
The accounting equation and the double entry principle; recording business transactions; end of period adjustments; financial statements and closing entries; accounting for merchandising operations; specialised journals and subsidiary ledgers; cash controls; accounting for partnerships; accounting for companies; interpretation of financial statements.
Courses: LW31, LX31
Credit Points: 12  Contact Hours: 3 per week

■ AYN101 ACCOUNTING PRINCIPLES
The nature and function of accounting information and its underlying concepts. Topics include: the accounting equation; elements of financial statements; recording and classifying accounting transactions; preparation of financial statements; external report-
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 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: BS70, BS70, BS87
Credit Points: 12 Contact Hours: 3 per week

■ AYN102 ACCOUNTING RESEARCH

Credit Points: 12 Contact Hours: 3 per week

■ AYN103 ADVANCED COMPANY ACCOUNTING

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

Courses: BS70, BS70
Incompatible with: AYN300
Credit Points: 12 Contact Hours: 3 per week

■ AYN104 AUDIT SAMPLING

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

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

■ AYN106 AUDITING HONOURS

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

Courses: BS60, BS70, BS87
Credit Points: 12 Contact Hours: 3 per week

■ AYN107 AUDITING STANDARDS & PRACTICE

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

Courses: BS70, BS70
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, BS70
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 identifiable 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; current assets; goodwill and unidentifiable intangibles; intercorporate investments and joint ventures; assets and liabilities; off-balance sheet financing; and funds/cash flow statements.

Course: BS87
Incompatible with: AYN112
Credit Points: 12 Contact Hours: 3 per week

■ AYN113 FINANCIAL ACCOUNTING 2

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

Course: BS87
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: BS87
Prerequisite: AYN113
Credit Points: 12 Contact Hours: 3 per week

■ AYN115 FINANCIAL ACCOUNTING HONOURS

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

Courses: BS60, BS70, BS87
Credit Points: 12 Contact Hours: 3 per week

■ AYN117 FINANCIAL REPORTING

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

Courses: BS70, BS87
Credit Points: 12 Contact Hours: 3 per week
AYNI18 INTERNAL AUDITING
The techniques used by the internal or operational auditors; the need for efficiency or value-for-money auditing; performance auditing; the internal auditor in large organisations both public and private.
Courses: BN30, BS70, BS87
Credit Points: 12 Contact Hours: 3 per week

AYNI19 INTERNATIONAL ACCOUNTING
Issues related to international accounting and the international accounting standard setting process. Issues examined include: the harmonisation of accounting; the environmental influences on international accounting; accounting principles and procedures in selected countries; foreign currency translation and transactions; transfer pricing and management accounting issues; internal and external audits worldwide; impact of multi-national enterprises; analysis of foreign financial statements.
Courses: BS70, BS87
Credit Points: 12 Contact Hours: 3 per week

AYNI20 AUDITING (MBA)
The audit environment; legal liability of auditors; professional ethics; study and evaluation of audit planning and programming, evidence, internal control theory and review techniques; audit program applications; revenue, receivables, cash; inventory; audit in EDP environment and evaluation of EDP controls; computer-assisted audit techniques; computer fraud; sampling techniques; the audit report.
Course: BS81 Prerequisite: AYN113
Credit Points: 12 Contact Hours: 3 per week

AYN300 ACCOUNTING 1 (PY)
See AYN103.
Courses: BS70, BS87 Prerequisite: AYN103
Incompatible with: AYN1103
Credit Points: 12 Contact Hours: 3 per week

AYN301 AUDITING (PY)
Examination at an advanced level of auditing standards and their practical application, judgemental and statistical audit sampling; EDP controls, and computer-assisted audit techniques, and audit reporting.
Courses: BS70, BS87 Prerequisite: FNN300
Credit Points: 12 Contact Hours: 3 per week

AYN302 SPECIAL TOPIC - PUBLIC ACCOUNTING
A study of topical areas in the public accounting area.
Courses: BS70, BS87
Credit Points: 12 Contact Hours: 3 per week

AYN303 ACCOUNTING INFORMATION SYSTEMS (PY)
Examination at an advanced level of accounting information systems (AIS). Topics include AIS strategic planning, feasibility analysis, systems development and implementation, networks and the electronic business.
Courses: BS70, BS87
Credit Points: 12 Contact Hours: 3 per week

BNB001 LEARNING AT UNIVERSITY
The importance of goal setting and motivation, differences between High School and University study, the student/lecturer relationship, approach to learning; study management, clarification of learning goals, benefits of planning to the control of learning; using lectures and pracs to your advantage, networking, concept mapping and flow charts; using textbooks and set notes to boost understanding; active vs passive learning skills and the implications of both; professional writing - pracs, reports, assignments; critical thinking, problem-solving and first year construction management; concentration and memory; learning and stress management; exam preparation, strategies and techniques.
Courses: BN30, CE42, CN31, CN32, CN33, EE43, EE44, ME45, MB46, PS47
Credit Points: 2 Contact Hours: 1.5 per week

BNB103 GENERAL ELECTIVE UNIT
Studies previously completed by students in areas of business or humanities may be acceptable as a Group A elective; applications to have such studies accepted as meeting the Group A elective requirements are considered on an individual basis.
Courses: EE44, ME45
Credit Points: 4 Contact Hours: 2 per week

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: CE21, EE22, ME23
Contact Hours: 15 weeks each
Credit Points: 3 each

BSB103 BUSINESS COMMUNICATIONS & APPLICATIONS
Courses: IF33, IF53, IS43, IT20, NS48, PU48, PU49
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
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:** BSN110 DISserTATION

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

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

**Course:** BSN116 THeSIs

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

Applied Research Methods provides a detailed review of data collection and analysis techniques, relevant to research in accounting, finance and related disciplines. The subject will teach students how to develop 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:** BSN141 APPLIED RESEARCH METHODS

**Credit Points:** 48

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:** BSN142 RESEARCH PROJECT

**Credit Points:** 24  **Contact Hours:** 3 per week

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:** BSN143 IMPLEMENTING & SUSTAINING TOTAL QUALITY MANAGEMENT

**Credit Points:** 12

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

**Course:** BSN144 RESEARCH PROJECT

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

**Course:** BSN145 THESIS

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

**Course:** BSN149 PROJECT

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

**Course:** BSN86

**Credit Points:** 12
CEB506 CIVIL ENGINEERING PRACTICE 2
Lectures, tutorials, practical work and field trips covering current topics in a specified area of civil engineering at an advanced undergraduate level. Unit is offered irregularly. When offered the unit material will be advertised by the Head of School.
Course: CEB42
Prerequisites: Students must be in the final year of their course.
Credit Points: 6 Contact Hours: 3 per week

CEB511 TRANSPORT ENGINEERING 2
Students focus on two aspects of transport engineering, rural road upgrading and small urban area transportation planning and road needs. Includes highway upgrading, deficiency analysis, traffic accident analysis, traffic flow simulation, staged development; overtaking lanes and rural intersection design; application of four-step transportation planning models, surveys, zone selection, network development, trip generation, distribution, assignment, model calibration, future year modelling, evaluation and selection of road needs, sensitivity analysis.
Course: CEB42
Prerequisite: CEB512
Credit Points: 6 Contact Hours: 3 per week

CEB512 TRANSPORT ENGINEERING 1
Land use/transport interaction, trip generation, trip distribution, mode choice, transport operations analysis, transport economics, transport capacity, urban road planning principles, urban transit planning, railway, aviation and bulk commodity systems design. Advanced pavement design techniques.
Course: CEB42
Prerequisite: CEB312
Credit Points: 6 Contact Hours: 3 per week

CEB520 FINITE ELEMENT METHODS
Finite element, finite difference and similar numerical techniques. Theoretical and modelling considerations are covered in the context of case studies in structures, soil mechanics and hydraulics.
Course: CEB42
Prerequisite: CEB313
Credit Points: 6 Contact Hours: 3 per week

CEB531 MASONRY DESIGN
Course: CEB42
Prerequisite: CEB220
Credit Points: 6 Contact Hours: 3 per week

CEB541 GEOTECHNICAL ENGINEERING 2
Course: CEB42
Prerequisite: CEB341
Credit Points: 6 Contact Hours: 3 per week

CEB542 GEOTECHNICAL ENGINEERING 3
Development of marginal lands: trafficability; embankments on soft soil; preloading; vertical drainage; vibroflotation; dynamic compaction and methods of deep foundation improvement. Rock excavation and slope stabilisation. Soil improvement, including mechanical and chemical stabilisation, soil reinforcement and other techniques. Anchoring in soil and rock. Earth and rockfill design and construction.
Course: CEB42
Prerequisite: CEB341
Credit Points: 6 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: CEB42
Prerequisite: CEB341
Credit Points: 6 Contact Hours: 3 per week

CEB551 ADVANCED STRUCTURAL DESIGN
Emphasis on the design of more complex structures. Normally three projects are studied involving some or all of: design in new materials, new analytical techniques, new codes of practice, novel structures.
Course: CEB42
Co-requisite: CEB405
Prerequisites: CEB201, CEB306, CEB354
Credit Points: 6 Contact Hours: 3 per week

CEB559 PRINCIPLES OF STRUCTURES 3
Structural properties of mild steel and high tensile steel. Structural framing and connections. Structural systems in steel: beams and columns, portal frames, space frames, trusses, tensile structures.
Courses: AR41, AR48, BN30
Prerequisite: CEB459
Credit Points: 3 Contact Hours: 2 per week

CEB560 HYDRAULIC ENGINEERING 3
Lectures, tutorial, practical work and site visits examine selected topics in water engineering. Topics chosen from hydrology, mobile bed hydraulics, river hydraulics, hydraulic structures, urban drainage, physical and mathematical modelling.
Course: CEB42
Prerequisites: CEB361, CEB460
Credit Points: 6 Contact Hours: 3 per week

CEB561 COASTAL ENGINEERING
Coastal engineering: wave theory, recording and analysis, wave generation; coastal processes, tides, surges, etc. currents, sediment movement, foreshore protection; coastal inlets, canal systems; planning and design of coastal structures; hydraulic models.
Course: CEB42
Prerequisite: CEB360
Co-requisite: CEB460
Credit Points: 6 Contact Hours: 3 per week

CEB564 ENGINEERING SCIENCE 4
Road pavement and building footing appraisal methods; earthworks and reclamation design/testing procedures; local authority/DPI design guidelines for water supply and sewerage reticulation, all fittings and testing; roads- earthworks, pavements, surfacing, etc.; stormwater - trenching, bedding and backfilling; water/ sewer - trenching, bedding, testing and backfilling; other services - conduct, specifications and estimating procedures; preparation of selected engineering design plans - roadworks, stormwater and other services; other engineered services for land developments projects; material selected to suit the student group; costing of engineering services; use of planning figures and unit costs; design office exercises in reading data from plans estimating costs, and preparing original designs and modifications to roads, water supply, sewerage and other engineered services.
Course: PS47
Co-requisite: CEB464
Prerequisites: CEB364, MED221
Credit Points: 6 Contact Hours: 3 per week

CEB570 PUBLIC HEALTH ENGINEERING 3
Basic solid waste management (domestic, commercial and industrial wastes); the general principles of
industrial liquid waste management, with examples of some important industries.

Course: CE42 Co-requisite: CEB470
Credit Points: 6 Contact Hours: 3 per week

C. CEB575 ENVIRONMENTAL IMPACT ASSESSMENT
Introduction to the techniques of environmental management. Environmental Impact assessment and the evaluation of critical environmental problems.
Courses: CE42
Prerequisites: CHB346, CEB370, CEB491
Credit Points: 6 Contact Hours: 3 per week

C. CEB659 PRINCIPLES OF STRUCTURES 4
Courses: AR41, AR48, BN30
Prerequisite: CEB559
Credit Points: 4 Contact Hours: 2 per week

C. 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

C. CEB901 CIVIL ENGINEERING QUANTITIES 2
Further study of SMM for industrial engineering construction leading to the measurement of dams, earthworks, storage volumes etc; refinery and processing plant, pipework, vessels, tanks, instrumentation, electrical commissioning, scaffold, shut down maintenance; pipelines, environmental assessment, construction, stations; mining, plant and equipment, conveyors, processing plant etc; oil and gas, off shore platforms, fabrications etc; cost engineering and cost control on engineering projects.
Course: CN33 Prerequisite: CEB701
Credit Points: 4 Contact Hours: 2 per week

C. CEPI07 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

C. CEPI09 MUNICIPAL LAW & REGULATIONS
The legislative framework for municipal engineering in Queensland. The various acts and regulations affecting the practising municipal engineer including powers and responsibilities are covered.
Courses: CE63, CE74
Credit Points: 8 Contact Hours: 2 per week

C. CEPI27 ROAD & TRAFFIC ENGINEERING
Urban traffic management, parking systems, surveys, intersection analysis; the design and evaluation of the urban road network; design of rural roads and pavement structures; pavement management.
Courses: CE63, CE74
Credit Points: 12 Contact Hours: 3 per week

C. CEPI28 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

C. CEPI31 ENGINEERING MANAGEMENT & ADMINISTRATION
Management principles and functions. Strategic and tactical planning, forecasting, decision-making. Budgeting and controls in organisations, techniques of project control. Human resources, managing change and development. Formulation of policy within a local authority. Local authority internal organisation, management, powers, responsibilities and functions, accounting and budgetary cycles, sources of finance and expenditure patterns.
Courses: CE63, CE74
Credit Points: 12 Contact Hours: 2 per week

C. CEPI72 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: 3 per week

C. CEPI74 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

C. 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

C. CEP215 ADVANCED TRAFFIC ENGINEERING
Traffic flow theory and traffic management. Analytical and computer analysis routines for urban intersection design, their background and applications.
Courses: CE63, CE74
Credit Points: 12 Contact Hours: 2 per week

C. 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
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

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

CEP310 URBAN TRANSPORTATION PLANNING
Transportation planning applications; road needs, urban transport, local area planning. Macro land use/transportation and micro urban transportation models; urban transportation zone selection and data needs; trip generation; model splits; surveying.

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

CEP361 DRAINAGE ENGINEERING
Drainage engineering for municipal engineers, road and railway designers, irrigation and general civil engineers. Rainfall and runoff models, both rational and computer models; drainage hydraulics of roof, streets, pipes, open channels, retention basins, culverts and bridges; erosion, sedimentation aspects of drainage, costs, planning policies and the law.

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

CEP491 MUNICIPAL ENGINEERING PRACTICE
A prescribed program of individual supervised study in a selected area within the field of municipal engineering, involving one or more major assignments together with appropriate tutorials.

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

CEP998 PROJECT B
The student is required to investigate in depth a shorter approved topic than that required in CEP999. The results will be presented in a major formal report.

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

CEP999 PROJECT A
The student is required to investigate in depth a substantially approved topic within the range of civil engineering practice and to carry out design, computing, model or experimental design and construction, experimental work and testing. The results will be presented in a major formal report.

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

CEP120 CIVIL SYSTEMS I
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

CEP135 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

CEP180 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

CEP190 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

CEP195 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

CET266 CIVIL OFFICE PRACTICE
Preparation and layout of civil engineering drawings; design office procedures including methods of data manipulation, presentation and checking. Drafting office organisation and management.

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

CET287 CIVIL OFFICE PRACTICE A
Applied civil engineering design drafting/drawing. Use of field data in preparation of plans.

Course: CE21  Prerequisite: MET120  Co-requisite: CET286  Credit Points: 3  Contact Hours: 2 per week
CET306 FIELD PRACTICE 1A
Setting out, as-built surveys and drawings, photography and field sketching; field measurement and sampling in water, soils and materials; implications of field measurements on design and construction.
Course: CET21
Prerequisite: CET365, PST901
Credit Points: 3
Contact Hours: 2 per week

CET365 HYDRAULIC ENGINEERING
Fluids, simple hydrostatics, fundamental characteristics and equations of fluid flow, pipe and open channel flow, hydraulic measurements, Laboratory work on fluid behaviour and instrumentation.
Course: CET21
Prerequisite: CET135
Credit Points: 7
Contact Hours: 3 per week

CET387 CIVIL ENGINEERING DRAFTING A
Municipal engineering design drawings for road works. Storm water drainage designs and drawings.
Course: CET21
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: CET21
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: CET21
Prerequisite: CET120
Credit Points: 7
Contact Hours: 3 per week

CET435 CONCRETE PRACTICE
Course: CET21
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: CET21
Prerequisite: Student must be in final year.
Credit Points: 3
Contact Hours: 2 per week

CET565 ROAD & DRAINAGE ENGINEERING
Road construction and maintenance, pavement types, surfacing, maintenance, design and construction. Road drainage principles, design and construction of urban and rural culverts, urban stormwater drainage.
Course: CET21
Prerequisites: CET365, CET645, CET815
Credit Points: 7
Contact Hours: 3 per week

CET585 CIVIL ENGINEERING DRAFTING
Preparation of municipal engineering drawings including roadworks and stormwater drainage. State and local authority standards. Projects involve varying amounts of design computations and computer usage. Quantity take-off, bills of quantities, cost estimates and cross referencing between drawings, bills of quantities and specifications.
Course: CET21
Prerequisite: CET286 Co-requisite: CET565
Credit Points: 7
Contact Hours: 3 per week

CET598 PROJECT 2
An individually designed program including designs, reports and investigations of sanitary engineering.
Course: CET21
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: CET21
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: CET21
Prerequisite: CET894
Credit Points: 7
Contact Hours: 3 per week

CET655 CONCRETE & STEEL DESIGN
Course: CET21
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: CET21
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: CET21
Credit Points: 7
Contact Hours: 3 per week

CET707 MUNICIPAL ENGINEERING
Structures and function of local authorities, legislation, municipal road and street construction, design of offices, traffic management, parking, town planning and subdivision, solid waste management, building practice, other municipal engineering aspects, field trip to local authority facilities.
Course: CET21
Prerequisite: CET815
Co-requisites: CET565, CET775
Credit Points: 7
Contact Hours: 3 per week

CET708 SPECIFICATIONS & ESTIMATES
Course: CET21
Credit Points: 7
Contact Hours: 3 per week

CET735 ADVANCED LABORATORY TESTING I
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: CET21
Credit Points: 7
Contact Hours: 3 per week

Course: CE21  Prerequisite: CET190  Credit Points: 7  Contact Hours: 3 per week

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

Course: CE21  Prerequisite: CET365  Credit Points: 7  Contact Hours: 3 per week

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  Prerequisite: CET365, CHA140  Credit Points: 7  Contact Hours: 3 per week

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

Course: CE21  Prerequisite: CET365, CET775, CHA140  Credit Points: 7  Contact Hours: 3 per week

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

Course: CE21  Prerequisite: CET286, CET385, CET655, MET120  Credit Points: 7  Contact Hours: 3 per week

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

Course: CE21  Prerequisite: 72 credit points.  Credit Points: 7  Contact Hours: 3 per week

See CET703.

Course: CE21  Prerequisite: 72 credit points.  Credit Points: 7  Contact Hours: 3 per week

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

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

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

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

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

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

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

Course: CE21  Prerequisite: CET286, MET120  Co-requisites: CET385, CET655, CET787  Credit Points: 7  Contact Hours: 3 per week


Course: CE21  Co-requisite: PST901  Credit Points: 3  Contact Hours: 2 per week

Common elementary laboratory apparatus, equipment and reagents; on completion the student should be able to handle, correctly and safely, all the basic pieces of laboratory equipment and be familiar with their main functions and limitations.

Course: SC10  Credit Points: 8  Contact Hours: 3 per week

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.

Course: CB21, EE21, SC10
Credit Points: 8
Contact Hours: 3 per week

■ CHA218 ANALYTICAL CHEMISTRY 1
A lecture and laboratory program on the theory and techniques of titrimetric and gravimetric analysis.
Course: SCI10
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: SCI10
Prerequisite: CHA111
Credit Points: 8
Contact Hours: 3 per week

■ CHA230 CHEMISTRY OF INORGANIC MATERIALS
An extension of the basic atomic and molecular theory introduced in CHA145 to include atomic orbitals, orbital shapes and quantum numbers; radioactive breakdown and applications; bonding, molecular orbitals; hybridisation, shapes of simple molecules relating to their properties; simple coordination chemistry. The occurrence, extraction/manufacture, properties and uses of the elements and the important inorganic compounds derived from a selection of members of the chemical groups.
Course: SCI10
Prerequisite: CHA145
Credit Points: 4
Contact Hours: 2 per week

■ CHA240 INSTRUMENTAL TECHNIQUES
An overview of the principles and practice of modern instrumental analysis, including the nature of electromagnetic radiation and its interaction with matter; use of visible, UV and IR spectroscopy; emission and absorption phenomena; chromatographic techniques and electroanalytical methods.
Course: SCI10
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: SCI10
Prerequisite: CHA145
Credit Points: 8
Contact Hours: 3 per week

■ CHA270 PHYSICAL CHEMISTRY 1
The first part of an integrated syllabus of physical chemistry in the Associate Diploma; the fundamental aspects of chemical energetics, solution chemistry, equilibria; practical applications.
Course: SCI10
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: SCI10
Prerequisite: CHA218, CHA240
Co-requisite: CHA319
Credit Points: 8
Contact Hours: 4 per week

■ CHA319 ANALYTICAL CHEMISTRY 2
Lectures and practical work are designed to develop further the basic titrimetric and gravimetric analysis principles introduced in CHA218. The program will feature the analysis of commercial materials with emphasis on sample dissolution techniques.
Course: SCI10
Prerequisite: CHA218
Credit Points: 6
Contact Hours: 3 per week

■ CHA320 CHEMICAL PROCESS PRINCIPLES 1
Chemical reactors both homogeneous and heterogeneous, unit operations: transport preparation and separation of materials and material and energy balances in chemical processes.
Course: SCI10
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: SCI10
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: SCI10
Prerequisites: CHA230, CHA250, CHA320
Credit Points: 8
Contact Hours: 3 per week

■ CHA370 PHYSICAL CHEMISTRY 2
The second part of the integrated syllabus of physical chemistry of the Associate Diploma: chemical kinetics, surface chemistry and elementary electrochemistry.
Course: SCI10
Prerequisite: CHA270
Credit Points: 6
Contact Hours: 2 per week

■ CHA410 COMPUTERS IN CHEMISTRY
The use of computers in various aspects of the chemical industry, both in laboratory and plant. The different approaches to laboratory automation and a detailed study of computer control in a selected industry. Field trips also are included.
Course: SCI10
Prerequisite: CSA259
Credit Points: 8
Contact Hours: 3 per week

■ CHA442 INTRODUCTION TO OCCUPATIONAL SAFETY
Basic first aid relevant to laboratory, plant and field situations; principles and practice of safe handling of common laboratory chemicals; safety aspects of laboratory design.
Course: SCI10
Credit Points: 4
Contact Hours: 2 per week
CHA520 CHEMICAL PROCESS PRINCIPLES 2
A lecture and laboratory course which deals with measurement systems, the principles of process control and applications in the chemical industry.
Course: SC10  Prerequisite: CHA320
Credit Points: 8  Contact Hours: 3 per week

CHA550 ORGANIC CHEMISTRY 3
The chemistry and uses of organic compounds encountered in industry, such as agricultural chemicals, fats and oils, waxes, detergents, dyestuffs, drugs, explosives, fibres, adhesives and cellulose derivatives.
Course: SC10  Prerequisite: CHA350
Credit Points: 8  Contact Hours: 3 per week

CHA580 FOOD CHEMISTRY 1
The basic chemical components of food, fats and oils, proteins, carbohydrates, vitamins and minerals; factors affecting quality such as texture, flavour and colour. Measurements of food quality. A major assignment related to the dairy industry is incorporated.
Course: SC10  Prerequisite: CHA318, CHA240, CHA250
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 sugars products.
Course: SC10  Prerequisite: CHA318
Credit Points: 8  Contact Hours: 3 per week

CHA644 PROCESS MEASUREMENT & MONITORING 1
A study of the physical and chemical measurements involved in the analysis of raw and potable waters; and the determination of organic and microbiological pollution. Emphasis is placed on sampling and sample preservation laboratory techniques, interpretation of results and the significance of the measured parameters in the operation and control of water and wastewater treatment plants.
Course: CE21  Prerequisite: CET365, CET775
Co-requisite: CHA140
Credit Points: 7  Contact Hours: 3 per week

CHA670 PHYSICAL CHEMISTRY 3
The third part of the integrated syllabus of physical chemistry of the Associate Diploma; covers the areas of applied physical chemistry; corrosion, distillation and extraction. Practical applications are emphasised.
Course: SC10  Prerequisite: CHA370
Credit Points: 8  Contact Hours: 3 per week

CHA680 FOOD CHEMISTRY 2
Advanced chemistry and methods of food processing and preparation. A further major assignment appropriate to the dairy industry is incorporated.
Course: SC10  Prerequisite: CHA580
Credit Points: 8  Contact Hours: 3 per week

CHA744 PROCESS MEASUREMENT & MONITORING 2
The physical and chemical measurements involved in the determination of inorganic and other pollutants; the analysis of sewage and other sludges; and the testing of sewage effluents together with an introduction to specialised analytical techniques including atomic absorption spectrophotometry, chromatography and polarography. Emphasis on sampling and sample preservation laboratory techniques, interpretation of results and the significance of the measured parameters in the operation and control of water and wastewater treatment plants.
Course: CE21  Prerequisite: CHA644
Credit Points: 7  Contact Hours: 3 per week

CHA844 TRADE WASTE CONTROL
A study of industrial wastes with respect to typical waste characteristics, effects on natural waters, sewers and treatment plants, methods of inhouse treatment and their achievable effluent levels, monitoring techniques, legislation and charging procedures.
Course: CE21  Prerequisites: CET777, CHA744
Credit Points: 7  Contact Hours: 3 per week

CHB001 INTRODUCTORY CHEMISTRY
For students without a pass in Senior Chemistry. Scientific measurement, atomic structure, periodic table, chemical equations, stoichiometry and calculations, chemical bonding, chemical reactivity, acids and bases, redox systems, matter, thermodynamics, enthalpy, heat of reactions, organic chemistry.
Courses: PU49, SC30
Credit Points: 6  Contact Hours: 3 per week

CHB002 INTRODUCTION TO ENGINEERING CHEMISTRY
The foundations of the principles of chemistry; the basic concepts of stoichiometry; properties of the elements of the periodic table; chemical equilibria, acids and bases; offered for engineering students without sound achievement in chemistry and serves as the foundation for CHB344 and CHB346.
Courses: CB42, EE43, ME45
Credit Points: 2  Contact Hours: 1 per week

CHB142 CHEMISTRY 1
Inorganic chemistry: modern atomic theory, electronic configuration of the elements, covalent bonding of simple molecules; Organic chemistry: reactions of the carbon-hydrogen bond, carbon-halogen bond, the carbon-carbon double bond, carbon-carbon triple bond and aromatic substitutions; Physical chemistry: chemical equilibria; equilibria in electrolyte solutions, properties of liquids, phase rule, liquid mixtures and colligative properties.
Courses: LS36, OP42, PU42, PU44, PU45
Incompatible with: CHB182
Credit Points: 12  Contact Hours: 6 per week

CHB173 CHEMISTRY 1A
States of matter: gases, liquids, solids; kinetic theory of gases, real gases; thermodynamics: forms of energy, work and heat; thermochemistry, enthalpies of formation, combination, etc.; thermochemical calculations; entropy, force energy, spontaneity of reactions; equilibria: equilibrium constants, homogeneous and heterogeneous equilibria; ionic equilibria – acids and bases, pH, buffer solutions, acid-base titrations; kinetics: rates of chemical processes, dependence of rate on concentration, order of reaction, integrated rate equations; experimental methods; temperature dependence of rate constant; catalysis; conductance: introduction to electrochemistry; bonding theory and foundations of spectroscopy: quantum theory, classical mechanics; the dynamics of microscopic systems, Schrödinger equation, translational, rotational and vibrational motions; atomic spectra and structure, quantum numbers and orbitals, electron spin.
Course: CH32
Prerequisite: Year 12 Chemistry - Sound Achievement OR Co-requisite: CHB001
Credit Points: 12  Contact Hours: 6 per week
Chemical stoichiometry; thermochromy; atomic structure; chemical bonding; chemical reactions; carbon compounds; states of matter; chemical equilibrium; acids and bases; ions and ionic equilibria.

Prerequisite: Year 12 Chemistry - Sound Achievement OR CHB001.
Credit Points: 12  Contact Hours: 5 per week

Scope and limitation of analytical chemistry; role of analytical chemistry in society and technology; laboratory equipment and safety; chemical safety; types of analyses; analytical methodology; data handling; an overview of advanced analytical techniques.

Course: CH32
Prerequisite: CHB173 or CHB182
Credit Points: 12  Contact Hours: 5 per week

Inorganic chemistry: classification and properties of the elements, shapes of molecules, bonding in solids and coordination chemistry. Organic chemistry: the reactions of alcohols, phenols and ethers, amino compounds, aldehydes, ketones, carbohydrates, the acyl group (carboxylic acids and derivatives), amino acids and proteins, chemical structure, biological activity, and colour in organic compounds. Physical chemistry: the gas laws for ideal and non-ideal systems, first law of thermodynamics and thermochromy, galvanic cells, applications to the determination of pH and potentiometric titrations, and colloids. (Note: credit may not be retained for more than one of these units.)

Courses: LS36, OP42, PU42, PU44
Prerequisite: CHB142
Incompatible with: CHB282
Credit Points: 12  Contact Hours: 6 per week

Builds on the fundamental concepts studied in Chemistry 1B CHB183 and develops a knowledge of organic mechanism as a tool for understanding the nature of organic chemical change; the use of modern spectroscopic techniques in structure elucidation.

Course: CH32
Prerequisite: CHB183
Credit Points: 12  Contact Hours: 5 per week

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

Atomic structure; chemical bonding; thermodynamics; oxidation and reduction; electrochemistry; coordination chemistry; metals, metallurgy, transition elements; silicon, silicates, semiconductors; stereochemistry and optical activity; alcohols, phenols, ethers, amines; aldehydes and ketones, carboxylic acids and functional derivatives of carboxylic acids; infrared spectroscopy.

Courses: ED50, SC30  Prerequisite: CHB182
Credit Points: 12  Contact Hours: 5 per week

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
Prerequisite: CHB173, CHB183, MAB212, PHB122
Credit Points: 12  Contact Hours: 5 per week

Organic chemistry: the reactions of alcohols, phenols and ethers, amino compounds, aldehydes, ketones, carbohydrates, the acyl group (carboxylic acids and derivatives), amino acids and proteins, chemical structure, biological activity, and colour in organic compounds. Physical chemistry: the gas laws for ideal and non-ideal systems, first law of thermodynamics and thermochromy, galvanic cells including applications to the determination of pH and potentiometric titrations, and colloids.

Course: PU43
Prerequisite: CHB142
Incompatible with: CHB242, CHB282
Credit Points: 8  Contact Hours: 4 per week

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

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

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

Courses: CH32, ED50, SC30
Prerequisite: CHB253, CHB282 or CHB283
Credit Points: 12  Contact Hours: 5 per week

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; E1/H+ plots; bioinorganic chemistry - biological significance of ligands and metals; HSAB theory; complex equilibria; applications with examples of selected bioinorganic systems - proteins, haem, etc.; chemistry of lanthanides and actinides; chemistry of selected non-metals; chemistry of precious metals.

Courses: CH32, ED50, SC30
Prerequisite: CHB282 or CHB283
Credit Points: 12  Contact Hours: 5 per week
CHB344 ENGINEERING CHEMISTRY M
Specialised chemistry unit designed for mechanical engineers; includes fuels and their combustion; the chemistry of lubricants and lubrication; corrosion and its prevention and water treatment processes.
Course: ME45
Prerequisite: CHB302 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 chemical equilibrium in solids handling; crushing and grinding; classifica­tion and analysis of organic compounds; rearrangement reactions which involve 1, 2-shifts to many many
Course: CE42
Prerequisite: CHB302 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-halogen; 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.
Course: 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; conjugation, cumulation, a-halogen, 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.
Course: CH32
Prerequisites: CHB313, CHB323
Credit Points: 12 Contact Hours: 5 per week

CHB372 PHYSICAL CHEMISTRY 3
Equilibrium electrochemistry: models of the electrified interface, absolute electrode potential. Ionic absorption, electrocapillary curves, surface ex­cess, molecular adsorption; phase rule: derivation of phase rule, applications to one component, binary, condensed and ternary systems; thermodynamics: second and third laws; free energy and chemical equi­librium ideal systems; chemical kinetics: order and molecularity of reactions, temperature effects. Reaction rate theories, complex reactions; bonding theory: orbitals and energies of the hydrogen atom; many electron atoms; molecular orbitals; spectroscopy; interaction of radiation with matter. Principles, instrumen­tal design and applications of rotational, vibrational and electronic spectroscopy.
Course: ED50, SC30
Prerequisite: CHB282 or CHB283
Credit Points: 12 Contact Hours: 5 per week

CHB373 PHYSICAL CHEMISTRY 3A
Equilibrium electrochemistry; applied phase chemistry; applied thermodynamics: 2nd and 3rd laws; kinetics: complex reactions, mechanisms; spectroscopy: interaction of radiation with matter.
Course: CH32

Prerequisite: CHB282 or CHB283
Credit Points: 12 Contact Hours: 5 per week

CHB382 CHEMISTRY 3
Biochemical relevance of pH; instrumental analytical techniques used in the pathology laboratory; the co­ordination chemistry of biological systems: dyes and stains; thermodynamics and kinetics.
Course: LS36
Prerequisites: CHB142, CHB242
Credit Points: 4 Contact Hours: 2 per week

CHB402 CHEMICALS IN SOCIETY
This unit provides students with an introduction to the role of Chemistry and its products in our society. Historical and societal aspects are incorporated in the study of a number of relevant applications of chemistry in consumer products. Topics include: chemical hazards, drugs and medicine, water purity, food chemistry, synthetic substances and resources and the environment.
Course: ED50 only
Prerequisite: CHB182
Co-requisite: CHB282
Credit Points: 12 Contact Hours: 5 per week

CHB411 ENVIRONMENTAL ANALYTICAL CHEMISTRY
Lectures and practical in the biological sciences dealing with the principles and application of sampling, and electrometric/spectroscopic/flame separation the analysis of materials from the biosphere.
Course: PU42, PU44, SC30
Prerequisite: CHB242 or CHB282
Incompatible with: A major in Chemistry or CHB313
Credit Points: 8 Contact Hours: 4 per week

CHB423 CHEMICAL TECHNOLOGY 4
The chemical industry; process flowsheets; sources and interpretation of data; industrial stoichiometry; material and energy balance calculations for both principles of particle mechanics and their applications in solids handling, crushing and grinding; classification; solid-liquid separation operations; liquid-solid contacting operations; fluid mechanics and their applications in storage, transport, mixing and dispersing operations; liquid-liquid extraction operations.
Course: CH32, ED50, SC30
Prerequisite: CHB282
Credit Points: 12 Contact Hours: 5 per week

CHB453 ORGANIC CHEMISTRY 4
A critical analysis of the chemistry of five- and six-membered heterocyclic systems with a single hetero atom; preparation, stability and applications to organo synthesis of the main group organometallic com­pounds; rearrangement reactions which involve 1, 2-shifts to electron-deficient elements; principles and practice of thin-layer chromatography; gas-liquid and high-performance liquid chromatography in the separation and analysis of organic compounds.
Course: CH32, ED50, SC30
Prerequisite: CHB373 or CHB372
Credit Points: 12 Contact Hours: 5 per week

CHB466 ENVIRONMENTAL CHEMISTRY
Course: CE42
Credit Points: 6 Contact Hours: 3 per week
CHB473 PHYSICAL CHEMISTRY 4
Thermodynamics; surface chemistry; dynamic electrochemistry; chemical kinetics.
Courses: CH32, ED50, SC30
Prerequisite: CHB372 or CHB373
Credit Points: 12
Contact Hours: 5 per week

CHB513 INSTRUMENTAL ANALYSIS 5
Quality assurance, data analysis, trace analysis, methods reliability, accuracy, precision, sensitivity, selectivity, limit of detection, comparative studies; atomic spectroscopy, theory and instrumentation; mass spectrometry, introductory theory and instrumentation; liquid chromatography, practices and principles.
Courses: CH32, SC30
Prerequisites: CHB313, CHB372, CHB373, CHB453
Credit Points: 12
Contact Hours: 5 per week

CHB523 CHEMICAL TECHNOLOGY 5
Principles of heat transfer and their applications in heat exchange and evaporation operations; distillation; principles of mass transfer in gas absorption psychrometric, drying and membrane operations; sources of chemicals, petrochemical processes, hydrogen economy; chemical engineering process analysis and its applications to industrial processes; topics include: equilibrium thermodynamics and kinetics, ideal reactors, reactor design.
Courses: CH32, SC30
Prerequisites: CHB423, CHB473
Credit Points: 12
Contact Hours: 5 per week

CHB533 INORGANIC CHEMISTRY 5
Chemistry of selected metalloids; organometallic chemistry; inorganic reaction mechanisms; special interest metals; development of principles of group theory; symmetry operations and inorganic IR spectra; UV-visible spectra; bioinorganic chemistry of special molecules; lasers and inorganic chemistry.
Courses: CH32 SC30
Prerequisite: CHB333
Credit Points: 12
Contact Hours: 5 per week

CHB553 ORGANIC CHEMISTRY 5
A course in advanced organic chemistry which emphasises the solution of synthetic problems. Topics may include principles of retrosynthesis, concepts of functional group equivalence and interconversions, disconnections, synths, strategies and tactics, selectivity and control, protecting groups. Synthesis of the major classes of organic compounds, including difunctional compounds, by carbon-carbon bond formation. Selectivity in oxidation and reduction. Introduction to the use of computers in synthesis design. Sources of raw materials for organic chemicals preparation of synthesis ('syn') gas, chemical conversions using syn gas, reactions of alkenes and aromatic feedstocks to produce common chemicals, preparation and chemistry of polymers, the industrial preparation of selected pharmaceuticals.
Courses: CH32, SC30
Prerequisite: CHB453
Credit Points: 12
Contact Hours: 5 per week

CHB573 PHYSICAL CHEMISTRY 5
Kinetics; colloid chemistry; phase equilibria; quantum mechanics; statistical mechanics.
Courses: CH32, SC30
Prerequisite: CHB473
Credit Points: 12
Contact Hours: 5 per week

CHB603 PROJECT
See CHB601.
Courses: CH32, SC30
Prerequisites: One of CHB573, CHB553 or CHB533 + CHB513 or CHB523
Credit Points: 12
Contact Hours: 5 per week

CHB613 INSTRUMENTAL ANALYSIS 6
Instrumental analysis including the principles and practices of XRF, thermal analysis, electrometric methods including voltammetry, amperometry; data acquisition, methods of automated analysis, flow-based analysers, robotics, computer networks, laboratory information management systems, chemical databases; chemometrics, optimisation techniques, multiple reflections, advanced quality assurance, interlaboratory 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
Overview of molecular cell biology and chemistry; biochemistry of proteins and cells; amino acids; peptides and proteins; conformation, structure, reactivity of peptides, proteins and enzymes; protein engineering; enzyme reaction mechanisms; bioorganic chemistry including structural, spectroscopic, and functional properties of metallo-proteins; catalytic roles in metallo-biochemistry; bioenergetics, biosynthesis and biotransformation.
Course: CH32
Prerequisite: CHB553
Credit Points: 12
Contact Hours: 5 per week

CHB663 ENVIRONMENTAL CHEMISTRY
Toxicology; water quality, its assessment; modeling reactions in water bodies; air quality; criteria pollutants and health effects; indoor pollutants; monitoring; dispersion of pollutants; control techniques.
Courses: CH32, SC30
Prerequisite: CHB372 or CHB373
Credit Points: 12
Contact Hours: 5 per week

CHB693 MATERIALS CHEMISTRY
Properties of materials; metals and alloys; metallic corrosion; crystalline materials; cements, ceramics and glasses; polymers.
Courses: CH32, SC30
Prerequisite: CHB473
Credit Points: 12
Contact Hours: 5 per week

CHB700 RESEARCH PROJECT
All students undertaking Honours are required to select and undertake, in consultation with a supervisor, a substantial project in an appropriate area. Each project will be assessed on the basis of an extensive written report and an oral presentation.
Course: SC60
Credit Points: 48
■ CHB701 COMPLEMENTARY STUDIES FOR CHEMISTS

Studies may include a selection from: participation in research seminars; oral communication skills; written communication skills; formal coursework in occupational health and safety, scientific and industrial ethics, development of research management strategies; and coursework material from other accredited courses as directed by the course coordinator and Head of School.

Course: SC60
Credit Points: 8

■ CHB880 ADVANCED TOPICS IN CHEMISTRY 1

See CHB880.

Course: SC60
Credit Points: 24  Contact Hours: 6 per week

■ CHN701 TOPICS IN ADVANCED CHEMISTRY 1

A series of lectures and/or reading program and/or selected laboratory exercises designed to provide the student with the appropriate theoretical and practical background, at an advanced level, necessary for the completion of a research program.

Course: SC80
Credit Points: 12

■ CHN704 RESEARCH TECHNIQUES

Development of theoretical and laboratory skills required to enable rapid progress with the research proposed for Stage 2 of the program.

Course: SC80
Credit Points: 44

■ CHN710 CHEMICAL INSTRUMENTATION

Chemical instrumentation and electronics required for advanced civil operation of scientific instrumentation.

Course: SC80
Credit Points: 12

■ CHN720 CHEMOMETRIC

The concepts of chemical data acquisition and interpretation; computational methods and existing software packages for statistical analysis in chemistry; statistical methods in quality and process control; sampling procedures; multivariate analysis and optimisation techniques.

Course: SC80
Credit Points: 12

■ CHN730 ADVANCED PHYSICAL METHODS IN CHEMISTRY

The theoretical and practical principles of selected physical methods in chemistry.

Course: SC80
Credit Points: 12

■ CHN740 LABORATORY TECHNIQUES FOR PREPARATIVE CHEMISTRY

The experimental techniques for the preparation and isolation of pure substances.

Course: SC80
Credit Points: 12

■ CHN701 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 modeling; aeration and agitation; sterilisation; bioreactors; and scale-up. Other topics are selected from animal cell culture, protein biotechnology, downstream processing and bio-process economics.

Courses: LS65, LS70, SC60, SC80
Credit Points: 12  Contact Hours: 5 per week

■ CHP320 DOWNSTREAM PROCESSING

Introduction to the fundamental problems of separation operations important to the recovery of commercial products from biological processes. Topics include: cell recovery and disruption, membrane technology, chromatographic techniques, electrochemical separation and new bio-separation techniques. Instruction includes case studies, and Aspen bioprocess simulation.

Course: LS70
Credit Points: 12  Contact Hours: 5 per week

■ CHP691 ENVIRONMENTAL CHEMISTRY

The nature and composition of natural and polluted waters; metal ions, gases, redox equilibria; chemical and microbial transformation of chemicals in water; water pollution and trace levels of substances in water. Environmental chemistry of soils; acid-base equilibria; and ion-exchange; chemicals in soil. The nature and composition of the atmosphere; chemical and photochemical reactions in the atmosphere; the oxides of carbon, sulphur and nitrogen in the atmosphere; organic pollutants and photochemical smog; particular matter. Water and atmospheric monitoring.

Courses: CE63, CE74
Prerequisites: CHB551, CHB571
Credit Points: 8  Contact Hours: 2 per week

■ CHS200 CHEMISTRY

Introduction to general and organic chemistry; atoms, molecules, ions; chemical bonding; chemical reactions and equations; solution chemistry; acids, bases and chemical equilibrium; gases; electrochemistry and nuclear chemistry; basic chemistry of organic compounds, aliphatic and aromatic.

Course: BN10
Credit Points: 6  Contact Hours: 3 per week

■ CNB005 MEASUREMENT OF CONSTRUCTION 1

Introduction to Quantity Surveying including the work of the Quantity Surveyor and his relationship with other members of the building industry. A study of measurement 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 roofer, bricklayer, plasterer, tiler and terrazzo worker, joiner, ironmonger, glazier and painter.

Courses: CN31, CN33
Prerequisites: CNB151, CNB154
Credit Points: 6  Contact Hours: 3 per week

■ CNB006 MEASUREMENT OF CONSTRUCTION 2

The process and methods of taking off and billing quantities in the trades: excavator, concreter, bricklayer and blocklayer, and carpenter.

Courses: CN31, CN33
Prerequisite: CNB005
Credit Points: 6  Contact Hours: 3 per week

■ CNB009 MEASUREMENT OF CONSTRUCTION 3

Detailed study and instruction in the process and methods of taking off and billing quantities in more
complex building solutions in the trades excavator, concreter, bricklayer and blocklayer, underpinning, pier and beam RC frame and suspended slabs.

**Courses:** CN31, CN33  
**Prerequisites:** CNB006, CNB254  
**Credit Points:** 4  
**Contact Hours:** 2 per week

### CNB010 MEASUREMENT OF CONSTRUCTION 1

Detailed study and instruction in the process and methods of taking off and billing quantities in the trades asphalters and built up roofing, demolisher, mason, structural steel and precast concrete.

**Courses:** CN31, CN33  
**Prerequisite:** CNB006  
**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  
**Prerequisite:** CNB009  
**Credit Points:** 4  
**Contact Hours:** 2 per week

### CNB014 BUILDING SERVICES 2 – ELECTRICAL

Electricity supply and distribution; high and low tension supply; measuring current, cut-outs, intake and distribution; internal distribution; large supply installation, sub-station; fuse and switch gear; wiring systems and circuits; conduit and cables; joint boxes. Multi- box switching; heading circuits; earth connections, protection of conduit, conductor and accessories against mechanical damage, weather dampness, fire, electric shock; fibre optic cables in building supervisory systems; assessment of maximum demand and voltage drop; earth tests; tools and handling equipment, fastenings and supports; measurement, control and lighting equipment; accessibility and protection; domestic, industrial and commercial appliances; testing and fault locating.

**Courses:** CN31, CN33  
**Prerequisite:** CNB253  
**Co-requisite:** CNB254  
**Credit Points:** 4  
**Contact Hours:** 2 per week

### CNB03 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  
**Prerequisite:** CNB253  
**Co-requisite:** CNB254  
**Credit Points:** 4  
**Contact Hours:** 2 per week

### CNB04 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:** CNB254  
**Credit Points:** 4  
**Contact Hours:** 2 per week

### CNB131 MEASUREMENT OF CONSTRUCTION 1A

Subject description as for CNB005.

**Courses:** CN31, CN33  
**Prerequisite:** CNB151  
**Credit Points:** 6  
**Contact Hours:** 3 per week

### CNB145 STRUCTURES 1

The needs of constructors; statics; bending theory for simple and continuous beams, approximate analysis methods; properties of sections; load transfer; design of simple timber and steel beams and columns for model projects; W33 framing manual for member sizing, tiedown and timber connection.

**Courses:** CN31, CN33  
**Co-requisite:** CNB151  
**Credit Points:** 4  
**Contact Hours:** 2 per week

### CNB146 STRUCTURES 2

Concepts of masonry design; design theory for reinforced concrete; design of simple concrete footings, slabs of ground, beams, columns, suspended slabs; design of slab for Construction 3 project; concept of PSC design; design of simple steel connections.

**Courses:** CN31, CN33  
**Prerequisite:** CNB145  
**Co-requisite:** CNB154  
**Credit Points:** 4  
**Contact Hours:** 2 per week

### CNB151 CONSTRUCTION 1

Materials, methods and construction in single and two-storey domestic structures, site information and investigation, foundations, columns, upper floors, external and internal walls, finishes, etc. Environmental, structural and aesthetic requirements, accounting for costs, dimensional requirements, statutory regulations, life and adaptability and manufacturing and erection requirements; drafting typical details and working drawings; environmental science, comfort situations in varying climatic zones and their effects.

**Courses:** CN31, CN33  
**Co-requisites:** CNB103, CNB145  
**Credit Points:** 12  
**Contact Hours:** 6 per week

### CNB154 CONSTRUCTION 2

Continuation of CNB151; properties of materials, and behaviour in manufacturing and construction, effect on form and structure; workshop and studio working details of building components, coordination of building elements.

**Courses:** CN31, CN33  
**Prerequisite:** CNB151  
**Co-requisites:** CNB104, CNB146  
**Credit Points:** 14  
**Contact Hours:** 7 per week

### CNB161 BUILDING STUDIES 1

The uses of materials and construction in single and two-storey domestic structures – site information, substructure, columns, upper floors, external and internal walls, finishes, etc. Environmental, structural, aesthetic, cost, statutory, dimensional, manufacturing and erection requirements. Factors in creating comfort situations in various climatic zones and their effect on building construction. Draughting: preparation of typical details and working drawings. Physical and chemical properties of materials such as timber, steel, concrete and clay products and how they affect their construction and structural qualities.

**Course:** CN32  
**Credit Points:** 14  
**Contact Hours:** 5.5 per week

### CNB162 BUILDING STUDIES 2

The uses of materials and construction in single and two-storey domestic structures under the elements: staircase, roof, internal and external walls, windows, doors, finishes; fireplaces. Environmental, structural and aesthetic requirements, taking account of constraints such as costs, dimensional requirements, statutory regulations, life and adaptability and manufacturing and erection requirements. Draughting: preparation of construction details and drawings.

**Courses:** CN31, CN32  
**Prerequisite:** CNB161  
**Credit Points:** 9  
**Contact Hours:** 3.5 per week
■ CNB166 URBAN ECONOMICS
Economic processes and spatial context of the city; differentiation of competing land use; location decisions in the urban market; intra-urban location; market failures, externalities and government involvement; transport in the urban environment, urban management; urban issues. Economics of the Australian construction industry.
Course: CN32
Credit Points: 4  Contact Hours: 2 per week

■ CNB171 CONSTRUCTION 1
Materials, methods and construction in single and two-storey domestic structures, site information and investigation, foundations, columns, upper floors, external and internal walls, finishes, etc. Environmental structural and aesthetic requirements accounting for costs, dimensional requirements, statutory regulations, life and adaptability, and manufacturing and erection requirements; draughting typical details and working drawings; environmental science, comfort situations in varying climatic zones and their effects.
Course: PU42
Credit Points: 12  Contact Hours: 6 per week

■ CNB172 CONSTRUCTION 2
Continuation of CNB171. The properties of materials and how they behave in the manufacturing and construction process and how these considerations relate to form and structure. It includes a studio and practical back-up to the lecture program. Students are required to prepare working details of building components, coordination of building elements for specific building use.
Course: PU42  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 durability; 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, tie-down 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

■ CNB243 LAW 1 – BUILDING ACTS & REGULATIONS
Passing and resolving Acts, regulations and by-laws; knowledgeable site representatives; study of building code of Australia, Queensland Home Building Code and Standard Building by-laws which control the design, construction and building works in Queensland; emphasis on building codes in the by-laws; a study of the Health Act, Factories and Shops Act, Liquor Act, Acts Interpretation Act, Fire Safety Act and Town Planning acts.
Courses: CN31, CN33, PU42  Co-requisite: CNB254
Credit Points: 5  Contact Hours: 2 per week

■ CNB245 MEASUREMENT OF CONSTRUCTION 1B
Methods of taking off and billing quantities in the trades of excavator, concreter, bricklayer, blocklayer and carpenter for simple building.
Courses: CN31, CN33  Co-requisite: CNB254
Prerequisites: CNB131, CNB151, CNB154
Credit Points: 6  Contact Hours: 4 per week

■ CNB246 MEASUREMENT OF CONSTRUCTION 2B
Methods of taking off and billing quantities in more complex building in the trades excavator, concreter, bricklayer, blocklayer in simple basement, underpinning, pier and beam, RC frame and suspended slab; taking off and billing in the trades asphalt, built-up roofing, demolition, mason, structural steel and precast concrete.
Courses: CN31, CN33  Co-requisite: CNB254
Prerequisites: CNB146, CNB245, CNB253
Credit Points: 8  Contact Hours: 4 per week

■ CNB247 MATERIAL SCIENCE 3
Atomic structure and bonding and its effects on a material's engineering property; elementary metallurgy of iron and steel; non-ferrous metals and alloys; joining of metals, fatigue, creep, brittle and ductile fracture, corrosion and protection; properties, manufacture, use and analysis of fibrous cement, wood products, ceramics, polymers, paints, sealants and mastic products; investigation into the material's strength, density, hardness, porosity, plasticity, elasticity, deterioration, optical, electrical, thermal and acoustic properties.
Courses: CN31, CN33  Co-requisite: CNB254
Prerequisites: CNB103, CNB104
Credit Points: 4  Contact Hours: 2 per week

■ CNB253 CONSTRUCTION 3
Study of industrial and multi-storey residential buildings; management, planning, and coordination of construction, site layout, site establishment and material handling processes; draughting and detailed drawings, site visits and/or workshop.
Courses: CN31, CN33  Co-requisites: CNB247, CNB259
Prerequisites: CNB103, CNB104, CNB154
Credit Points: 10  Contact Hours: 5 per week

■ CNB254 CONSTRUCTION 4
An extension of CNB253, dealing with multi-storey commercial buildings.
Courses: CN31, CN33  Prerequisite: CNB253
Credit Points: 12  Contact Hours: 6 per week

■ CNB259 STRUCTURES 3
Portal behaviour; plastic versus elastic design; structural bracing; truss analysis; stability of structures during construction; stability of cranes, loads in lifting
systems; unbalanced loads during construction; stability of marine equipment; stability of multi-storeyed buildings; loading and design of simple retaining structures.

**Courses:** CN31, CN33  
**Co-requisite:** CNB253  
**Prerequisites:** CNB103, CNB104, CNB145, CNB146  
**Credit Points:** 4  
**Contact Hours:** 2 per week

**CNB261 BUILDING STUDIES 3**
The materials and construction of a range of structures from industrial single to multi-storeyed 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 aging and problems of cleaning, repair and maintenance.

**Course:** CN32  
**Prerequisite:** CNB162  
**Credit Points:** 9  
**Contact Hours:** 3 per week

**CNB262 BUILDING STUDIES 4**
An extension of CNB261, dealing with multi-storeyed 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**

**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**
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:** 2 per week

**CNB341 BUILDING & CIVIL ENGINEERING CONSTRUCTION**
Large project bulk excavation, earth and rock retaining systems; rock excavation and explosive handling; dewatering; pile driving, bored pier and special foundation construction; demolition of structures; roadworks, techniques, stabilised construction, surface sealing and associated bridge construction; falsework and temporary works.

**Courses:** CN31, CN33  
**Prerequisite:** CNB254  
**Credit Points:** 4  
**Contact Hours:** 2 per week

**CNB342 LAW 2 – PRINCIPLES & PROPERTY**
Legal principles and process, the legal system and process; sources and divisions of the law; rules of precedence; interpretation of statutes and regulations; legal practice and procedure; law of property, ownership and possession, estates and interests in land; easements, rights and restrictive covenants; party walls, boundary walls, fences and encroachments.

**Courses:** CN31, CN32, CN33  
**Credit Points:** 3  
**Contact Hours:** 1.5 per week

**CNB343 ECONOMICS OF THE CONSTRUCTION INDUSTRY**
Economics and applied economics; features of the macroeconomy; demand, supply, prices and stocks; market structures, competition, collusion, integration and concentration; real property markets, tenure, markets and sub markets; construction and housing industries composition and characteristics; demand for dwellings, the deposit gap, public housing, rental markets; pricing mechanism, application to land, contract and speculative projects, etc.; cost analysis, cost components in housing, problems of rising costs and time delays; finance industries, types and use of finance, use of gearing, risk considerations, cash flow; failure of developer and builder firms.

**Courses:** CN31, CN33  
**Credit Points:** 4  
**Contact Hours:** 2 per week

**CNB347 HYGIENE & SANITATION**
A study of macro services to the community including water supply, sewerage, power, gas, telephone and other public services. Requirements of headworks and reticulations. A study of sanitation, septic tanks, absorption and transpiration beds, stormwater and sewerage disposal and garbage and refuse disposal. Hydraulic engineering services associated with buildings. Water supply (including fire fighting and hot water), sewerage and sanitary plumbing with a study of relevant Acts and laws, including sizing and testing of main and gravity-fed services.

**Courses:** CN31, CN33, PU42  
**Credit Points:** 4  
**Contact Hours:** 2 per week

**CNB362 PROPERTY AGENCY**
Characteristics of the construction methods 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  
**Co-requisite:** CNB440  
**Credit Points:** 4  
**Contact Hours:** 2 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.

**Courses:** CN32  
**Prerequisite:** CNB363  
**Credit Points:** 8  
**Contact Hours:** 3 per week

Courses: CN32, PS47
Credit Points: 9
Contact Hours: 3 per week

Budgeting and cost accounting, the production function, decision and control aspects of production, cost accounting, cost flows, cost types, cost classification, costing systems, standard costing and variance analysis, flexible budgets and budgetary control, performance and evaluation. Company finance: objectives of the finance function, use of financial indicators, debt equity sources of funds, financial versus capital structure, financial risk and gearing, cost of capital. Cash flow management: decision making using cash flow management techniques viz purchase versus lease, etc. Working capital management and short-term investment criteria: Capital budgeting for an ongoing business. Project sorting and budgeting.

Courses: CN32, PS47
Prerequisite: CNB367
Credit Points: 8
Contact Hours: 3 per week

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, storied 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, CNB540
Credit Points: 6
Contact Hours: 2 per week in Semester 1, 1 per week in Semester 2

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

More advanced management principles and their application to site administration and management.

Courses: CN31, CN33
Co-requisite: CNB253
Credit Points: 4
Contact Hours: 2 per week
Preparation of bills of quantities using computer

Courses: CN31, CN33
Co-requisite: CNB246
Prerequisites: CNB006, CNB245
Credit Points: 5  Contact Hours: 2.5 per week

CNB451 COMPUTER SOFTWARE APPLICATIONS I
Preparation of bills of quantities using computer software packages; hands-on experience in set-up of base accounts, 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  Prerequisite: CNB246, ISB180
Credit Points: 4  Contact Hours: 2 per week

CNB452 COMPUTER SOFTWARE APPLICATIONS 2
Cost plan/estimates using computer software packages, including set-up of base accounts, parameter specifications; elemental and detailed estimate measurement; editing, correction and data manipulation; report generation and formatting; development of labour constants, standard rates and items; pricing, tendering, spreadsheet application; contract administration, variation control, rise and fall of final accounts; progress payments; cash flow forecasts.
Course: CN33  Prerequisite: CNB647  Co-requisite: CNB648
Credit Points: 4  Contact Hours: 2 per week

CNB461 MEASUREMENT OF CONSTRUCTION 5
Methods of taking off and billing quantities in complex basement and foundation work in the trades underpinning, excavator, concreter, piling systems, structural systems in suspended slabs and walls.
Course: CN33  Co-requisite: CNB341
Prerequisites: CNB246, CNB254
Credit Points: 3  Contact Hours: 1.5 per week

CNB462 MEASUREMENT OF CONSTRUCTION 6
Methods of taking off and billing quantities in the trades plumber and drainer.
Course: CN33  Prerequisite: CNB347
Credit Points: 3  Contact Hours: 1.5 per week

CNB464 VALUATION 5 – RURAL
The physical and economic factors of rural land and its development, land utilisation and degradation, farm management and productivity, factors influencing rural valuations. Rural sales, valuation procedures and inspections. Practical assignments.
Course: CN32  Prerequisite: CNB268
Credit Points: 8  Contact Hours: 3 per week

CNB465 PROPERTY INVESTMENT ANALYSIS 1
Investment principles and strategy, property investment financing and evaluation, property investment market, time value of money concepts, cash flow techniques over time, application of CF techniques to property, feasibility studies, market analysis, risk analysis applied to property, the structure of detailed risk and return viability studies; portfolio theory applied to property; computer applications.
Course: CN32, PS447  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 development. 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
Credit Points: 4  Contact Hours: 2 per week

CNB520 SPECIFICATIONS
Compilation of specifications complementing architectural documents; definitions, objects and purpose of a specification; specification as a contract legal and working document; reference material and specification writing; use of Master specifications; outright and performance specifications and preparation of specified bills of quantities.
Course: CN33  Prerequisite: CNB254
Credit Points: 3  Contact Hours: 1.5 per week

CNB524 MEASUREMENT OF CONSTRUCTION 7
Methods of taking off and billing quantities in the trades of mechanical and electrical engineer, external works and preliminaries.
Course: CN33  Prerequisites: CNB013, CNB014
Credit Points: 4  Contact Hours: 2 per week

CNB526 POST CONTRACT SERVICES 1
Method of adjustment of provisional items, rise and fall entitlements; preparing valuation certificates for
progress payments; cost control techniques used during the construction period; review of applicable contractual clauses; quantity surveying practice, adjustment to the contract sum for variations; feasibility studies; different types of contractual arrangement and selection of contractors.

Course: CN33  Prerequisites: CNB440, CNB540  Credit Points: 5  Contact Hours: 2.5 per week

**CNB527 PM2 – QUANTITATIVE TECHNIQUES**

Operations research techniques applied to the construction industry: linear programming; transportation and assignment methods; dynamic programming; decision trees; descriptive and inductive statistical methods applied to the construction/development industry and research; frequency distributions, measures of central tendency, dispersion; probability of variance, correlation and regression, sampling.

Courses: CN31, CN33  Prerequisites: CNB009, CNB010, CNB246, CNB446  Credit Points: 5  Contact Hours: 2.5 per week

**CNB540 ESTIMATING 2**

Build up of typical rates for demolition, dewatering, piling, underpinning, shoring/formwork to columns, beams, walls and slab systems; reinforcement tying and fixing; concrete placing rates; precast erection; scaffolding, gantries, hoists and cranes, etc.; calculations of preliminaries for country and city projects.

Courses: CN31, CN33  Prerequisites: CNB403, CNB404  Credit Points: 3  Contact Hours: 1.5 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  Prerequisites: CNB440  Credit Points: 3  Contact Hours: 1.5 per week

**CNB545 PM3 – CONSTRUCTION PLANNING TECHNIQUES 1**

Application of construction planning and control techniques; bar charts; critical path networks, arrow and precedence diagrams; updating control and reporting techniques; line of balance.

Courses: CN31, CN33  Co-requisite: CNB540  Prerequisites: CNB246, CNB254, CNB404, CNB446  Credit Points: 7  Contact Hours: 3.5 per week

**CNB548 PM4 – CONSTRUCTION PLANNING TECHNIQUES 2**

Resource management; basic and production planning techniques; planning and control for various types of projects; misuse and abuse of planning and legal problems associated with CPM.

Courses: CN31  Prerequisites: CNB545  Credit Points: 8  Contact Hours: 4 per week

**CNB550 PM5 – PROJECT COST CONTROL**

Financial planning and cost control of the construction project; the development time relationships; cost consequences of design decision; preconstruction budget, budget management, materials control; performance analysis; trend evaluation; forecasting 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.

Course: CN32  Prerequisite: CNB261  Credit Points: 8  Contact Hours: 3 per week

**CNB563 STATUTORY VALUATION**

Capital taxation as it affects property transactions. Valuations for: tax and taxation of capital gains; for statutory rating purposes under relevant legislation appeals procedure; for compulsory acquisition; assessment of compensation resulting from acquisition, resumption and damage. Evidence; the expert witness and professional liability; mock court.

Course: CN32  Prerequisites: CNB363, CNB364  Credit Points: 8  Contact Hours: 3 per week

**CNB564 VALUATION 7**

Valuation of specialist-type properties including licensed premises, hotels, service stations, entertainment and public properties. The valuation of corporate assets for organisational and balance sheet purposes. The future role of the valuer.

Courses: CN32, CN81  Credit Points: 8  Contact Hours: 3 per week

**CNB565 LAND MANAGEMENT**

Land resource management, ecology, regional land systems, coastal and riverine development issues; environmental degradation, land contamination, heritage values and management.

Courses: CN32, PS47  Credit Points: 8  Contact Hours: 3 per week

**CNB567 REAL ESTATE MARKET ANALYSIS**


Courses: CN32, PS47
Credit Points: 4 Contact Hours: 2 per week

■ CNB658 REAL ESTATE PRACTICE
Management concepts in real estate; a business plan: office administration; staff recruitment and training; trust accounts; a composite real estate practice.

Courses: CN32, PS47
Credit Points: 5 Contact Hours: 2.5 per week

■ CNB601 FORMWORK DESIGN & CONSTRUCTION
Formwork building, quality, safety, control; formwork planning, re-use, materials and hardware; cost hire or buy; erecting and stripping; scheduling, loads and pressures on slab, beams, column and wall forms; form design and design tables; formwork drawing and detailing; building and erecting formwork; architectural forms, precast concrete; special techniques and pre-stressing; property formwork systems, simple falsework design.

Courses: CN31, CN81
Prerequisite: CNB146 Co-requisite: CNB253
Credit Points: 4 Contact Hours: 2 per week

■ CNB603 BUILDING MANAGEMENT 5
The construction labor market, supply and demand, awards, conditions and earnings differentials; role of the construction trade unions and negotiations between employer and unions; construction conciliation and arbitration systems; strikes and lockouts; workers compensation acts and regulations etc.

Courses: CN31, CN33
Credit Points: 4 Contact Hours: 2 per week

■ CNB606 PM8 - LAND DEVELOPMENT STUDIES
The structure, operation and control of the land development industry including the political-economic framework; land use plans and approval mechanisms of subdivisible land; financial aspects of development projects, trends and prospects in the housing development industry.

Course: CN31
Prerequisite: CNB623
Credit Points: 4 Contact Hours: 2 per week

■ CNB623 PM6 - BUILDING DEVELOPMENT TECHNIQUES 1
Feasibility, market and location surveys; cost analysis; evaluation techniques, conventional and discounting; cash flows and sensitivity analysis; authorities, development restrictions, services; profitability, commercial assessment, land values, options; purchase, terms, legal documentation, consolidation, surveys; commissioning design team, building use, facilities, quality, staging; instruct consultants, analyse alternatives, value engineering, marketability, income and outgoings; cost and time control from sketch design to completion; tender procedures and negotiations, contract documentation; leasing, brochures, publicity, letting agents, targets; authorization of payments, monthly reports, coordination meetings; financing projects and cash flow.

Courses: CN31, CN33
Credit Points: 4 Contact Hours: 2 per week

■ CNB624 PM7 - BUILDING DEVELOPMENT TECHNIQUES 2
See CNB623.

Courses: CN32, CN33
Prerequisite: CNB623
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 PROGRAMS
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, CNB06, CNB09, CNB10, CNB46, CNB461, CNB462, CNB524
CNB540
Credit Points: 4 Contact Hours: 2 per week

■ CNB648 COST PLANNING & COST CONTROL 2
Continuation of CNB647.

Course: CN33
Prerequisite: CNB647 Co-requisite: CNB6452
Credit Points: 4 Contact Hours: 2 per week

■ CNB653 POST CONTRACT SERVICES 2
Continuation of CNB526.

Course: CN33
Prerequisite: CNB526
Credit Points: 5 Contact Hours: 2.5 per week

■ CNB656 BUILDING RESEARCH
History of building research; definition of research; Australian and international building research organisations; nature of the building industry and implications for research; financing research; future developments in building research; research management; research process; development and presentation of a bibliographic report.

Course: CN33, CN33
Prerequisite: 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, present 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

- **CNN662 RESEARCH DISSERTATION 2**

  See CNN661.  
  **Course:** CN32  
  **Prerequisite:** CNN661  
  **Credit Points:** 8  
  **Contact Hours:** 4 per week

- **CNN663 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:** CNN663  
  **Credit Points:** 5  
  **Contact Hours:** 2 per week

- **CNN664 PROPERTY DEVELOPMENT 2**

  See CNN663.  
  **Course:** CN32  
  **Prerequisite:** CNN663  
  **Credit Points:** 6  
  **Contact Hours:** 2 per week

- **CNN665 PROPERTY MANAGEMENT 1**

  The role and importance of property management. The legal and physical parameters governing the establishment, building, use and inheritance 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

- **CNN666 PROPERTY MANAGEMENT 2**

  See CNN665.  
  **Courses:** CN32, PS47  
  **Prerequisite:** CNN665  
  **Credit Points:** 5  
  **Contact Hours:** 3 per week

- **CNN667 APPLIED COMPUTER TECHNIQUES**

  Designed to give students hands-on experience and to demonstrate contemporary commercial software; on completion, students should be able to evaluate a range of commercial and non-commercial computer programs designed for the property development and construction industry; covers accounting and cost control packages; feasibility studies; maintenance packages; CPM, network analysis techniques.  
  **Course:** CN32  
  **Prerequisite:** CNN363  
  **Credit Points:** 8  
  **Contact Hours:** 3 per week

- **CNN441 DISSERTATION**

  See CNN442.  
  **Courses:** BN73, CN77  
  **Credit Points:** 48  
  **Contact Hours:** 4 per week

- **CNN442 DISSERTATION**

  The dissertation may be of a research or investigative nature on any approved area related to project management. Suitable topics will be discussed and arranged with course members each year. Each student will be assigned a supervisor and will be examined by means of a dissertation by that supervisor and the unit moderator. Incorporates IFN001 Advanced Information Retrieval Skills which must be taken.  
  **Courses:** BN73, CN77  
  **Credit Points:** 48  
  **Contact Hours:** 2 per week

- **CNP417 DESIGN MANAGEMENT**

  The nature of design and the factors which influence the process of design. It includes planning, managing and controlling the design process from inception to detailed documentation; decision sequences in design; appreciation of the consequence of design decisions on the total project; the inter-relationships between architectural design and engineering and service design requirements; briefing techniques.  
  **Courses:** BN73, CN64, CN77, CN81  
  **Credit Points:** 6  
  **Contact Hours:** 2 per week

- **CNP422 SPECIALIST VALUATIONS**

  Theory of value, valuation types and approaches, practical approaches to the following valuation types: rating, compensation for compulsory purchase, investment, own-use, property assets, portfolios, public and specialist properties. Assessment of potential.  
  **Courses:** BN73, CN64, CN77, CN81  
  **Credit Points:** 6  
  **Contact Hours:** 2 per week

- **CNP426 PROJECT DEVELOPMENT**

  Site selection/acquisition; securing the land; authority negotiation and approvals; authority approvals; resource planning; acquisition/procurement; project coordination; construction management; commissioning and occupation; property management; project finalisation; post construction evaluations; project management objectives of cost time and quality; process overview; project stages; management principles; feasibility/justification; preliminary brief; development objective, motivation and needs; feasibility studies; project feasibility/justification; finance for projects; marketing.  
  **Courses:** BN73, CN64, CN77, CN81  
  **Credit Points:** 12  
  **Contact Hours:** 2 per week

- **CNP429 COST MANAGEMENT & ECONOMICS**

  Financial statements; investment decisions; economic evaluation; financing decisions; life cycle costing; control systems; management accounting and reporting; information systems; cost planning theories and techniques; the economy.  
  **Courses:** BN73, CN64, CN77, CN81  
  **Credit Points:** 12  
  **Contact Hours:** 2 per week

- **CNP430 CURRENT ISSUES**

  The unit is very much an integrative study area. There are two main strands: the integration, under the project management umbrella, of areas already studied; and the integration of recent and topical developments in the area of project management. Areas may include: quality management, buildability, value analysis, case studies, industrial relations, computer applications and selection, technology, information systems IT and AI, international project management, simulation exercises (Arousal, Bicep), recent developments in law, and global land development. Many of these topics will be covered by guest speakers from industry or presented in seminars.  
  **Courses:** BN73, CN64, CN77, CN81  
  **Credit Points:** 18  
  **Contact Hours:** 3 per week

- **CNP431 PROJECT MANAGEMENT**

  **Courses:** BN73, CN64, CN77, CN81  
  **Credit Points:** 12  
  **Contact Hours:** 2 per week
CNP433 PROJECT MANAGEMENT LAW
Introduction to the legal system; contract law; elements of contract; contents of valid contract; legal issues and problems associated with project management contracts; arbitration; property law; international law; planning law.
Courses: BN73, CN64, CN77, CN81
Credit Points: 12 Contact Hours: 2 per week

CNP434 TIME MANAGEMENT 1
Use of planning techniques for project control; critical path method for planning; precedence networks; activities on the arrow; time scaled networks; bar charts; resource loading and levelling; line of balance; introduction to computing packages; control and reporting techniques; resource time and cost analysis.
Courses: BN73, CN64, CN77, CN81
Credit Points: 12 Contact Hours: 2 per week

CNP437 FIELD TRIP
An experiential field trip of five days duration in an adventure-style environment. The emphasis will be on team building, working in a stressful environment, communication skills, personal discovery and extension, and building trust and relationships. The activities will be orientated to achieving greater awareness of and competence in the above areas.
Courses: BN73, CN64, CN77, CN81
Credit Points: 12 Contact Hours: 5 days

CNP438 REAL ESTATE INVESTMENT ANALYSIS
Investment principles, characteristics, goals and strategies; investment alternatives, property investments and evaluation techniques; current property investment market in Australia; basic risk and return measures and financing; time value of money concepts, PV, FV, PMT, and dual rates; cashflow models and partial interests; NPV's and IRR's and their applications; cash flow assumptions and rates of return; practical cash flow applications and spreadsheets; financial feasibility study models; tax issues related to property investment; property type selection.
Courses: BN73, CN64, CN77, CN81
Credit Points: 12 Contact Hours: 2 per week

CNP439 PROPERTY MANAGEMENT
The motivation, instrumentation and application of property management for commercial and industrial real estate, including lease construction, rental valuations, rent review, review types, budgeting, outgoings and physical management. Trends and prospects.
Courses: BN73, CN64, CN77, CN81
Credit Points: 12 Contact Hours: 2 per week

CNP667 APPLIED COMPUTING
The application of computer programs in the financial and physical management process of property development, management and investment.
Courses: BN73, CN64, CN77, CN81
Credit Points: 6 Contact Hours: 2 per week

COB101 COMPUTER-MEDIATED COMMUNICATION
Information access and distribution; organisational networks; computerised text analysis and style replications; the human-machine interface and interpersonal relationships.
Course: BS50
Credit Points: 12 Contact Hours: 3 per week

COB102 CONSULTING FOR ORGANISATIONAL CHANGE
Models of planned change; the change agent; change project management; diagnostic interventions; collecting, analysing and feeding back data; designing interventions; interpersonal and group process interventions; organisational process interventions; organisational strategy interventions; technocultural interventions; transition processes; professional ethics; evaluating and institutionalising change.
Courses: BS50, BS78
Prerequisite: COB106 or HRB104, nil for postgraduate students
Credit Points: 12 Contact Hours: 3 per week

COB103 PERSPECTIVES ON ORGANISATIONS & ENVIRONMENT
Contemporary views of organisations, work and management; concepts and skills necessary for analysing and understanding organisations and organisational processes.
Courses: BS50, BS78
Prerequisite: COB129
Credit Points: 12 Contact Hours: 3 per week

COB104 DRAMATURGY FOR PROFESSIONALS
The relational level of communication; structure and style of message with special emphasis on non-verbal language; dramaturgical and experiential models; the theoretical perspectives of semiotic message analysis and action research underpin practical exercises.
Course: BS50
Credit Points: 12 Contact Hours: 3 per week

COB105 BUSINESS ETHICS
An overview of the diverse ethical theories which may be used in analysing business ethics problems.
Course: BS50
Credit Points: 12 Contact Hours: 3 per week

COB106 GROUP COMMUNICATION: THEORY & PRACTICE
Exploration and practice in interpersonal communication skills such as listening, assertion and negotiation. Business and media interviewing and small group communication in organisational settings provide the focus for the program. Group dynamics and systems theory as a theoretical base for analysing communication performance. Students practice problem-solving strategies by rehearsing vocational situations.
Courses: BS50, BS72
Prerequisite: COB134
Credit Points: 12 Contact Hours: 3 per week

COB107 INTERCULTURAL COMMUNICATION
The social and cultural factors which affect communication with people in other countries for business and related purposes; the influence of values, beliefs and customs on the communication process.
Course: BS50
Credit Points: 12 Contact Hours: 3 per week

COB108 INTER-ORGANISATIONAL RELATIONS
The ways organisations interact; classic views reflecting competitive relationships contrasted with emerg-
The use of technology for document preparation, including cooperatives and strategic alliances; cross-cultural aspects of organisational forms and relationships; reference to Pacific rim nations.

Courses: BS50, BS78
Credit Points: 12 Contact Hours: 3 per week

COB109 ISSUES IN PUBLISHING
The processes involved in book and magazine publishing; changing media habits and literacy skills of consumers; the impact of technology and economics; strategic positioning; editorial concepts and steps in production.

Courses: BS50, BS72
Prerequisites: COB138, COB157
Credit Points: 12 Contact Hours: 3 per week

COB110 ORGANISATION & SOCIETY
The broad context (the society and culture) within which organisations operate; students develop an awareness of the influence of Australian society on the nature and operation of formal organisations and of the impact of various organisations - government, business and non-profit - on our society.

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 will provide a focus for this exploration.

Courses: BS50, BS72, BS78
Prerequisite: COB106 (may be co-requisite); nil for postgraduate
Credit Points: 12 Contact Hours: 3 per week

COB113 THEORETICAL PERSPECTIVES ON COMMUNICATION
An overview of the major theoretical and methodological approaches in the study of communication within a professional context.

Courses: BS50, BS72
Credit Points: 12 Contact Hours: 3 per week

COB114 TRENDS IN ORGANISATIONAL DESIGN
New perspectives in organisational design. Topics include: the future of work; classical perspective on design; open systems perspectives; sociotechnical systems perspectives; remote working; organisation learning; collaboration within and between organisations; experiments in work design; cooperatives; networks; the problem of power; distribution.

Courses: BS50, BS73
Prerequisite: COB129
Credit Points: 12 Contact Hours: 3 per week

COB119 COMMUNICATION TECHNOLOGY IN ORGANISATIONS
Concepts and applications of communication technology which impact on information processing and communication in organisations.

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

COB119 TEXT FORMATTING & TRANSCRIPTION
The use of technology for document preparation, analysis of underlying principles of skills acquisition; traditional and technological perspectives on document design, document formatting, business correspondence, tabulation, financial statements, 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.

Course: BS50, ED50
Credit Points: 12 Contact Hours: 3 per week

COB121 RECORDS MANAGEMENT
The paper-based and electronic records and information systems operating within and between organisations; the impact that changes in communication technology have had on these systems.

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

COB122 OFFICE PROCEDURES
The impact of communication technology on work structures and job design, and the social issues resulting from its adoption and implementation.

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

COB123 ISSUES IN COMMUNICATION TECHNOLOGY
The impact of communication technology on work structures and job design; the social issues resulting from its adoption and implementation.

Course: BS50, ED50
Prerequisite: COB118
Credit Points: 12 Contact Hours: 3 per week

COB124 OFFICE TRANSCRIPTION A
Students analyse the process of skills acquisition and gain a knowledge and understanding of skill development as it applies to shorthand and other forms of transcription.

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

COB125 OFFICE TRANSCRIPTION B
Students analyse the process of skills acquisition; provides a knowledge and understanding of skill development as it applies to shorthand and other forms of transcription. Students will have previous knowledge of shorthand.

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

COB126 SUPERVISION & ADMINISTRATION
The impact of technological change on the supervision and administrative practices as they relate to communication processes in organisations; the role and duties of supervisory and administrative personnel in information processing; the impact on these roles and duties through changes in technology.

Course: ED50
Prerequisite: COB123
Credit Points: 12 Contact Hours: 3 per week

COB129 ORGANISATIONAL PROCESSES
Organisations are examined from four perspectives: individual, group, organisational and community; emphasis on developing skills for making organisations effective, efficient and humane.

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

COB134 SPEECH COMMUNICATION: THEORY & PRACTICE
Based on the rhetorical perspective; oral, non-verbal and visual modes of communication in their application to business speaking; develops students ability...
and confidence to successfully communicate in contemporary business and professional situations, such as: face-to-face business interviews; presentations to small groups, e.g. clients, boards of directors, etc.; persuasive presentations to large groups eg. the public, company meetings, etc.

Courses: BS50, IF52, IS43, IT20
Credit Points: 12  Contact Hours: 3 per week

■ COB136 PROFESSIONAL COMMUNICATION (SERVICE)
Communicating successfully in writing and orally in professional situations. An understanding of the concepts and skills required for effective formal reporting and persuasive writing, oral reporting and persuasive speaking, group decision making and meeting procedures, leadership and participation.

Courses: ME46, PH38
Credit Points: 6  Contact Hours: 3 per week

■ COB138 WRITTEN COMMUNICATION: THEORY & PRACTICE
The principles of expository and persuasive writing in academic and business contexts.

Courses: BS50, BS72, IT20
Credit Points: 12  Contact Hours: 3 per week

■ COB144 CREATIVE LANGUAGE FOR COMMUNICATORS
Development of advanced skills in written communication, and in dealing with a variety of communicative and textual forms; the various forms of effective communication; communication theory and critical theory.

Courses: BS50, IF52, IS43  Prerequisite: COB138
Credit Points: 12  Contact Hours: 3 per week

■ COB147 CREATIVE WRITING & PUBLISHING
Creative writing involves the communication of ideas and values within a social framework; students examine the creative writing process with emphasis on the short story; problems of publishing and marketing as a professional writer are considered, especially for the professional communicator.

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

■ COB152 ANALYSIS & METHODOLOGY IN MANAGEMENT
The first part of the unit is designed to establish a conceptual base suitable for the analysis of both abstract and empirical argument. The second part of the unit builds upon the concept of a valid argument by introducing the notion of the empirical research process, both historical and scientific.

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

■ COB153 ORGANISATIONAL ANALYSIS & MANAGEMENT
How modern organisations operate and their import for the study and practice of management; focuses on two key areas: analysis and understanding of organisational theory and social processes in organisations; specific skills valuable to managers are identified and discussed; the major processes with a focus on decision making and communication processes.

Course: BS50  Prerequisite: COB152
Credit Points: 12  Contact Hours: 3 per week

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

Course: BS50
Prerequisite/Co-requisite: Eight units in the Bachelor of Business degree including either Administrative Theory or Psychology.
Credit Points: 12  Contact Hours: 3 per week

■ COB156 ADVANCED SECRETARIAL STUDIES
Extends the professional education of teachers of Secretarial Studies and provides an opportunity to broaden knowledge of concepts and application of technology, its impact on functions, procedures and supervisory practices in organisations.

Course: ED26
Credit Points: 12  Contact Hours: 3 per week

■ COB157 CORPORATE WRITING & EDITING
The specific requirements of writing in the corporate environment; principles and procedures in writing management submissions, reports, and manuals, as well as letters, memos and resumes; the content, style and presentation of documents for specific readers.

Courses: BS50, BS72  Prerequisite: COB138
Credit Points: 12  Contact Hours: 3 per week

■ COB158 ADVANCED SPEECH COMMUNICATION (THEORY & PRACTICE)
Based on the semiotic perspective using practical drama as the tool for learning; communication theory; verbal structure, paralanguage, proxemics, kinesics, etc. through this medium; the development of expressive self-presentation skills in the business environment; aims to develop communicators with an understanding of communicator style who are creative and risk-taking in their presentations; who, having an understanding of the multiple message levels of oral communication, will approach a presentation with a prepared control over visual, verbal, paralinguistic, and kinesic elements of performance.

Course: BS50  Prerequisites: COB113, COB134
Credit Points: 12  Contact Hours: 3 per week

■ COB159 RESEARCH CONCEPTS & TECHNIQUES
Main conceptual and theoretical traditions of research and practical techniques; qualitative approaches include focus groups and action research; quantitative techniques include surveys and experimental studies. Research institutions; ethical issues; relationship between consumers and researchers.

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

■ COB160 PROFESSIONAL COMMUNICATION
Principles and strategies that enable students to cope with the complex rhetorical demands of writing and speaking within the organisational culture.

Courses: AA21, BS50, IT32
Credit Points: 12  Contact Hours: 3 per week

■ COB161 INDEPENDENT STUDY UNIT
An opportunity for advanced level undergraduate students to undertake individual research in an area which is complementary to their course work.

Course: BS50  Prerequisite: 8 units
Credit Points: 12  Contact Hours: 3 per week
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; problem-solving, interdisciplinary approach with reference to social psychology, sociology, culture theory, systems thinking and network analysis.
Course: 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 I
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 telecommunication, other hardware delivery systems and information technology.
Courses: BS61, BS84
Credit Points: 12
Contact Hours: 3 per week

COP110 SOCIAL & ORGANISATIONAL CHANGE
The origins, nature and effect of social change on individuals, organisations and communities; theories and models of change will be used to explore planned and unplanned changes currently occurring, particularly as these relate to possible futures; emphasis will be on the strategies and skills required to initiate and participate in effective change management.
Course: BS73
Credit Points: 12
Contact Hours: 3 per week

COP115 PROFESSIONAL COMMUNICATION
Course: PS67
Credit Points: 4
Contact Hours: 2 per week

COP118 MANAGING HUMAN SERVICE ORGANISATIONS 1
The management task in human service organisations; managerial paradigms and the development of an empowering managerial framework; analysis of cultures in human service organisations, personal and interpersonal skills including career, time and stress management, and working collaboratively with colleagues and managers.
Course: BS73
Credit Points: 12
Contact Hours: 3 per week

COP119 MANAGING HUMAN SERVICE ORGANISATIONS 2
Managerial skills in human service organisations: action planning, recruitment and selection, staff support and development, dealing with problem workers, developing collaborative work groups, decision making, leading meetings, managing conflict.
Course: BS73
Prerequisite: COP118
Credit Points: 12
Contact Hours: 3 per week

COX100 INTRODUCTION TO ORGANISATION
Examination of basic management and organisational skills and their application to the workplace.
Courses: BS10, JS21
Credit Points: 12
Contact Hours: 3 per week

CPB202 EDUCATION & CHANGE
Examination of change as an adjunct of the character and values of society and the nature and needs of human beings. Existing and developing agendas for change are examined in several fields such as: multiculturalism; equity; employment; educational assessment; teaching and learning with a view to encouraging students to develop personally effective responses to the demands of change.
Course: ED41
Prerequisite: CPB201
Credit Points: 8
Contact Hours: 3 per week
The foundations of leadership: systems theory; social systems; values; organisations; role theory; the leaders and the program; models of leadership; identifying and investigating leadership situations.

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

CPB281 ETHNICITY & RACISM IN EDUCATION  
Students are introduced to the theoretical concepts of ethnicity, prejudice ethnocentrism and racism; examines the history of cultural relations in Australia and the development of institutional racism in educational and work place perspectives in Aboriginal and multicultural education, and positive approaches to cultural relations in the school setting are emphasised to develop appropriate teacher practices.

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

CPB330 ABORIGINAL & TORRES STRAIT ISLANDER EDUCATION POLICY  
Historical, economic, social factors influencing the position of Aboriginal and Torres Strait Islanders; cultural factors and educational policies and programs; development of policies and programs appropriate for these people.

Courses: ED37, ED50, ED51, ED52  
Credit Points: 12  
Contact Hours: 3 per week

CPB331 ASIAN CULTURE & EDUCATION  
The Queensland Department of Education requires that all teachers have an awareness of contemporary Asian cultures and skills for promoting Asian orientations in classroom practice. This is designed to provide pre-service teachers with knowledge and skills for working in the Asian context of Australian education. Content includes: cultural forms in Asia; contemporary socio-political developments; past and present educational strategies; promoting informed Asian awareness in curriculum and classrooms.

Courses: ED37, ED50, ED51, ED52  
Credit Points: 12  
Contact Hours: 3 per week

CPB332 EDUCATION & THE COMMUNITY CONTEXT  
The range of inter-relationships between communities and educational activities; comparative studies; policy and its implications for developing strategies; techniques and skills for analysing community needs; some skills to improve effectiveness in working with the community.

Courses: ED37, ED50, ED51, ED52  
Credit Points: 12  
Contact Hours: 3 per week

CPB333 POLICY ANALYSIS FOR EDUCATORS  
This unit aims to assist educational workers understand the relevance of contemporary policy initiatives for classroom and school practices, to demonstrate how policy may be used strategically to enhance professional practice and to provide skills in critical policy analysis. Particular attention is given to how beginning teachers may respond critically and constructively to pressures within devolved education systems to participate in policy formation, assessment and implementation.

Courses: ED37, ED50, ED51, ED52  
Credit Points: 12  
Contact Hours: 3 per week

CPB334 POWERFUL TEACHERS, POWERFUL STUDENTS  
This unit explores an interdisciplinary perspective 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  
Credit Points: 12  
Contact Hours: 3 per week

CPB335 TEACHER AS RESEARCHER  
This unit assists future educational practitioners to understand the role that research can play in improving their everyday practice. It draws on advocacy models of research to develop actual strategies by which practitioners can inform their own educational work and evaluate its effectiveness.

Courses: ED37, ED50, ED51, ED52  
Credit Points: 12  
Contact Hours: 3 per week

CPB336 EDUCATION & CULTURAL DIVERSITY  
For teachers and students education settings are places of cultural interaction. This unit is designed to provide educators with an understanding of the complex issues involved in catering for cultural diversity in schools and other education settings and strategies for professional practice in contexts of cultural diversity. Contents include: cultural change in education; racism in schooling; curriculum issues; English as a second language; school-community relations.

Courses: ED37, ED50, ED51, ED52  
Credit Points: 12  
Contact Hours: 3 per week

CPB337 GENDER & EDUCATION  
This unit provides students with a critical awareness of the significance of gender issues in education, together with knowledge of relevant research and policy developments. There will be an emphasis on the implications for school organisation, curriculum and teaching strategies.

Courses: ED37, ED50, ED51, ED52, NS48  
Credit Points: 12  
Contact Hours: 3 per week

CPB338 IDENTIFYING & RESPONDING TO STUDENT DIFFERENCE  
This unit analyses the range of perceptions and reactions to individual difference; the psychological explanations for the sociocultural contexts of difference in schools; perspectives on the identification and classification of special educational needs. From a commitment to social justice and equity, it examines policy initiatives which impact on learners and teachers; identifies inappropriate strategies.

Courses: ED37, ED50, ED51, ED52  
Credit Points: 12  
Contact Hours: 3 per week

CPB339 TEACHING ABORIGINAL & TORRES STRAIT ISLANDER STUDENTS  
An examination of the cultural, linguistic and social background of Aboriginal and Torres Strait Islander students and their current educational needs. Curriculum issues and classroom strategies for more effective teaching of Aboriginal and Torres Strait Islander students, together with strategies for working with parents and the community.

Courses: ED37, ED50, ED51, ED52  
Credit Points: 12  
Contact Hours: 3 per week

CPB420 CONTEMPORARY ISSUES IN EDUCATION  
The cultural and social contexts and psychological factors relevant to the processes of education and schooling in an era of change; application of the principles of social justice to the evaluation of educa-
tion policy and practice, and analysis of social and personal action relevant to educational change.

Course: ED26
Credit Points: 12  Contact Hours: 3 per week

■ CPB421 PHILOSOPHICAL PERSPECTIVES ON SCHOOLING
Developments in philosophy of education which account for the micro-institutional practices of schooling, school prospectuses, timetables, school architecture, classroom work, equity issues.

Course: ED26
Credit Points: 12  Contact Hours: 3 per week

■ CPB422 PHILOSOPHY IN THE CLASSROOM
Philosophical belief systems underlying approaches to learning, knowledge and curriculum. Justice and fairness to both teachers and students in the classroom. Current developments in classroom practices.

Course: ED26
Credit Points: 12  Contact Hours: 3 per week

■ CPB423 SOCIETY, SOCIAL POLICY & EDUCATION
Education as social policy; historic, economic and political context of educational policy making; education and social justice; policy, change and practice.

Course: ED26
Credit Points: 12  Contact Hours: 3 per week

■ CPB424 SOCIOLOGY OF THE SCHOOL
Using a sociological framework, this unit provides teachers and administrators with an opportunity to analyse schools and classrooms within a social context; students are able to draw implications to assist them in carrying out their teaching and administration practices more effectively.

Course: ED26
Credit Points: 12  Contact Hours: 3 per week

■ CPB425 AESTHETIC EDUCATION
An examination of aesthetics, both traditional and contemporary, and the relevance they have for understanding the role the arts plays in education; the democratisation of culture, encouraging more representative forms of cultural production; evaluation of the arts, particularly in the classroom; theory of creativity and the imagination; the deficiencies of an individualistic ethic in the arts.

Course: ED26
Credit Points: 12  Contact Hours: 3 per week

■ CPB440 THE COMMUNITY & SCHOOL ADMINISTRATION
Provides students with an opportunity to broaden their understanding of the community context in which schools operate; examines examples of successful community-school linkages such as school advisory councils and develops students’ capacities to manage and develop these linkages.

Courses: ED23, ED26, ED65
Prerequisites: Minimum of one year’s teaching experience.
Credit Points: 12  Contact Hours: 3 per week

■ CPB441 HISTORY OF AUSTRALIAN EDUCATION
The growing involvement of the State in education during the nineteenth century; factors which led to the State accepting responsibility for elementary education; growth of educational bureaucracies; State involvement in secondary education; establishment of tertiary education in Australia; the influence of particular reports on Australian education.

Course: ED26
Credit Points: 12  Contact Hours: 3 per week

■ CPB442 EDUCATION FOR A MULTICULTURAL SOCIETY
Over the last decade, multiculturalism has replaced assimilation as an approach to migrants. In this unit teachers are given specialist knowledge and skills to prepare students for life in a multicultural society.

Courses: ED26, ED72
Credit Points: 12  Contact Hours: 3 per week

■ CPB443 COMPARATIVE & INTERNATIONAL EDUCATION
Australia’s identity in the international community has significant implications for education. This unit introduces the major international issues in education through studies of global developments and by comparing Australian education with other cultures; develops skills and knowledge appropriate for teachers of the 1990s and the next century.

Courses: ED26, ED72
Credit Points: 12  Contact Hours: 3 per week

■ CPB444 ISSUES IN ABORIGINAL EDUCATION
Factors influencing the position of Aborigines and Islanders in Australian society; government policies; Aboriginal culture and education; current initiatives; participation of Aborigines in policies and programs.

Courses: ED26, ED72
Credit Points: 12  Contact Hours: 3 per week

■ CPB445 CAREER & LIFE PATTERNS OF WOMEN TEACHERS
The relevance of theories of adult development and career development for understanding the personal and professional life patterns of women teachers. Emphasis on acquiring personal coping strategies. This unit is also of relevance to male teachers seeking to understand the conflicts facing female teachers.

Courses: ED23, ED26, ED72
Credit Points: 12  Contact Hours: 3 per week

■ CPB446 WOMEN, EDUCATION & SOCIAL CHANGE IN AUSTRALIA
Education and other social policy initiatives relating to women; current debates on the status of women and education’s intervening role; ideology and the position of women; effects of economic and technological change; educational implications.

Courses: ED26, ED72
Credit Points: 12  Contact Hours: 3 per week

■ CPN603 CHANGING AGENDAS IN LEADERSHIP EDUCATION
Addresses the differing approaches to the study of leadership, including organisation theory, cultural analysis, critical theory, the increasing number of women in leadership positions and the very essence of leadership itself; enhances the student’s understanding of leadership in the 1990s and provides a broad base for work in the leadership area.

Courses: ED11, ED13, ED73
Credit Points: 12  Contact Hours: 3 per week

■ CPN 604 EQUITY & EDUCATIONAL MANAGEMENT: ISSUES & STRATEGIES
The implications of equity, theory and practice at all levels of educational management; issues of gender and educational leadership, disability, race and ethnicity; focuses on processes for overseeing the implementation of change; accountability and the measurement of progress according to equity indicators;
organisational culture from the perspectives of leaders, line managers and senior administrators.

Courses: ED11, ED13, ED73
Credit Points: 12 Contact Hours: 3 per week

CPN605 ORGANISATIONAL CULTURES & EDUCATION LEADERSHIP

Investigates dimensions of culture in educational organisations and works through cultural analyses, design, strategic management and leadership; the rhetoric of policy versus the reality of practice; explores different leaders and their communities.

Courses: ED11, ED13, ED73
Credit Points: 12 Contact Hours: 3 per week

CPN606 EDUCATIONAL LEADERSHIP, POWER & CAREERS

Focuses on crucial issues in the nature of work and an understanding of the concept of career in the changing world in the 1990s; provides an overarching view of discontinuity in social change and a basis for individuals to reconsider their own self-development and the management of their own careers.

Courses: ED11, ED13, ED73
Credit Points: 12 Contact Hours: 3 per week

CPN607 INTERNATIONAL & DEVELOPMENT EDUCATION: POLICY & PRAXIS

Perspectives on global political economy and the role of education, and culture; education, hegemony and resistance; issues of gender, class and race; education and development; strategies of social and economic change in developing countries; transformative education: theory pedagogy and curriculum; social justice and policy issues in global context.

Courses: ED11, ED13, ED71
Credit Points: 12 Contact Hours: 3 per week

CPN608 GENDER EQUITY & EDUCATION POLICY

Feminist theory, social policy and education policy; gender equity policies in education; approaches to gender equity policy in international and comparative contexts; historical perspectives; contemporary debates; analysing gender equity policies; gender role and strategies for change.

Courses: ED11, ED13, ED71
Credit Points: 12 Contact Hours: 3 per week

CPN609 ADVANCED POLICY ANALYSIS IN EDUCATION

Social policy, educational policy and social theory; competing theoretical approaches towards the role of the state; education policy issues in Australia and the broader policy context; key influences on policy developments; approaches to policy analysis; case studies analysed from a variety of approaches; strategies for change; relationship between theory and practice.

Courses: ED11, ED13
Credit Points: 12 Contact Hours: 3 per week

CPN610 YOUTH POLICIES & POST-COMPULSORY EDUCATION

The field of debate; a critical examination of responses and controversies around current policy trends in post-compulsory and higher education; critical policy analysis; assumptions underlying current trends and competing definitions of key concepts; reconceptualisation of youth policy in relation to increased retention and participation rates; case study analysis.

Courses: ED11, ED13, ED71
Credit Points: 12 Contact Hours: 3 per week

CPP501 SOCIO-CULTURAL ISSUES IN EDUCATION

Examines socio-cultural contexts of schooling; the pastoral care and special needs industries; resistance and disruption in schools; disability and integration.

Courses: ED24
Credit Points: 12 Contact Hours: 3 per week

CPP510 SOCIO-CULTURAL CONTEXTS OF HUMAN RELATIONSHIPS

Family, marriage and partnerships, divorce and separation; family violence; disability.

Courses: ED22, ED24, ED67
Credit Points: 12 Contact Hours: 3 per week

CSA259 INTRODUCTION TO COMPUTING

An overview of computing ranging from the impact of computers on society through to the details involved in database organisation and the inter-relationship between these facts; emphasis is on demystifying computers; an understanding of the abilities of computers and their role in health science.

Courses: LS15, SC10
Credit Points: 8 Contact Hours: 2 per week

CSB087 PROGRAMMING LANGUAGES FOR TEACHERS

Further software development; techniques of program development; top-down design and modularity; computer programming using appropriate languages.

Course: ED50
Prerequisite: ISB095
Incompatible with: CSB013 and CSB015
Credit Points: 12 Contact Hours: 4 per week

CSB155 INTRODUCTION TO COMPUTING

The computer as a processor of information; an overview of computers, computer organisation, software, programs and the range of programming languages; the design of algorithms using structured techniques and stepwise refinement; implementation and execution of such algorithms using PASCAL.

Courses: B550, MA34, SC50
Credit Points: 12 Contact Hours: 4 per week

CSB191 INTRODUCTION TO COMPUTING

Introduction to technical computer programming; teaching programming techniques for the writing of correct and efficient programs for limited, but typical engineering problems; using structured programming techniques to write, modify and enhance program applications on selected computer systems using the PASCAL programming language.

Courses: CE42, EE43, EE44, IF53, ME45, ME46
Co-requisites: MA133, CEB194
Credit Points: 4 Contact Hours: 2 per week

CSB263 COMPUTING

Introduction to computer programming; simple applications in the BASIC language. Topics include: computer utilisation; organisation; hardware; software; data organisation; information storage retrieval; computer systems; programming in BASIC; problem solving; analysis of numerical and non-numerical problems; introduction to FORTRAN; use of WordPerfect, VP Planner and dBase III Plus.

Courses: CH32, SC10
Credit Points: 12 Contact Hours: 4 per week

CSB280 PROGRAMMING PRINCIPLES

Continuation of the material included in CSB155; develops structured program design techniques; intro-
duces advanced algorithms and methods of proving program correctness.
Courses: BS55, SC30  Prerequisite: CSB155
Credit Points: 12  Contact Hours: 3 per week

CSB291 INTRODUCTION TO FORTRAN
Mainframe and industry standard micro-based systems, applying the programming techniques acquired in CSB191 to the FORTRAN programming language.
Courses: CF42, EE44, IF53, ME45  Prerequisite: CSB191
Credit Points: 4  Contact Hours: 2 per week

CSB490 SOFTWARE ENGINEERING
The structure and syntax of well-designed programs as well as programming techniques for use in electronics, communications and electrical engineering, using examples from C and UNIX.
Courses: EE43, EE44  Prerequisite: CSB191
Credit Points: 6  Contact Hours: 3 per week

CSB860 COMPUTER SYSTEMS FOR TEACHERS
Single and multi-user operating systems; interaction with computer systems and management of stored information; definition and implementation of algorithms in suitable language; selection of computable representation for real world concepts and application in computer programs; hierarchy of levels of abstraction; adoption of abstracted views of real world information processing or problem-solving situations; capabilities and limitations of conventional, sequential processing machine architectures.
Course: ED50
Credit Points: 12  Contact Hours: 3 per week

CSB980 PROJECT
Students in IF23 only, either invidually or in small groups, undertake a substantial project relevant to the needs of industry and designed to provide insight into industrial requirements. Each project is carried out under the supervision of a staff member whose interests lie in the field of the project. Before work commences on the project, student(s) and supervisor must agree on the topic of the project and the scope of the work to be attempted.
Course: IF23
Co-requisite: This unit must be done in the final year of the course
Credit Points: 30

CSN100 THEORY OF COMPUTING I
Formal properties of programs; the view of programs as predicate transformers is developed as a method of constructing provably correct algorithms; methods of software development based on formal specifications.
Courses: CS36, CS55  Prerequisite: ITB431 (or equivalent)
Credit Points: 12  Contact Hours: 3 per week

CSN110 COMPILER CONSTRUCTION
The organisation and structure of language translators and compilers. Some emphasis is placed on those parts of these software tools which are amenable to formal analysis. The material extends undergraduate studies in algorithm design and in the semantics of formal languages. Special attention is paid to techniques which are applicable in the implementation of special purpose languages such as database query languages and production systems.
Courses: CS36, CS55  Prerequisite: ITB440 (or equivalent)
Credit Points: 12  Contact Hours: 3 per week

CSN202 PROJECT
This is a two semester unit. In the first semester students must attend lectures/seminars for one hour every two weeks (on average). They also engage in literature search and other design aspects of their research project. The topic of research is to be decided by agreement between the student and a Faculty staff member acting as project supervisor. The second semester is a continuation and completion of the research project initiated in the first semester.
Course: CS55
Credit Points: 24

CSN210 DISTRIBUTED SYSTEMS
Provides a thorough understanding of the rationale for distributed computer systems, their domain of application and the principles of distributed control underlying their construction. A number of representative systems will be examined.
Courses: CS36, CS55  Prerequisite: ITB440 or equivalent
Credit Points: 12  Contact Hours: 3 per week

CSN220 ARTIFICIAL INTELLIGENCE
Artificial intelligence in the computing industry; aspects of artificial intelligence which have given rise to commercial products; background research efforts which promise to have major impact on the use of computers in the near future.
Courses: CS36, CS55  Prerequisite: ITB442 or equivalent
Credit Points: 12  Contact Hours: 3 per week

CSN300 THEORY OF COMPUTING 2
Formal language theory; investigation of various types of automata and machines and their relation to context free languages; discussion of some aspects of computational complexity.
Courses: CS36, CS55  Prerequisite: ITB440 or equivalent
Credit Points: 12  Contact Hours: 3 per week

CSN301 MINOR PROJECT
CSN302 MINOR PROJECT
CSN303 MINOR PROJECT
CSN304 MINOR PROJECT
Students may undertake a number of minor projects to pursue specialised areas, or broaden their knowledge in areas of relevance to their employment. Topics are decided by agreement between the student and a staff member acting as supervisor.
Course: CS36
Credit Points: 12

CSN310 PARALLEL PROCESSING
The modelling of parallel systems and the design methodologies used in their construction; applicable software systems and methodologies; the formal analysis of concurrent systems is based on the theory of communicating sequential processes.
Courses: CS36, CS55  Prerequisite: CSN210
Credit Points: 12  Contact Hours: 3 per week

CSN340 COMPILER LABORATORY
In-depth treatment of topics of contemporary translator construction in a practical setting; code generation methods for advanced computer architecture.
Courses: CS36, CS55  Prerequisite: CSN110
Credit Points: 12  Contact Hours: 3 per week
CSN350 ADVANCED GRAPHICS 1
Advanced level extension of the material in the undergraduate curriculum; the use of facilities provided by existing graphics systems.
Courses: CS36, CS55  Prerequisite: ITB441
Credit Points: 12  Contact Hours: 3 per week

CSN360 ADVANCED GRAPHICS 2
Specialised areas of computer graphics. Topics will be agreed between staff and students.
Course: CS36  Prerequisite: CSN350
Credit Points: 12  Contact Hours: 3 per week

CSN370 SPECIAL TOPIC
Aspects of scientific interest at that time. See School noticeboards for further information.
Courses: CS36, CS55  Prerequisite: To be advised.
Credit Points: 12  Contact Hours: 3 per week

CSN380 NEURAL NETWORKS
The purpose, scope, and history of neurocomputing; various models of artificial neurons and a number of learning rules for supervised and unsupervised learning. Pattern classifiers, associative and auto associative neural network arrays are treated.
Courses: CS36, CS55
Credit Points: 12  Contact Hours: 3 per week

CSN450 MAJOR PROJECT
This year long unit enables students to pursue a specialised topic in greater depth. Topics are decided by agreement between the student and a faculty member acting as supervisor.
Course: CS36  Prerequisite: Completion of eight units of the Master of Applied Science (Computing).
Credit Points: 24

CUB212 TEACHERS AS CURRICULUM DECISION MAKERS
Analysis of state policies and curriculum frameworks to gain an understanding of the responsibility which teachers are expected to take with respect to curriculum development and school community involvement. Ways in which literature deals with curriculum decision making. The role of parents and other members of the wider community in curriculum decision-making and the development of skills necessary to facilitate a collaborative approach to curriculum and school development.
Course: ED41  Prerequisite: CUB211
Credit Points: 12  Contact Hours: 3 per week

CUB281 NEGOTIATED STUDY IN TEACHING
Students identify a particular area within the teaching role which they would like to explore in more depth. This may be related to the career pathway they plan to take or the teaching and curriculum implications of a particular problem or specific teaching context in which they are interested. The lecturer determines if the student has the necessary prerequisite knowledge and skills to pursue the topic and determines a suitable program of reading. The lecturer meets with the student on a regular basis to discuss progress. The negotiated study may take the form of an investigative study within a particular school context.
Course: ED41
Credit Points: 8  Contact Hours: 3 per week

CUB282 MANAGING EXCEPTIONAL CHILDREN
Teachers need to develop approaches, strategies, programs and modifications to develop an inclusive curriculum which enhances learning and fosters the abilities for all children. This is designed to refine education students' theories and practices related to the management of the diverse range of children found within the primary classroom. Understanding the range of exceptional children. Essential knowledge and practices in classroom organisation, student motivation, curriculum modification processes and classroom management.
Course: ED41  Prerequisite: CUB212
Credit Points: 8  Contact Hours: 2 per week

CUB330 EDUCATION LAW AND THE BEGINNING TEACHER
Legal literacy; sources of education law; students and rights; students law and schools; parents law and education; teachers rights and obligations; teachers and school-based accidents; educational malpractice.
Courses: ED50, ED51, ED52
Credit Points: 12  Contact Hours: 3 per week

CUB331 MAINSTREAM INTEGRATION OF CHILDREN WITH DISABILITIES
Historical and philosophical analysis of the evolution of education and education policy related to children with special needs and disabilities. Individuals exhibiting learning problems: identification, diagnosis, profiling and program development. Curriculum issues related to integration; communication; classroom management; use of resources; Individual Educational Programs (IEP); team teaching; networking; curriculum design and modification; the multifaceted role of a consultant/adviser in school.
Course: ED50
Credit Points: 12  Contact Hours: 3 per week

CUB410 TEACHERS & THE CURRICULUM
Development of concepts and strategies essential to the processes of school-based curriculum development and the design, implementation and evaluation of relevant school programs. It relates the signficance of curriculum in the broader sense to a spectrum of individual professional teaching perspectives.
Courses: ED26, ED63
Credit Points: 12  Contact Hours: 3 per week

CUB413 CURRICULUM, MAKING IT HAPPEN AT SCHOOL
Implementing curriculum programs in specific school settings; 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 is on the provision of effective adult education.
Course: ED26
Credit Points: 12  Contact Hours: 3 per week

CUB431 CLASSROOM MANAGEMENT: MODELS & PRACTICE
Practical and research-based approaches to classroom management and discipline for teachers. Includes
techniques that motivate pupils in daily teaching, rule
development, teaching for responsibility, dealing
with parents and communication and settings for on-
task behaviour and meeting student needs.
Courses: ED26, ED64
Credit Points: 12 Contact Hours: 3 per week

- CUB432 TEACHERS & ISOLATED
  LEARNERS
The isolated community; the isolated learner; con-
sideration of various types of teaching situations in
rural schools, especially small schools and distance
education; teaching strategies; support services.
Course: ED26
Credit Points: 12 Contact Hours: 3 per week

- CUB433 TEACHING STRATEGIES
Evaluation of the student's teaching strategies; the
literature on teaching strategies; critical evaluation of
strategies/models of teaching available.
Courses: ED26, ED64
Credit Points: 12 Contact Hours: 3 per week

- CUB435 FACILITATING PROFESSIONAL
  DEVELOPMENT & INSTITUTIONAL
  CHANGE
Professional development as a central factor in the
facilitation of institutional change; authentic case
studies used to examine collaborative supervision and
facilitative leadership within the context of change
with the goal of developing quality institutions.
Courses: ED24, ED26, ED64
Credit Points: 12 Contact Hours: 3 per week

- CUB436 ANALYSING EDUCATIONAL
  PRACTICE
The concepts and skills to analyse educational prac-
tice; 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 par-
ticular 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 prac-
tices in Queensland with particular reference to the
ROSBA and Viviani reports; improving teacher-
made tests; advantages and disadvantages of a wide
range of test instruments used in classrooms.
Courses: ED26, ED64
Credit Points: 12 Contact Hours: 3 per week

- CUB444 EDUCATORS & THE LAW
Legal literacy; sources of education law; students and
rights; students' law and schools; parents' law and
education; educators' rights and obligations; educators
and school-based accidents; educational malpractice;
educational administration and law.
Courses: ED23, ED26, ED63
Credit Points: 12 Contact Hours: 3 per week

- CUN601 CURRICULUM
  INVESTIGATIONS
The ways in which questions about curriculum are
analysed in various contexts; reviews trends in re-
search methodologies specific to the field of cur-
rriculum and issues which are raised in the curriculum
research literature; analyses traditional research
methodologies; explores the impact on curriculum of
approaches such as action research and teacher as
researcher; investigates curriculum evaluation.
Courses: ED11, ED13
Credit Points: 12 Contact Hours: 3 per week

- CUN602 PROFESSIONAL DEVELOPMENT
A dynamic process of learning that leads to new
factual knowledge; this is designed for individual
educators as they seek to be both proactive and
responsive to the challenge of curriculum change; it
cultivates their uniqueness and virtue, guided by
the individual's judgement, and leads to increased
personal understanding and awareness and informs
and supports professional action at a higher level and
in a more integrated way.
Courses: ED11, ED13
Credit Points: 12 Contact Hours: 3 per week

- CUN603 EMPOWERMENT FOR
  CURRICULUM CHANGE
The process of curriculum decision-making and
change from the perspectives of 'Who benefits from
the change?' and 'Whose values are involved?';
theories of educational change and conceptions of the
leadership role as they relate to curriculum change;
thoretical framework for considering issues related
to power and empowerment.
Courses: ED11, ED13
Credit Points: 12 Contact Hours: 3 per week

- CUN604 COLLABORATIVE
  SUPERVISION IN CURRICULUM
  PRACTICE
Collaborative approaches to supervision designed to
empower educators from a variety of professional
contexts in relation to the ongoing improvement of
curriculum practice in teaching/learning environ-
ments; defines supervision; critically evaluates
models of supervision; studies in depth collaborative
approaches and applies these to teaching/learning en-
vironments in a variety of contexts.
Courses: ED11, ED13
Credit Points: 12 Contact Hours: 3 per week

- CUP420 PROFESSIONAL &
  CURRICULUM STUDIES 1
The theories and practices which make up the educa-
tional repertoire of a classroom teacher; development
of a coherent conceptual understanding of teaching
and managing learning, particularly as it applies to
arts education and physical education.
Course: ED36
Credit Points: 12 Contact Hours: 4 per week

- CUP421 PROFESSIONAL &
  CURRICULUM STUDIES 2
Investigation of the process of curriculum develop-
ment, particularly in social environment, human
relationships education, health studies, and science in
primary schools.
Course: ED36
Credit Points: 12 Contact Hours: 3 per week
**CUP501 CURRICULUM FOUNDATIONS**
Examination of the personal and generic theories of curriculum practice, and the foundations for teachers and consultants to develop a framework for curriculum thinking and decision making which emerges from contemporary curriculum theory.

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

**CUP502 CURRICULUM DEVELOPMENT & INNOVATION**
Application of the curriculum development process in specialist teaching areas; the process of innovation and change appropriate for particular educational settings. Frameworks and skills for evaluating existing programs and their implementation.

*Course: ED22  Prerequisite: CUP501*
*Credit Points: 12  Contact Hours: 3 per week*

**CUP503 CURRICULUM: LEARNERS WITH SPECIAL NEEDS**
Introduction to curriculum development and situational/self analysis; innovative program approaches for learners with special needs; changing ourselves and our educational environments; evaluation of curriculum development; resource teacher support for school based curriculum development, human relationships education and participation and equity; communication about improved programs.

*Course: ED24  Credit Points: 12  Contact Hours: 3 per week*

**EAB103 AUSTRALIAN FAMILIES & EARLY EDUCATION**
Family and community analysis, historical view, economic, political, social and cultural factors; issues affecting families in Australia today; employment patterns, ideology of family, effect of technological change, inequalities and social justice; personal approaches and critical reflection.

*Courses: ED40, ED42  Prerequisite: LEB240  Credit Points: 8  Contact Hours: 2 per week*

**EAB105 EARLY CHILDHOOD EDUCATION CONTEXTS**
Exploration of childhood services; relationships of early childhood services to Australian and overseas contexts; implications of beliefs for practice in early childhood education; the early childhood teacher as an agent for empowering parents and their children.

*Course: ED40  Credit Points: 8  Contact Hours: 2 per week*

**EAB112 INTEGRATED CURRICULUM FOR 3-5 YEAR OLDS**
Total program planning and implementation in kindergarten and preschool settings; extension of pedagogical content to an advanced level; philosophy; alternative curriculum models; child development in practical curriculum decision-making; integration across content areas; working with parents and members of the community.

*Course: ED40  Credit Points: 12  Contact Hours: 3 per week*

**EAB113 INTEGRATED ROUTINES & LEARNING FOR UNDER 3s**
Practical aspects of providing physical care and nutrition for young children; individualised quality care for young children (basic trust, bonding, attachment); adults as responsive, sensitive, interactive partners; creating a safe, stimulating and supportive environment (space, resources, time, health and nutrition); the importance of the contribution of all adults involved with children aged birth to three years.

*Course: ED40  Credit Points: 12  Contact Hours: 3 per week*

**EAB125 EARLY CHILDHOOD CURRICULUM: MUSIC & MOVEMENT**
Music and movement as a way of learning and knowing for young children; the child-centred music learning environment; experience within the creative process itself; development of sensitivity to sounds and movement, and their interaction; understanding the basic concepts of musical and movement elements; acquisition of the simple skills, teaching techniques and curriculum principles which allow the child to operate as a creative musician and mover; and the development of positive attitudes toward music, movement and the self.

*Course: ED40  Credit Points: 8  Contact Hours: 3 per week*

**EAB126 EARLY CHILDHOOD CURRICULUM: SCIENCE/HEALTH EDUCATION**
The organisation of physical and interpersonal environments which support young children's natural curiosity in the sciences; ways in which early childhood environments can be organised to support active, enquiry learning; varied and relevant resources for the content of biological, social and physical sciences; the immediate classroom, the outdoors and the local neighbourhood and the social, cultural and physical features of these environments.

*Course: ED40  Credit Points: 8  Contact Hours: 3 per week*

**EAB127 EARLY CHILDHOOD CURRICULUM: LANGUAGE & LITERACY 2**
Planning, implementation and evaluation of developmentally appropriate programs to promote the spoken and written language of children from birth to eight years of age; development of learning environments, teaching strategies and learning experiences to assist children's linguistic knowledge, understanding and use in a variety of contexts and for a variety of purposes; monitoring and reporting individual progress, with particular emphasis on the early years of primary school.

*Course: ED40  Credit Points: 12  Contact Hours: 3 per week*

**EAB128 EARLY CHILDHOOD CURRICULUM: MATHEMATICS & SCIENCE**
Preparation of learning environments for the development of mathematics and science for children from birth to eight years of age; development of learning centres and associated methods characteristic of environments that foster active, enquiry learning; use of content knowledge in concert with the needs of individual children in culturally relevant ways; monitoring and reporting individual progress; with particular emphasis on the early years of primary school.

*Course: ED40  Credit Points: 12  Contact Hours: 3 per week*

**EAB144 INTEGRATING THE EXCEPTIONAL CHILD IN EARLY CHILDHOOD**
Foundations for least restrictive early education; philosophical and policy issues; integrating early intervention; nature of exceptionalities; methods for meeting special needs; team work with support per-
sonnel; evaluation of individualised programs and teaching strategies; management of behaviour; family dynamics and parental needs.

Courses: ED40, ED42, NS48
Credit Points: 8  Contact Hours: 2 per week

■ EAB154 TEACHING STRATEGIES 4: CHILD CARE
Monitoring and reporting on children's progress; managing children's behaviour; developing a personal philosophy; integrating across content areas; advanced data gathering techniques for teachers. A negotiation approach allows students to focus their studies in the selected context of early childhood education of child care. Eighteen days teaching practice in a child care centre.
Course: ED40  Prerequisite: EAB153
Credit Points: 12  Contact Hours: 2 per week

■ EAB155 TEACHING STRATEGIES 4: KINDERGARTEN/PRESCHOOL
Monitoring and reporting on children's progress; managing children's behaviour; developing a personal philosophy; integrating across content areas; advanced data gathering techniques for teachers. A negotiation approach allows students to focus their studies in the selected context of early childhood education of kindergarten. Eighteen days teaching practice in a child care centre.
Course: ED40  Prerequisite: EAB153
Credit Points: 12  Contact Hours: 2 per week

■ EAB156 TEACHING STRATEGIES 4: YEARS 1-3
Monitoring and reporting on children's progress; managing children's behaviour; developing a personal philosophy; integrating across content areas; advanced data gathering techniques for teachers. A negotiation approach allows students to focus their studies in the selected context of early childhood education of P-3. Eighteen days practice in an early primary school setting.
Course: ED40  Prerequisite: EAB153
Credit Points: 12  Contact Hours: 2 per week

■ EAB157 TEACHING STRATEGIES 5
Preparing for a teaching career; teacher as professional practitioner; ethical and legal issues; administration and leadership; career paths in early childhood education; advocacy; government policies; common and specialised studies across the full range of early childhood education and care services. Twenty days teaching practice in a child care, kindergarten, preschool or Years 1-3 setting.
Course: ED40
Credit Points: 12  Contact Hours: 3 per week

■ EAB160 ESL IN EARLY CHILDHOOD SETTINGS
The nature and functions of language; grammar of English from a teaching/learning perspective, particularly in relation to English learners; teaching English as a second language; teaching specific language skills; evaluation and assessment.
Courses: ED40, NS48
Credit Points: 8  Contact Hours: 2 per week

■ EAB161 CULTURAL INCLUSIVITY IN EARLY CHILDHOOD
Aspects of diverse disciplines and the emergent common principles, aims, objectives and practices that enhance the development of the professional; culturally inclusive practices; cultural bias; criteria for evaluating resources and curricula; cultural inclusivity; sociology, multicultural studies, aboriginal studies, gender studies and early childhood education and history.
Courses: ED40, NS48
Credit Points: 8  Contact Hours: 2 per week

■ EAB166 SPECIAL PROGRAMS FOR YOUNG CHILDREN
Meeting particular needs of young children through special programs; procedures for setting up, obtaining funding, assessing needs, formulating objectives, devising programs, evaluating outcomes of programs including those for isolated children, socially disadvantaged children and culturally different children.
Course: ED40
Credit Points: 8  Contact Hours: 3 per week

■ EAB167 CHILDREN'S LITERATURE FOR EARLY CHILDHOOD SETTINGS
The significance of children's literature as it increasingly influences the content of literacy and language programs; origins and antecedents of stories as they reflect society; critical evaluation of books being produced nationally and internationally; acquisition of skills of selection for use in early childhood settings; planning quality long-term literature programs for children in early childhood settings.
Course: ED40
Credit Points: 8  Contact Hours: 2 per week

■ EAB176 MEDIA FOR EARLY CHILDHOOD TEACHERS
Examination of media selection, use and evaluation; integration of learning through media; planning and production in areas of graphics, audio, projected and photographic media and television; development of media for early childhood teaching situations.
Course: ED40
Credit Points: 8  Contact Hours: 2 per week

■ EAB180 DANCE EDUCATION FOR YOUNG CHILDREN
Study of alignment and physiology of young bodies; increasing movement awareness for children through games and simple dance structures.
Course: ED40
Credit Points: 8  Contact Hours: 2 per week

■ EAB281 EARLY CHILDHOOD 2
Combination of the theoretical underpinnings of child growth and development in a range of interdisciplinary settings for children from three to eight years with the practical application of a child study. This unit provides the students with the opportunity to develop skills as observers in a range of settings in order to see and record what is happening as accurately and objectively as possible to increase their understanding of child behaviour and development. This unit provides the opportunity to interpret the observational data in a range of educational settings.
Course: ED41  Prerequisite: EAB280
Credit Points: 12  Contact Hours: 3 per week

■ EAB282 EARLY CHILDHOOD 3
Student teachers compare and contrast similarities and differences in early childhood environments with teaching in other educational environments. The teacher's role in the classroom and outside the classroom is explored. Students are encouraged to examine their own personal qualities through self-awareness activities and to confront their attitudes and biases as they explore teaching practices that are developmentally appropriate. Students draw on concepts from psychology and sociology in undertaking these tasks.
The issue of developmentally appropriate practice in early childhood education is investigated for all areas of a child’s development through an integrated approach. Appropriate curriculum planning based on teacher’s observations and recordings of each child’s special interests and developmental progress. Curriculum planning as an integrative process.

Course: ED52
Credit Points: 12
Contact Hours: 3 per week

EAB283 EARLY CHILDHOOD EDUCATION

Introductory principles, practices, philosophies and theories in the visual and performing arts as they relate to young children in various contexts; the arts as a way of knowing and expressing; creativity versus artistry; an overview of artistic development from birth to adolescence; the arts, culture, education and the young child; aesthetics and aesthetic development in early childhood; introduction to the integration of the arts. A main focus will be on the elements and concepts in the areas of the visual arts, music, drama, movement and dance with specific emphasis given to the visual arts: the development of the visual arts for children under five years of age and for school aged children; assisting artistry with children under five years of age and with school aged children.

Course: ED52
Credit Points: 12
Contact Hours: 3 per week

EAB300 EARLY CHILDHOOD ARTS 1

Overview of artistic development from birth to adolescence; the arts, culture, education and the young child; aesthetics and aesthetic development in early childhood; introduction to the integration of the arts. A main focus will be on the elements and concepts in the areas of the visual arts, music, drama, movement and dance with specific emphasis given to the visual arts: the development of the visual arts for children under five years of age and for school aged children; assisting artistry with children under five years of age and with school aged children.

Course: ED52
Credit Points: 12
Contact Hours: 3 per week

EAB301 EARLY CHILDHOOD ARTS 2

Application of principles, practices, philosophies and theories in the areas of music, drama, movement and dance, with specific examples provided for how these arts areas provide unique opportunities for knowing and understanding. Children’s development and ways in which this development may be assisted is examined in the areas of music, dance, and drama across two age categories - under five years of age and school age. The integration of the arts in relation to the unique, shared elements and concepts across the various domains, and advocacy in the arts.

Course: ED52
Credit Points: 12
Contact Hours: 3 per week

EAB302 EARLY CHILDHOOD FOUNDATIONS 1

This subject addresses the biological processes which are the foundation of physical, motor and perceptual development of children from birth to eight years; prenatal factors which affect physical, and motor development; growth patterns and changes in body systems which occur in infancy and in young children; the effects of maturation on development; development of perceptual systems (visual, auditory, tactile-haptic, kinaesthetic and vestibular); sensitivity and organisation of these systems; phases and patterns in motor development and the factors affecting that development; observational methods and techniques through which physical, motor and perceptual features of development of children can be analysed.

Course: ED52
Credit Points: 12
Contact Hours: 3 per week

EAB303 EARLY CHILDHOOD FOUNDATIONS 2

Review and analysis of current knowledge of the processes and features of language and cognitive development of children birth to 8 years of age; language acquisition and communication; interrelation-

ships between language and thought; the knowledge base and cognitive processes; analysis of observational data on children’s behaviour in the area of language and cognition and using such analyses to plan for children’s needs, interests and abilities; links with other aspects of development.

Course: ED52
Credit Points: 12
Contact Hours: 3 per week

EAB304 EARLY CHILDHOOD FOUNDATIONS 3

Theories of social, emotional and creative development and their application; theoretical and empirical approaches to the study of creativity and self-expression from birth to eight years; the nature of creativity and its relationship to other areas of development; children’s recognition and production of emotions; processes involved in the socialisation of emotions; sex differences and contextual influences on development; individuality, self-knowledge and the development of personal identity; socialisation in the context of relationships, in particular, those within the family, the peer context and the classroom.

Course: ED52
Credit Points: 12
Contact Hours: 3 per week

EAB305 EARLY CHILDHOOD LANGUAGE EDUCATION 1

Theories of development and learning of language and literacy from early years through emergent literacy to fluency with the use of a variety of genres of written language; early literacy learning processes, and the teaching practices, strategies and resources to support these in preschools and primary schools; working with parents of children to enhance literacy learning at 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

Overview of previous experiences in literacy education from practice and the earlier subject; observation and assessment of the literacy learning abilities of a child as a basis for the development of a profile for planning; reporting to parents; development of frameworks for and planning of integrated language and literacy education programs appropriate to a range of children and a variety of educational contexts; modification of programs for children with special needs; study of issues in literacy and literacy education in early childhood contexts for children from birth to eight years of age.

Course: ED52
Credit Points: 12
Contact Hours: 3 per week

EAB307 EARLY CHILDHOOD MATHEMATICS EDUCATION

Approaches to the teaching and learning of mathematical concepts are reviewed with a focus on the development of the child; the sequence of development from early mathematical understandings to the application of number within in a problem-solving framework; applications of technology.

Course: ED52
Credit Points: 12
Contact Hours: 3 per week

EAB308 EARLY CHILDHOOD SCIENCES, MATHEMATICS & TECHNOLOGY

Overview of early childhood science, social studies and maths topics, concepts and processes; investigation of appropriate monitoring strategies; use of a
variety of technologies; ways in which early childhood environments can be organised to support integrated, active, enquiry learning, with relevant resources from the immediate classroom, the outdoors, families and the local neighbourhood.

Course: ED52
Credit Points: 12  Contact Hours: 3 per week

EAB309 INTEGRATED EARLY CHILDHOOD CURRICULUM 1
Investigation of distinctive curriculum practices in use in Australian early childhood settings such as preschool/kindergarten, child care centres and the first years of primary school; ideas informing practice; curriculum principles which emphasise the importance of children, parents, community and teachers working collaboratively; play as an integrating force in children's learning; teaching and learning occurring within responsive relationships where difference is valued; the nature of teacher decision making and the knowledge bases teachers bring to their curriculum implementation work.

Course: ED52
Credit Points: 12  Contact Hours: 3 per week

EAB310 INTEGRATED EARLY CHILDHOOD CURRICULUM 2
Current practices in Australian early childhood settings, understood within philosophical and historical perspectives; examination of key ideas informing the holistic curriculum approaches of the field; theories and practices associated with play; the celebration of difference with particular attention given to practices which are responsive to the values and needs of Aboriginal and Torres Strait Islanders; personalised teaching and learning; indepth study of the knowledge base of the early childhood teacher practitioner; critical analysis of approaches to designing curriculum for the expanding range of services for young children and families in Australia.

Course: ED52
Credit Points: 12  Contact Hours: 3 per week

EAB311 ALTERNATIVE PROGRAMS IN EARLY CHILDHOOD
This subject will aim to broaden students' knowledge of a wide range of community programs which support the needs of children and families outside of mainstream early childhood settings (e.g., visits to community Aboriginal and Torres Strait Islander programs). A resource file of programs will be established by students to aid in future teaching, to help refer families to appropriate services, to build up a deepened awareness of models of parent-professional communication and to suggest alternative career paths in early childhood.

Course: ED52
Credit Points: 12  Contact Hours: 3 per week

EAB312 CASE STUDIES IN EARLY CHILDHOOD & FAMILY LITERACY
Introduction to case study methods, adult literacy and intergenerational and family literacy, including clients from English and Non-English speaking backgrounds; planning and implementing an intergenerational literacy program with a client and the young children; reporting and reflecting upon the program; contributing to ongoing research in family literacy.

Course: ED52
Credit Points: 12  Contact Hours: 3 per week

EAB313 CHILDREN'S LITERATURE FOR EARLY CHILDHOOD SETTINGS
A study of the significance of children's literature as it furnishes literacy and language programs: origins and patterns of stories both traditional and contemporary as they reflect society; critical evaluation of books published nationally and internationally; acquisition of skills of selection for use in early childhood settings; planning appropriate long term quality-literacy 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 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 Aboriginal and Torres Strait Islanders with regard to environmental issues will be examined.

Course: ED52
Credit Points: 12  Contact Hours: 3 per week

EAB315 CREATING CURRICULUM WITH YOUNG CHILDREN
In this subject students will examine dilemmas arising when teachers plan to negotiate the curriculum with children and parents in child care, preschool/kindergarten and primary school settings. Students will critically analyse strategies teachers use to create "spaces" where children are able to construct knowledge in personally relevant ways.

Course: ED52
Credit Points: 12  Contact Hours: 3 per week

EAB316 EARLY CHILDHOOD ART EDUCATION
Historical and contemporary trends in art education; philosophy and practice in early childhood visual arts education; in-depth exploration of young children's artistic development and learning; assessment and evaluation of visual arts in early childhood; curating children's art exhibitions; public information about children's artistry; advocacy for improving options for young children in the visual arts.

Course: ED52
Credit Points: 12  Contact Hours: 3 per week

EAB317 EARLY CHILDHOOD DRAMA IN EDUCATION
This subject will develop skills and understandings of drama in education; indepth exploration of techniques and strategies to enhance young children's dramatic ways of knowing and learning; assessment and planning for drama across the early childhood curriculum.

Course: ED52
Credit Points: 12  Contact Hours: 3 per week

EAB318 EARLY CHILDHOOD EDUCATION & FAMILY ISSUES IN AUSTRALIA
The subject examines contemporary issues facing families such as changing employment patterns, changing family forms, ethnic and cultural diversity and new technologies; in-depth analysis of contemporary issues as they impact on families and on early childhood education; strategies for responding to families and the key issues they face in the context of early childhood education.

Course: ED52
Credit Points: 12  Contact Hours: 3 per week
EAB319 EARLY CHILDHOOD SOCIO-CULTURAL CONTEXTS
Opportunity to investigate a broad range of issues currently affecting early childhood educators and their clients, with in-depth study of an issue selected from this broad range. Issues include work based child care and the effect on children, families and teachers; vacation care programs and before and after school programs and what this means for primary school children and teachers; early childhood educators as agents of social change; policy decisions made at state and federal levels which affect early childhood education; how changing patterns of work/employment have affected early childhood education; the low status of caregivers in society who are entrusted with children, 'our investment for the future'; the debate about whether child care is a tool for the liberation of women or the repression of other women; children, poverty and early childhood services; children, ethnicity and early childhood services.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week

EAB320 EARLY CHILDHOOD TRANSACTIONS 1
Analysis of interpersonal communications in terms of the students' own socio-cultural context; basic theories, definitions, principles and models of interpersonal communication related to the role of the early childhood educator; interacting empathically and assertively with children, their families, other professionals, and the wider community; awareness of the range of communication skills; accepting the responsibility to lead, delegate and negotiate with individuals and groups; understanding contemporary Australian families, ethical considerations and social justice issues in early childhood education.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week

EAB321 EARLY CHILDHOOD TRANSACTIONS 2
Insights into Australian families and interpersonal processes extended from Early Childhood Transactions 1; diversity and commonality in family childrearing values and practices; the parental role in young children's development; dimensions of parenting behaviour; family-teacher roles; interpersonal skills in practical contexts with families: effective collaborative procedures and skills of listening, giving and receiving feedback, assertion, negotiation and group leadership.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week

EAB322 ETHICAL RESPONSIBILITIES IN EARLY CHILDHOOD
In-depth examination of legal and ethical responsibilities for early childhood educators; historical overview of changing trends in legislation relating to children; current issues in children's rights, including welfare, human rights, child care; professional ethics and the responsibility of the early childhood educator to children, parents, the community, society, colleagues and the profession; advocacy for improved opportunities for young children; case studies of Australian issues in advocacy, ethics and the law.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week

EAB323 EVERYDAY FOOD & SCIENCE FOR YOUNG CHILDREN
An overview of science topics, concepts and processes as experienced in everyday life, in the home and various early childhood educational settings; exploration of a food cycle approach to learning, with consideration of space, time, resources and teaching strategies; current early childhood policies and practices which affect the needs of children from birth to age eight years; staff health in relation to early childhood program delivery.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week

EAB324 INTEGRATING YOUNG CHILDREN WITH DISABILITIES INTO EARLY CHILDHOOD PROGRAMS
The main focus of this subject is on the integrated approach to teaching children with disabilities through an effective and cooperative team approach of teachers, families and support personnel; philosophical and policy issues for the least restrictive education for young children with disabilities; the range and nature of disabilities early childhood teachers may encounter in their practice; development, implementation and evaluation of individualised programs; teaching strategies for integration into regular programs; needs and concerns of families; the range of support services available to families and teachers.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week

EAB325 MANAGEMENT OF EARLY CHILDHOOD SERVICES
General management theory and practice; organisational and leadership styles; management of various early childhood services; setting policies and planning for services; implementing day to day tasks and operations; managing and working with people; considering ethical issues and conduct; working outside early childhood services.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week

EAB326 MUSIC EDUCATION & YOUNG CHILDREN
In depth exploration of musical elements in relation to concept development in young children; application of specific techniques for guiding children's understanding, such as solfege, ostinato with Orff-type instruments, and listening with a musical focus; extension of personal musicianship and creativity; integration of music with other areas.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week

EAB327 PRACTICAL CHILD CARE ISSUES
This subject investigates the practical day to day aspects of designing, communicating, implementing and evaluating developmentally appropriate programs for children from birth to eight years. It will focus on B-3 and 5-8 year old care programs.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week

EAB328 RESEARCH IN EARLY CHILDHOOD DEVELOPMENT
Research design, methodology and analysis as applied to the study of young children's development. This elective is recommended for students considering enrolment in postgraduate research courses in Early Childhood. Longitudinal, cross-sectional and cross-sequential designs; experimental, quasi-experimental, and naturalistic designs; hypothesis generation, ethical issues in conducting research with young children; measurement and sampling; intro-
Students become involved in an investigation which comprises language foundations, processes and patterns of development, communicative competence, creativity and problem solving; levels of decision making, federal and state governments, employing authorities, particular child care and education services. 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: ED52
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

EAB503 TEACHING STRATEGIES FOR CHILD CARE
The planning-implementing-evaluating cycle; managing learning environments; the teaching/caring role; facilitating children’s development and learning through the human environment; dimensions of curriculum decision-making; adult/adult and adult/child interactions; teacher as a professional.

Course: ED42
Credit Points: 16

EAB504 PROGRAMS & TEACHING STRATEGIES FOR CHILDREN UNDER THREE YEARS
Facilitating children’s development and learning through the physical environment; mathematics and science concepts in the learning environment; physical care, education and nutrition for infants and toddlers; creating a safe, stimulating and supportive environment for learning; day care programs for infants and toddlers in Australia and overseas; parent-infant programs; policies and trends.

Course: ED42
Credit Points: 16
EAB505 LEARNING TEACHING & INTEGRATED CURRICULUM FOR 3-5 YEARS
Language and cognitive development; communication with children; early mathematics and science concepts; total program planning implementation and evaluation; integration across content areas involving parents and community.
Course: ED42
Credit Points: 16

EAB506 FIELD PROJECT (CHILDREN 0-5 YEARS)
Observations, analysis and implementation of the teaching and management program; teaching file of recorded observations, summaries, records, organisation strategies and evaluated plans; provision of a safe, caring and challenging learning environment; competency in leadership and responsibility.
Course: ED42
Credit Points: 16

EAB507 EARLY CHILDHOOD LEADERSHIP & MANAGEMENT IN THE SOCIOCULTURAL CONTEXT
Administration of early childhood services; leadership styles; managing people; professional issues; selection of personnel; outcomes for children and families; management theory and practice; program administration; financial matters; features of comprehensive programs, planning and communication.
Course: ED42
Credit Points: 16

EAB508 FIELD PROJECT (CHILDREN 0-12 YEARS)
A significant social, political or curriculum issue affecting the delivery of a child care and education service; teaching file of recorded observations, summaries, relevant centre records, management and teaching strategies, community resources, parent and staff communications, evaluated plans; competence in providing a safe caring learning environment which reflects the cultural and social backgrounds of the children; competence in leadership and responsibility for the total program for a period of time.
Course: ED42
Credit Points: 16

EAN601 EARLY CHILDHOOD CURRICULUM: DESIGN ISSUES
Key concepts and themes in the development of early childhood curriculum; processes associated with decision making of early childhood teachers; critical analysis of early childhood curriculum theorising; research methods used to study curriculum and teacher’s application of knowledge bases.
Courses: ED35, ED13
Credit Points: 12
Contact Hours: 3 per week

EAN602 EARLY CHILDHOOD SERVICES & POLICIES
Analysis of early childhood services from a social, political and cultural context; early childhood services for families and children in contemporary Australia; key issues affecting the development of these services, critical analysis of current policies.
Courses: ED11, ED13
Credit Points: 12
Contact Hours: 3 per week

EAN603 RESEARCH SEMINAR IN EARLY CHILDHOOD ISSUES
Development of skills for critical evaluation of research in early childhood issues; knowledge of methodological approaches; skills for a pilot study or review of selected research issues in early childhood; critical discussion of implications of research for early childhood education; knowledge of broad research issues regarding child development, family, education and care contexts and interventions.
Courses: ED11, ED13
Credit Points: 12
Contact Hours: 3 per week

EAN604 YOUNG CHILDREN, FAMILIES & COMMUNITY
The interactions between children, families and the wider social and cultural community in the past, present and future; key issues facing families within community contexts; application of research findings to the analysis of transactions involving children, families and community; aspects of family diversity; professionals and families.
Courses: ED11, ED13
Credit Points: 12
Contact Hours: 3 per week

EAP411 CREATIVITY & LANGUAGE 1
Developmental processes in the expressive and language arts; principles of learning; the development of personal identity in young children; creative and expressive processes for language and literacy in early childhood programs.
Course: ED35
Credit Points: 12
Contact Hours: 3 per week

EAP412 THINKING & PROBLEM SOLVING 1
The processes of interest in active learning, enquiry and problem solving; environments and strategies which promote the development of active learning and enquiry by young children; monitoring progress.
Course: ED35
Credit Points: 12
Contact Hours: 3 per week

EAP413 PROGRAM PLANNING & TEACHING STRATEGIES 1
Development of those areas of knowledge and skills essential to the practical decision making of early childhood teachers. An off-campus component of this unit includes two practicums each of twelve days in two early childhood settings (child care, preschool, kindergarten or early primary).
Course: ED35
Credit Points: 12
Contact Hours: 3 per week

EAP416 CREATIVITY & LANGUAGE 2
Discipline-based processes; the interrelated and unique contribution of each of the arts; the teacher’s role as a curriculum decision maker in the development of language and literacy programs.
Course: ED35
Credit Points: 12
Contact Hours: 3 per week

EAP417 THINKING & PROBLEM SOLVING 2
The child as explorer, problem solver and meaning maker; organising for active learning, enquiry and problem solving; linking home and early childhood educational environments.
Course: ED35
Credit Points: 12
Contact Hours: 3 per week

EAP418 PROGRAM PLANNING & TEACHING STRATEGIES 2
The development and integration of student teachers’ knowledge, skills and attitudes from the curriculum development and socio-cultural units to assist them in performing and justifying their diverse roles in teaching practice. An off-campus component of this unit includes two practicums each of sixteen days in two
early childhood settings (child care, preschool, kindergarten or early primary).

Course: ED35
Credit Points: 12  Contact Hours: 3 per week

■ EAP500 EARLY CHILDHOOD EDUCATION 
LEADERSHIP & ADVOCACY

This unit initially reviews the foundations of early childhood services in Australia. The principles of leadership, empowerment plus change are considered along with advocacy for the early childhood field.

Courses: ED23, ED65
Credit Points: 12  Contact Hours: 3 per week

■ EAP520 CHANGE IN CHILDREN BIRTH TO AGE EIGHT

Techniques for observing and analysing child behaviour; major theories of development and learning; cognitive, social/emotional, language, physical development and learning in children 2-9 years.

Course: ED20
Credit Points: 8
Incompatible with: EAP528

■ EAP521 EARLY CHILDHOOD EDUCATION 1

The development of problem solving, explanation, investigation, self-expression, originality, divergent thinking, and risk-taking in young children in relation to communication, movement the expressive arts, mathematics, science, social studies and health curriculum; approaches and suitable materials for these curriculum areas within various early childhood settings.

Course: ED20
Credit Points: 12
Incompatible with: EAP529

■ EAP522 EARLY CHILDHOOD EDUCATION 2

The development of problem solving, explanation, investigation, self-expression, originality, divergent thinking, and risk-taking in young children in relation to communication, movement and the expressive arts; analysis of teaching strategies.

Course: ED20
Credit Points: 12
Incompatible with: EAP529

■ EAP523 THE CONTEXT OF EARLY CHILDHOOD EDUCATION

Examination of the bases and scope of education in early childhood, the role of psychological theories, curriculum models, policies and programs; case studies of early childhood programs.

Course: ED20
Credit Points: 8
Incompatible with: EAP530

■ EAP524 RESEARCH IN EARLY CHILDHOOD

Examination of the research literature in development and learning; research techniques in early childhood; and their application; application of research techniques to research proposals; experimental research in one aspect of development and learning of children aged 3-8 years; contributions to early childhood research from other fields.

Course: ED20
Credit Points: 8
Prerequisite: EAP520
Incompatible with: EAP531

■ EAP525 EARLY CHILDHOOD PROGRAM PLANNING

Planning and evaluating early childhood programs for children 3 to 8 years; organisation and administration of programs for young children; examination of approaches to teaching; early intervention programs; inter-disciplinary teamwork and support services; strategies for working with parents and community agencies; professional behaviour and ethics.

Course: ED20
Credit Points: 12

■ EAP526 EARLY CHILDHOOD EDUCATION 3

Current approaches to the teaching of literacy and numeracy in the early years; diagnosis and assessment in early literacy and numeracy; the expressive arts and the sciences as modes of learning and teaching in the early years; the use of microcomputers and educational software with young children; planning and teaching for individual and group needs.

Course: ED20
Credit Points: 12

■ EAP527 TRANSACTIONS IN EARLY CHILDHOOD EDUCATION

Examination of the implications of social, cultural and geographical factors for early childhood education; consideration of the effects of technology and media, and ethical and legal obligations; analysis of procedures and techniques for case studies; formulating a personal philosophical statement.

Course: ED20
Credit Points: 8
Prerequisite: EAP532

■ EAP528 CHANGE IN CHILDREN BIRTH TO AGE EIGHT

See EAP520.
Course: ED20
Credit Points: 12
Incompatible with: EAP520

■ EAP529 EARLY CHILDHOOD EDUCATION 1 & 2

See EAP521 and EAP522.
Course: ED20
Credit Points: 12
Incompatible with: EAP521 and EAP522

■ EAP530 THE CONTEXT OF EARLY CHILDHOOD EDUCATION

See EAP523.
Course: ED20
Credit Points: 12
Incompatible with: EAP523

■ EAP531 RESEARCH IN EARLY CHILDHOOD

See EAP524.
Course: ED20
Credit Points: 12
Incompatible with: EAP524

■ EAP532 TRANSACTIONS IN EARLY CHILDHOOD EDUCATION

See EAP527.
Course: ED20
Credit Points: 12
Incompatible with: EAP527

■ EAP533 DANCE EDUCATION IN EARLY CHILDHOOD

The study of movement and dance in early childhood, the influence of home and culture, the awareness of space, time, energy and body performance in the movement and dance curriculum; the approaches underpinning philosophical and professional practice.

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

■ EAP552 FROM PLAY TO DRAMA IN EARLY CHILDHOOD EDUCATION

The developmental relationship that exists between children's play and drama in early childhood,
children's language development through drama; theories/approaches and methods in drama contexts.

Course: EDB22
Credit Points: 12  Contact Hours: 3 per week

- **EDB553 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: EDB22, EDB26
Credit Points: 12  Contact Hours: 3 per week

- **EDB554 THE ARTISTIC PROCESS & THE VISUAL ARTS IN EARLY CHILDHOOD EDUCATION**

The value of the visual arts – for culture, and for children; education versus educated, children's development and learning through the visual arts; visual arts media and curricula, philosophical and historical underpinnings.

Course: EDB22
Credit Points: 12  Contact Hours: 3 per week

- **EDB254 PRACTICE TEACHING 4**

During this four-week period in schools, students extend their involvement to include periods of continuous teaching. The experience widens to encompass both the school and community domains. Wider contexts eg. small schools are also considered appropriate venues for practical experience in this semester. Students also have the opportunity to implement the knowledge and skills gained in major study areas. Finally, other practical experiences eg. attendance at P & C meetings is required.

Course: EDB41  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: EDB41  Prerequisite: EDB254
Credit Points: 12

- **EDB305 EARLY CHILDHOOD PRACTICES 1**

Within the focus of the teacher and children learning together, the following topics will be introduced: the planning cycle; why observe? what/when/how? techniques of recording observable behaviour with specific emphasis on language and thinking; creating positive language environments; play as a means of learning; basic skills for teachers.

Course: EDB52  Prerequisite: EDB323
Credit Points: 12  Contact Hours: 2.5 per week

- **EDB306 EARLY CHILDHOOD PRACTICES 2**

Continuing the interactive focus there will be further development of Semester 3 topics in order to deepen understanding and extend teaching strategies.

Course: EDB52  Prerequisite: EDB305
Credit Points: 12  Contact Hours: 2.5 per week

- **EDB307 EARLY CHILDHOOD PRACTICES 3**

Within the focus of teacher/child decision making, emphasis will be placed on: observing social interaction, teaching strategies relating to conflict management and discipline; the monitoring of children's progress; the creation of positive learning environments.

Course: EDB52  Prerequisite: EDB306
Credit Points: 12  Contact Hours: 2.5 per week

- **EDB308 EARLY CHILDHOOD PRACTICES 4**

Further analysis of the complexities of interactions within learning environments, particularly relating to: Maths/Science; the arts; teaching strategies for the appropriate use of technology within the educational setting; the integrating role of play.

Course: EDB52  Prerequisite: EDB307
Credit Points: 12  Contact Hours: 2.5 per week

- **EDB309 EARLY CHILDHOOD PRACTICES 5**

Within the focus of negotiation, teacher-child-parent-community, this subject will review and analyse a variety of teaching approaches in early childhood, extending strategies for supporting children's play with a particular emphasis on literature and the arts; recognising emerging professionalism; research skills and independent adult learning.

Course: EDB52  Prerequisite: EDB308
Credit Points: 12  Contact Hours: 2 per week

- **EDB310 EARLY CHILDHOOD PRACTICES 6**

Synthesis of knowledge gained to date in terms of developing a personal teaching style and philosophy; ethical responsibility; the roles of the teacher as reflective practitioner, action researcher, advocate, administrator and leader; preparing for a teaching career and examining career paths in early childhood.

Course: EDB52  Prerequisite: EDB309
Credit Points: 12  Contact Hours: 2 per week

- **EDB311 PROFESSIONAL PRACTICE 1**

The school experience program of 25 days provides students with opportunities to continue their observations of educational settings and to apply their professional and discipline studies to the planning, resourceing, 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: EDB50  Prerequisite: EDB323
Credit Points: 12

- **EDB312 PROFESSIONAL PRACTICE 2**

This 20 day school experience program concentrates on developing those generic skills needed for teaching effectively units of work planned by supervising teachers. It challenges students to cater for the individual learning styles of their pupils by incorporating a rich variety of teaching strategies and classroom management approaches in their planning and implementation. The further consolidation of the teaching role of teachers enables students to extend their interests in teachers' broader professional roles in areas such as pastoral care and collegial decision making. Students are expected, through analysis and reflection, to promote praxis between their study of Education and Curriculum subjects and their school and teaching experiences.

Course: EDB50  Prerequisite: Curriculum Studies X/Y, EDB311
Credit Points: 12
EDB313 PROFESSIONAL PRACTICE 3
This program of 20 days in conjunction with the 10
days school experience of Professional Practice 4 is
the final practice teaching component of the Bachelor
of Education course. Aims to extend confidence and
competence in the teachers' roles to a level commen­
surate with entry to successful beginning teaching.
This program subsequently immerses students in the
real world of teaching. Students assume, as far as
practicable, full responsibility for units of work from
planning through to assessment. In addition, students
are challenged to involve themselves fully in the
organised day-to-day activities of the school that draw
upon their teaching and other professional skills such
as self-evaluation and critical reflection.
Course: EDB313 Prerequisite: EDB312
Co-requisite: Curriculum Studies X/Y
Credit Points: 12

EDB314 PROFESSIONAL PRACTICE 4
This unit is structured so that integration is achieved
between an on-campus program and an equivalent
two weeks' off-campus experience in practising
schools. It aims to promote students' conceptualisa­
tion of their final practice teaching experience as a
trial at beginning teaching with the collection of
primary data (eg. interviews, reflective journals) and
the progressive application of selected educational
frameworks, eg. the developmental nature of
teachers' professional practice, analysis of 'begin­
ing-experienced' teaching, empirical research,
decision-making and planning. Students examine the
total role of the beginning teacher within the ecology
of various school systems.
Course: ED50 Prerequisite: EDB312 Co-requisite: EDB313
Credit Points: 12

EDB315 TEACHERS AS
COMMUNICATORS & PROFESSIONAL
PRACTICE 1
This unit, the first of five in the professional practice
strand, is concerned with communication at various
levels and in a range of contexts. Its focus is directed
from traditional/open classroom to the wider
communities encompassing state/private, rural/distance
and aboriginal/migrant education.
Course: EDB315 Prerequisite: EDB314
Contact Hours: 1 hour per week and 3 week block
Credit Points: 12

EDB316 TEACHERS AS MANAGERS &
PROFESSIONAL PRACTICE 2
This unit is the second of five in the Professional
Practice Strand. Its foci are on the management of
planning, implementation and evaluation in the class­
room as well as on the relationship of management
and classroom climate and control.
Course: ED51 Prerequisite: EDB315
Contact Hours: 1 hour per week and 1 day per
week in schools plus 1 day of initial contact.
Credit Points: 12

EDB317 TEACHERS AS CURRICULUM
DECISION MAKERS & PROFESSIONAL
PRACTICE 3
This unit allows students to examine aspects of cur­
iculum decision making and to acquire the
knowledge, skills and processes necessary for short
term and long range planning. Curriculum develop­
ment, curriculum implementation, and curriculum
evaluations are investigated to refine daily, weekly
and term programs. State and Federal initiatives in
curriculum are assessed so that classroom teachers
can confidently interpret curricula for the needs and
capabilities of diverse groups of learners. The block
practice component of the subject provides oppor­
tunities to design, test and refine personal decision­
making models, approaches, strategies and programs.
Courses: ED51, EDB316
Prerequisite: EDB316
Credit Points: 12

EDB318 TEACHERS AS RESPONSIVE
PRACTITIONERS & PROFESSIONAL
PRACTICE 4
This unit, the fourth of the Professional Practice
Strand, is concerned with responding effectively to
the many and varied teaching/learning contexts
within today's classrooms and schools. Its focus is
directed from traditional/open classroom to the wider
communities encompassing state/private, rural/distance
and aboriginal/migrant education.
Course: ED51 Prerequisite: EDB317
Contact Hours: 1 hour per week and 3 week block
in schools following Easter vacation.
Credit Points: 12

EDB319 TEACHERS AS REFLECTIVE
PRACTITIONERS & PROFESSIONAL
PRACTICE 5
Prior to graduation, students need to synthesise the
range of skills, attitudes and knowledge sources that
they have experienced through the course, to ensure
an effective transition into professional practice. This
subject attempts to pursue this goal through further
developing teachers as reflective practitioners, taking
responsibility for the shaping of educational practice
from their own perspective.
Course: ED51 Prerequisite: EDB318
Contact Hours: 1 hour per week and 3 week block
in schools following September vacation.
Credit Points: 12

EDB320 EDUCATION IN CONTEXT
Education and change in a postmodern society; the
implications for education of the complex and diverse
nature of Australian society; the role of policy making
in meeting the educational challenges of the 1990s.
Courses: ED50, ED51, ED52
Credit Points: 12 Contact Hours: 3 per week

EDB321 HUMAN DEVELOPMENT &
EDUCATION
Life span development for students interested in early
childhood, primary, secondary, or adult education.
Theoretical perspectives on human development; so­
cial, emotional and moral development; physical
and motor development; cognitive and language
development; current issues in human development.
Courses: EDB313 EDB315 EDB317
Credit Points: 12 Contact Hours: 3 per week

EDB322 PROFESSIONAL PRACTICE IN
EDUCATION
The nature of teaching, and the role of teachers are
studied using curriculum decision-making and criti­
cally 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 ob­
server, communicator and facilitator of learning.
Courses: ED50, ED51, ED52
Credit Points: 12 Contact Hours: 3 per week
EDB324 LANGUAGE, TECHNOLOGY & EDUCATION
Foundational perspectives on language, technology and communication in educational contexts; language as functional system and social semiotic; educational implications of the interconnections among language, technology, discourse and power; the student as reader and writer of academic prose; introduction to the language and technology of instruction.
Courses: ED50, ED51, ED52
Credit Points: 12 Contact Hours: 3 per week

EDB325 PSYCHOLOGY OF LEARNING & TEACHING
This unit addresses theories of learning, together with related ideas and concepts, and their implications for educators, especially in terms of their capacity to respond to the needs of all learners and to design, organise and manage environments for learning.
Courses: ED50, ED51, ED52
Credit Points: 12 Contact Hours: 3 per week

EDB326 SOCIOLOGICAL & PHILOSOPHICAL ANALYSIS OF EDUCATIONAL PRACTICE
By using the educational disciplines of sociology and philosophy, this subject examines the social, cultural, historical and political contexts of schooling; technologies, practices and strategies employed by schools; the curriculum as a contested site; the place of schooling in the modern state. It encourages critical reflection by students and allows them to engage with others as co-theorists in pedagogical work.
Courses: ED50, ED51, ED52
Credit Points: 12 Contact Hours: 3 per week

EDB330 INDEPENDENT STUDY
Self-initiated and self-directed study in an area of interest which allows study either to a depth not possible in elective units or in an area not covered by the current Bachelor of Education (Pre-Service) course. An Independent Study can be undertaken by any student who has successfully completed 6 semesters of the pre-service BEd or equivalent. Students must meet certain requirements laid down in the Independent Study Guide (QUT) available from the Faculty of Education. Students cannot enrol without the written approval of the Course Coordinator.
Courses: ED37, ED50, ED51, ED52
Credit Points: 12 Contact Hours: 3 per week

EDB331 LEARNING/TEACHING ENVIRONMENTS
This unit enables students to: develop an understanding of the environmental context for learning/teaching; appreciate the range of learning environments in education; develop an understanding of how people interact in different learning environments; and offer opportunities to design learning experiences for people in non-formal learning contexts.
Courses: ED37, ED50, ED51, ED52
Credit Points: 12 Contact Hours: 3 per week

EDB333 DEVELOPING COOPERATIVE ENVIRONMENTS FOR DIVERSE LEARNERS' NEEDS
This unit reviews and extends knowledge about managing learners to meet their needs in purposeful and responsive learning environments. It encourages a reflective and research oriented evaluation of topics which include managerial, environmental and educational conceptions of developing positive relations, teaching for motivation, and contemporary models, structures and frameworks for decision-making, relating to cooperative learning environments.
Courses: ED37, ED50, ED51, ED52
Credit Points: 12 Contact Hours: 3 per week

EDB334 GIFTED LEARNERS
This unit provides a framework for understanding and evaluating the needs of gifted learners. It emphasises identification, learning and teaching styles, sound emotional issues, research findings and resources associated with gifted learners. Provision is also made for some practical work with gifted learners.
Courses: ED37, ED50, ED51, ED52
Credit Points: 12 Contact Hours: 3 per week

EDB336 ABORIGINAL & TORRES STRAIT ISLANDERS, PAST & PRESENT
This introductory unit is designed to give students a basic understanding and awareness of Murri and Torres Strait Islander cultures. Throughout the unit, students will be provided with a holistic approach to learning about the main features of both traditional and contemporary cultures. This knowledge would enhance and assist the individual’s ability to develop effective relationships with the Murri and Torres Strait Islander communities.
Course: ED51
Credit Points: 12 Contact Hours: 3 per week

EDB337 ISSUES IN ABORIGINAL & TORRES STRAIT ISLANDER CULTURE
This unit will continue to develop students’ knowledge about Murri and Torres Strait Islander people, historically, socially and culturally in relation to these changes and will give them the opportunity to explore and investigate areas of interest.
Course: ED51
Credit Points: 12 Contact Hours: 3 per week

EDB338 MURRI & TORRES STRAIT ISLANDER STUDIES: AN INTEGRATED PERSPECTIVE
This unit is intended for students who already have a solid grounding in Aboriginal and Torres Strait Islander history and culture and who have an understanding of the issues that concern Murri and Torres Strait Islander people today. Students will have the opportunity to develop a deeper understanding of the complexities of the cultures of these two distinct groups and to examine and evaluate issues of concern relevant to their areas of interest.
Course: ED51
Credit Points: 12 Contact Hours: 3 per week

EDB440 INDEPENDENT STUDY
Self-initiated and self-directed academic study in an area of educational management interest which allows study either to a depth not possible in electives, or in an area not covered by the course; for requirements see the Independent Study Guide.
Courses: ED23, ED26, ED30, ED51, ED52
Credit Points: 12 Contact Hours: 3 per week

EDB490 RESEARCH METHODS IN EDUCATION
Development of an awareness and understanding of the research process for an historical, sociocultural, ethical and theoretical perspective; the validity, applicability and suitability of various research strategies for specific educational endeavours; comprehension and evaluation of research findings drawn from a variety of perspectives, paradigms and
methodologies; development of skills to conduct research appropriate to answer questions.

Courses: ED23, ED24, ED25, ED26, ED37, ED50, ED51, ED52
Credit Points: 12 Contact Hours: 3 per week

EDN600 RESEARCH METHODS IN EDUCATION
Development of an awareness and understanding of the research process from historical, sociocultural, ethical and theoretical perspectives; the validity, applicability and suitability of various research strategies for specific educational endeavours; comprehension and evaluation of research findings drawn from a variety of perspectives, paradigms and methodologies; development of skills to conduct research appropriate to answer questions critical to particular fields of interest.

Courses: ED11, ED13, ED61, ED71
Co-requisite: EDN601
Credit Points: 12 Contact Hours: 3 per week

EDN601 MAJOR ISSUES IN EDUCATION
Using conceptual frameworks - well-documented perspectives which can be used to generate questions and provide methods for their exploration - as tools in the analysis of current educational debates, to broaden and sharpen an individual's perspective and act as a basis for improving practice; development of skills in accessing and presenting academic arguments.

Courses: ED11, ED13, ED61, ED71
Co-requisite: EDN600
Credit Points: 12 Contact Hours: 3 per week

EDN602 ADVANCED SEMINARS
Students to participate in a unit organised around a particular interest or a visiting expert.

Course: ED13
Credit Points: 12 Contact Hours: 3 per week

EDN603 INDEPENDENT STUDY
Opportunity to study an aspect or topic in a particular specialisation of special interest to students; working autonomously under the supervision of a lecturer.

Courses: ED11, ED13
Credit Points: 12

EDN604 DISSERTATION STAGE 1
Opportunity to extend and synthesise knowledge from the core and area of interest units in either a critical evaluation of a topic in the literature of the student's area of interest or the development of appropriate educational resources; provides the opportunity for formal course work to be synthesised and applied in a manner that reflects how it might be used in future work situations.

Course: ED13 Prerequisites: EDN600, EDN601
Credit Points: 12

EDN606 DISSERTATION STAGE 2
An application of coursework theory to a literature survey, a critical analysis, an evaluation of a portion of an educational program or the development of a curriculum package.

Course: ED13 Prerequisites: EDN600, EDN601
Credit Points: 12 Contact Hours: 3 per week

EDN615 THESIS 1
Provides students with an opportunity to extend and synthesise knowledge from a particular area of interest into a research study; allows the skills and understandings gained from coursework units to be employed in a practical situation.

Course: ED13 Prerequisites: EDN600, EDN610
Credit Points: 12

EDN616 THESIS 2
See EDN615.
Course: ED13
Prerequisites: EDN600, EDN601, EDN615
Credit Points: 12

EDN617 THESIS 3
See EDN615.
Course: ED13
Prerequisites: EDN600, EDN601, EDN615, EDN616
Credit Points: 12

EDN618 THESIS 4
See EDN615.
Course: ED13
Prerequisites: EDN600, EDN601, EDN615, EDN616, EDN617
Credit Points: 12

EDP401 UNDERSTANDING EDUCATION IN CONTEMPORARY AUSTRALIA
The teacher as a professional; classroom practice; school culture and organisation; national issues affecting schooling.

Courses: ED35, ED36, ED37
Credit Points: 12 Contact Hours: 3 per week

EDP402 HUMAN DEVELOPMENT & LEARNING
An analysis of human development through the life span; exploration of how students learn; factors influencing effective learning and teaching.

Courses: ED35, ED36, ED37
Credit Points: 12 Contact Hours: 3 per week

EDP403 TEACHING STUDIES
Strategies for expository teaching and enquiry based learning; generic teaching skills; interactive classroom; basic language and text processing strategies; organisation of the learning environment; lesson and activity planning routines and models.

Courses: ED35, ED36, ED37
Credit Points: 12 Contact Hours: 3 per week

EDP404 TEACHING STUDIES
Strategies for expository teaching and enquiry based learning; generic teaching skills; interactive classroom; basic language and text processing strategies; organisation of the learning environment; lesson and activity planning routines and models.

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

EDP405 UNDERSTANDING EDUCATION IN CONTEMPORARY AUSTRALIA
The teacher as a professional; classroom practice; school culture and organisation; national issues affecting schooling.

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

EDP508 PRACTICUM IN EARLY CHILDHOOD 1
See EDP510.
Course: ED20 Incompatible with: EDP510
Credit Points: 6

EDP509 PRACTICUM IN EARLY CHILDHOOD 2
See EDP511.
Course: ED20 Prerequisite: ED508 Incompatible with: EDP511
Credit Points: 6
EDP510 PRACTICUM IN EARLY CHILDHOOD 1
Observation; planning, implementation and evaluation of curriculum for children in early childhood; communication with children, parents and colleagues; the demonstration of organisational and administrative skills in an early childhood setting.
Course: ED20 Incompatible with: EDP508
Credit Points: 8

EDP511 PRACTICUM IN EARLY CHILDHOOD 2
Observation; design, implementation and evaluation of programs for children in the early childhood age range; communication with children, parents and colleagues; increased responsibility for control and management in the early childhood setting; catering for children in the early childhood age range.
Course: ED20 Prerequisite: EDP510
Incompatible with: EDP509
Credit Points: 8

EDP512 POLICIES & PRACTICES IN EDUCATIONAL MANAGEMENT
Explores the nature of educational policies in Australia; analyses policies to consider social and political influences; addresses educational practices in relation to current policies at various government and organisational levels.
Courses: ED23, ED65
Credit Points: 12 Contact Hours: 3 per week

EDP513 EDUCATIONAL SERVICES MANAGEMENT
Focuses on leadership roles by identifying various leadership skills and effective communication styles. The understanding and facilitation of change will be explored. Consulting, advocacy and empowerment strategies will be identified.
Courses: ED23, ED65
Credit Points: 12 Contact Hours: 3 per week

EDP514 FIELD PROJECT
An applied action research project focussing on the development of a management-oriented program; the delivery and evaluation of the program within an existing educational service.
Courses: ED23, ED65 Incompatible with: EDP516
Credit Points: 12 Contact Hours: 3 per week

EDP515 HUMAN RESOURCE MANAGEMENT IN EDUCATION
This unit investigates staff supervision and appraisal; staff development planning, implementation and evaluation; facilitative skills.
Courses: ED23, ED65
Credit Points: 12 Contact Hours: 3 per week

EDP516 EXTENDED FIELD PROJECT
An applied action research project focussing on the development of a management-oriented program; the delivery and evaluation of the program within an existing educational service will occur. The Extended Field Project will include a research report with greater breadth and depth than the 12 credit point field project.
Course: ED23 Incompatible with: EDP514
Credit Points: 24

EDP601 THE REFLECTIVE PRACTITIONER IN HIGHER EDUCATION
Develops critical, reflective and proficient tertiary educators with a commitment to learning as a lifelong process; begins with and builds upon the various experiences which the participants bring with them.
Course: ED68
Credit Points: 12 Contact Hours: 3 per week

EDP502 ADULT LEARNING & TEACHING IN HIGHER EDUCATION
It is necessary to have a broad understanding of the theory and practice of teaching adults and critically reflect on the appropriateness of particular approaches to the needs, interests and learning styles of adult audiences; involves the application of theoretical perspectives to the practice of teaching adults in varied higher education and contexts.
Course: ED68
Credit Points: 12 Contact Hours: 3 per week

EDP603 HIGHER EDUCATION IN AUSTRALIA: CONTEXT & ISSUES
History of higher education in Australia; current structure and funding of higher education in Australia; major stakeholders and key institutional interfaces; professional associations, TAFE, secondary education, industry, student groups, government.
Course: ED68
Credit Points: 12 Contact Hours: 3 per week

EDP604 PROGRAM DESIGN & EVALUATION IN HIGHER EDUCATION
Identifies and describes the major theoretical underpinnings of educational planning and evaluation; trace the historical shifts within the practice of course design and evaluation; demonstrate skills in evaluation and subsequent planning for course integration; and demonstrate skills in critical analysis of evaluation designs and procedures.
Course: ED68
Credit Points: 12 Contact Hours: 3 per week

EDR700 ADVANCED SEMINARS IN INTERDISCIPLINARY STUDIES IN EDUCATION
Aims to broaden and deepen the student's initial perspective to include elements derived from theoretical perspectives drawn from a number of disciplines; seeks to provide a context for learning for educators who seek the personal and professional benefits that the broadening and deepening of their professional knowledge affords. Includes negotiated seminars program, interdisciplinary study of education, a reading program and presentation of colloquia involving formulation and defence of positions within the context of a community of scholars.
Course: ED11
Credit Points: 48 Contact Hours: 3 per week

EDR701 ADVANCED SEMINARS IN APPLIED EDUCATIONAL RESEARCH
Prepares students for the presentation of a thesis and provides breadth of knowledge in the application of research within the candidate's applied focus; provides experienced educators with advanced programs of study in research methods; the application of research methods to professional practice.
Course: ED11
Prerequisite: EDN600 or equivalent
Credit Points: 48 Contact Hours: 3 per week

EDR702 THESIS
Provides students with an opportunity to extend and synthesise knowledge from the coursework section; allows the coursework to be applied in a manner that reflects how it might be used in future work situations; provides a means of extending the skills and under-
standings gained from formal units to investigate in depth some aspects of the student's professional practice. Focuses on the extension of acquired knowledge to increase the understanding and competence of skilled professional educators; facilitates the application of innovative research but grows out of the professional coursework.

**Course: ED11  Prerequisites: EDR700, EDR701  Credit Points: 144**

**EEB101 CIRCUITS & MEASUREMENTS**
The concepts of voltage, current and electrical impedance, simple electrical circuits (R, L and C) and the measurement of electrical quantities using the oscilloscope, meters and bridges; AC theory, errors in measurement, traceability of measurement.

Courses: EE42, EE43, EE44, IF23, IF53, ME23, ME45, ME46  
Credit Points: 7  Contact Hours: 3 per week

**EEB107 AERONAUTICAL INDUSTRIAL EXPERIENCE 1**
Students must engage in two weeks of approved employment in the aviation industry at the end of the first semester with a view to gaining a general background in aviation; students must submit an industrial experience record which has been completed by both the student and the employer.

Course: EE43  Contact Hours: 2 weeks

**EEB202 ELECTROMAGNETICS**
Introduction to engineering applications of current flow, electrostatic and electromagnetic fields; ideal and loosely coupled transformers - instrument and high frequency transformers; electrical power supply and safety; rotating electrical machines.

Courses: EE43, EE44, IF23, IF53, ME45, ME46  
Credit Points: 6  Contact Hours: 3 per week

**EEB203 CIRCUIT ANALYSIS**
Network theorems, mesh and nodal analysis, complex power; introduction to the concept of steady-state response; introduction to transient response of RL, RC and RCL circuits with step forcing functions; mutual inductance, three phase systems.

Courses: EE43, EE44, IF23  Prerequisite: EEB101  
Credit Points: 5  Contact Hours: 3 per week

**EEB206 INDUSTRIAL EXPERIENCE 1**
Students should engage in at least five weeks of employment, approved by the Head of School; for the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.

Courses: EE43, EE44  Contact Hours: 5 weeks

**EEB209 ELECTRICAL ENGINEERING 2M**
Introduction to the basic principles of microprocessors, microprocessor systems, electrical machines, power control and tariffs; basic level of presentation with heavy emphasis on practical applications.

Course: ME45  
Credit Points: 6  Contact Hours: 3 per week

**EEB272 DIGITAL PRINCIPLES**
Binary variables, number systems, Boolean algebra, minimisation of logic functions, logic gates, analysis and synthesis of combinational logic functions.

Courses: EE44, IF23, IF53  
Credit Points: 3  Contact Hours: 1.5 per week

**EEB273 MICROCOMPUTERS IN ENGINEERING**
Introduction to the physical, virtual and application levels of a microcomputer system; I/O devices and interfacing; operating systems; programming and software packages; transducers and peripheral devices; hardware and software integration.

Course: ME45  
Credit Points: 4  Contact Hours: 2 per week

**EEB302 ELECTROTECHNOLOGY**
Magnetic circuits, magnetic materials, transformers and electro-magnetic devices. Power distribution, three phase, balanced and unbalanced loads.

Courses: EE44, IF23  
Prerequisites: EEB202, EEB203  
Credit Points: 6  Contact Hours: 3 per week

**EEB303 NETWORK THEORY 1**
A detailed study of the basic theory of network analysis covering Laplace and Fourier analysis, four terminal network theory, frequency behaviour and transient response of networks.

Courses: EE43, EE44, IF23  
Prerequisites: EEB203, MAB187, MAB188  
Co-requisite: MAB493  
Credit Points: 8  Contact Hours: 3 per week

**EEB306 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: EE43, 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 ROMs, GALs, etc.

Course: EE43  
Credit Points: 6  Contact Hours: 3 per week

**EEB400 ELECTRICAL POWER SYSTEMS**
Introduction to electrical power systems calculations; technology of overhead lines and cables; elementary electrical engineering economics.

Course: EE44  
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; non-linear analysis techniques for simple networks.

Courses: EE43, EE44, IF23  
Prerequisites: EEB303, EEB362  
Credit Points: 6  Contact Hours: 3 per week
- **EEB404 ELECTRICAL MACHINES**
The fundamentals of torque production in rotating machines; the theory of operation and characteristics of most commonly used machines are then derived from common foundations.
Course: EEB44  
Prerequisite: EEB302  
Credit Points: 6  
Contact Hours: 3 per week

- **EEB406 INDUSTRIAL EXPERIENCE 2**
Students should engage in at least five weeks' employment, approved by the Head of School; for the employment to be recognized, students must submit an industrial experience record form which has been completed by both the student and the employer.
Course: EEB44  
Contact Hours: 5 weeks

- **EEB407 AERONAUTICAL INDUSTRIAL EXPERIENCE 2**
Students must engage in five weeks of approved employment in the aerospace industry at the end of the fourth semester with a view to gaining detailed experience in several aspects of aerospace industry particularly in relation to concepts peculiar to that industry; students must submit an industrial experience record form which has been completed by both the student and the employer.
Course: EEB43  
Contact Hours: 5 weeks

- **EEB430 ENGINEERING FIELDS**
Electrostatic and magnetic fields, Maxwell's Equations and electromagnetic waves.
Courses: EEB43, EEB44 IF23  
Prerequisites: MAB187, MAB188, PHB132, PHB232  
Credit Points: 6  
Contact Hours: 3 per week

- **EEB471 ELECTRONICS**
A detailed study of transistor circuits and their applications; circuits fundamental to the understanding of integrated circuit amplifiers are studied in detail.
Courses: EEB43, EEB44, IF23  
Prerequisite: EEB371  
Credit Points: 8  
Contact Hours: 3 per week

- **EEB473 INTEGRATED CIRCUITS**
The fundamental theory of operation of integrated circuits; the generalised concepts of feedback in electronic circuits; various operational amplifier configurations; oscillators and timing circuits.
Courses: EEB43, EEB44, IF23  
Prerequisite: EEB471  
Credit Points: 6  
Contact Hours: 3 per week

- **EEB474 MICROPROCESSORS**
Microprocessor architecture, instruction sets, assembly language programming; memories, input/output devices and interrupt systems.
Courses: EEB43, EEB44, IF23, IF53  
Prerequisite: EEB372 or EEB373  
Credit Points: 6  
Contact Hours: 3 per week

- **EEB520 CONTROL ENGINEERING**
Measurement transducers, amplifiers, signal processors and final control elements; system components; application of micro-computers to closed-loop control; examples of closed-loop systems; system transfer function and time domain performance.
Courses: EEB43, EEB44, IF23  
Prerequisite: EEB302  
Co-requisite: EEB401  
Credit Points: 6  
Contact Hours: 3 per week

- **EEB531 ELECTRICAL POWER TRANSMISSION**
Equivalent circuits of power equipment; the pu method; power flows in networks, solution by Gauss Seidel; sequence components, fault analysis by sequence methods; power system harmonics; transients due to switching; transmission plant parameters.
Course: EEB44  
Prerequisite: EEB400  
Credit Points: 6  
Contact Hours: 3 per week

- **EEB553 ELECTRICAL POWER EQUIPMENT**
Transmission line parameters, standing voltage and travelling waves on transmission lines; introduction to protection of systems. CTs, VTs protection methods of electrical equipment.
Course: EEB44  
Prerequisite: EEB400  
Credit Points: 6  
Contact Hours: 3 per week

- **EEB62 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: EEB43, EEB44, IF23  
Prerequisites: EEB303, EEB362, MAB4493/1, MAB403/2  
Credit Points: 6  
Contact Hours: 3 per week

- **EEB563 SIGNALS & LINEAR SYSTEMS**
A detailed study of Fourier theory applied to signals; an overview of systems and their representation; response of systems to signals.
Courses: EEB43, EEB44, IF23  
Prerequisites: EEB303, EEB362, MAB4493/1, MAB403/2  
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: EEB44, IF23  
Prerequisite: EEB471  
Credit Points: 6  
Contact Hours: 3 per week

- **EEB591 SYSTEMS PROGRAMMING LANGUAGES**
Introduction to embedded systems and software design using C, C++ and object oriented Pascal; engineering applications for embedded systems.
Courses: EEB44, IF23  
Prerequisite: EEB474  
Credit Points: 6  
Contact Hours: 3 per week

- **EEB600 STARTING A TECHNOLOGY BASED BUSINESS**
Business structures, forming a business team, marketing and market research, financing new high-risk business, selling yourself with business plans and
presentation skills, product development, manufacturing and distribution, inventions, networking.

Courses: EE44, ME45
Credit Points: 4 Contact Hours: 2 per week

**EEB601 REAL-TIME OPERATING SYSTEMS**

Theory and practical aspects of the use of microprocessors and computers as components in time critical engineering applications; methods of guaranteeing computer response within a specifiable time; applications related to embedded systems and some business applications; design of new systems and study of existing systems.

Courses: EE43, EE44, IF23 Prerequisite: EEB591
Credit Points: 6 Contact Hours: 3 per week

**EEB602 SIGNAL PROCESSING**

Develop techniques for the analysis of stationary random signals in linear systems. Review of probability theory and statistics; stochastic processes; correlation functions; power density spectrum; random signals and linear systems; matched filters; detection and estimation theory; overview of practical applications.

Courses: EE43, EE44, IF23 Prerequisite: EEB361, EEB401, MAB893
Credit Points: 6 Contact Hours: 3 per week

**EEB606 INDUSTRIAL EXPERIENCE 3**

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

Course: EE44 Contact Hours: 5 weeks

**EEB607 AERONAUTICAL INDUSTRIAL EXPERIENCE 3**

Students must engage in 5 weeks of approved employment in the aerospace industry at the end of the sixth semester with a view to gaining specific information and experience in some aspect of aerospace industry; for the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.

Course: EE43 Contact Hours: 5 weeks

**EEB620 CONTROL SYSTEMS ANALYSIS**

Time-domain, frequency-domain, and complex-domain analysis of systems; closed-loop control system performance and system compensation; digital computer control of closed-loop systems; analogue and digital simulation of systems.

Courses: EE43, EE44, IF23 Prerequisite: EEB520
Credit Points: 6 Contact Hours: 3 per week

**EEB621 ADVANCED CONTROL SYSTEMS**

System performance specification format; selection of control system elements; design of linear system compensation using analogue and digital techniques; system non-linearities and non-linear system analysis and design; examples of typical control systems.

Courses: EE44, IF23 Prerequisite: EEB620
Credit Points: 6 Contact Hours: 3 per week

**EEB622 POWER ELECTRONICS**

Review of modern switching components, characteristics and device control methods; principles of operation of controlled rectifiers and chopper techniques for DC motor control; quasisquare and PWM inverters for induction and synchronous motor control; static switches for induction motor soft start control and static VAR compensation; induction motor drive and DC motor drive control strategies; harmonic analysis and waveform modelling analysis.

Course: EE44 Prerequisite: EEB573
Credit Points: 7 Contact Hours: 3 per week

**EEB651 INFORMATION THEORY & NOISE**

Information in discrete and continuous channels, coding efficiency, statistical description of noise, effects of transformations on signal parameters, error rates, effect of noise in information transfer.

Courses: EE43, EE44, IF23 Prerequisite: EEB362, MAB493
Co-requisite: EEB581
Credit Points: 6 Contact Hours: 3 per week

**EEB662 MICROWAVE & ANTENNA TECHNOLOGY**

Propagation in rectangular and circular guides, guide components, microwave active devices, high frequency techniques, antennas, antenna arrays, computer-aided antenna design, antenna measurements.

Courses: EE43, EE44 Prerequisite: EEB562
Credit Points: 7 Contact Hours: 3 per week

**EEB680 AEROSPACE DESIGN 2**

Designing for reliability as required by the aviation and aerospace industry will augment practical design assignments; assignments require that design problems be solved analytically and the results confirmed by equipment construction and practical measurement; computer-aided design, computer simulation and programming may be required.

Course: EE43 Prerequisite: EEB362, EEB400, EEB580, EEB620
Credit Points: 6 Contact Hours: 3 per week

**EEB691 AERONAUTICAL COMPUTING**

Suitable languages such as Ada will be used to implement embedded avionics computer systems and practical experience will be gained in the application of object-oriented software design, concurrency and distributed systems used in the aerospace industry.

Course: EE43 Prerequisite: CSB490
Credit Points: 6 Contact Hours: 3 per week

**EEB692 SPACE TECHNOLOGY**

Review of world launch capability; spherical trigonometry; orbits and trajectories; eg. launch orbits, geostationary orbits; GPS satellite orbit requirements; gravitational fields; Lagrange points; orbital dynamics and parameters; special purpose orbits; tracking data; payload techniques; upper atmospheric meteorology and astronomy.

Course: EE43
Credit Points: 6 Contact Hours: 3 per week

**EEB722 FLIGHT CONTROL SYSTEMS**

Principles and description of flight control systems; performance of aircraft in flight; analysis and simulation of flight control systems; cross-coupling parameters; methods of coupling terrain following radar and other navigational aids; mechanical systems; analogue augmented systems; digital augmented systems; digital computer control relating to multiplex buses (Mil spec); artificial stability; automatic pilots during flight and landing; fibre optic control; fly-by-wire systems; use of redundancy.

Course: EE43 Co-requisite: EEB947
Prerequisite: MEB551, MEB553, MEB611
Credit Points: 6 Contact Hours: 3 per week

**EEB741 POWER SYSTEMS ANALYSIS**

Economic operation of power systems, system stability, power system control; HVDC power trans-
mission; advanced harmonic analysis; surge phenomena in machine and transmission lines.

Courses: 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 coodination, HV switchgear.

Courses: EE44
Credit Points: 6
Contact Hours: 3 per week

■ EEB761 STATISTICAL COMMUNICATION

PCM quantisation noise in uniform and non-uniform quantisation; effects of channel noise on S/N; delta and delta-sigma modulations; threshold extensions; spread spectrum, matched filtering and correlation.

Courses: EE44, IF23
Prerequisite: EEB661
Credit Points: 7
Contact Hours: 3 per week

■ EEB780 AEROSPACE DESIGN 3

Practical design assignments consisting of detailed design and realisation of typical sub-systems used in all areas of the avionics industry; assignments require that design problems be solved analytically and the results confirmed by equipment construction and practical measurement; computer-aided design, computer simulation and programming may be required.

Course: EE43
Prerequisites: EEB474, EEB602, EEB680
Co-requisites: EEB947, MEB790
Credit Points: 6
Contact Hours: 3 per week

■ EEB784 AEROSPACE PROJECT

An individual engineering project on a special subject. The work requires design, computing, construction and experimental work and practical testing with the submission of appropriate reports; the topic is selected from aerospace engineering and involves electronics, computing, control, communication and electrical power; it may include programming, circuit and system design.

Course: EE43
Credit Points: 27
Contact Hours: 6 per week

■ EEB788 DESIGN 2

Design principles and practice of more complex electronic circuits; electrical equipment and systems.

Courses: EE44, IF23
Prerequisites: EEB302, EEB587
Credit Points: 8
Contact Hours: 3 per week

■ EEB789 PROJECT

An individual engineering project on a specified topic will be completed; the work will require, design, computing, construction, experimental work and practical testing with the submission of appropriate reports; the topic will be selected from any area which involves electronics, computing, control, communication and educational power and may include programming, circuit and system design.

Courses: EE44, IF23
Co-requisites: This unit must be done in the final year of the course.
Credit Points: 30
Contact Hours: 6 per week

■ EEB820 ENGINEERING MANAGEMENT

Economic analysis of electrical engineering projects; present worth and annual cost calculations. Assessment of tenders; project management, critical path and linear programming methods; contract administration. Engineering case studies.

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

■ EEB821 PRODUCTION TECHNOLOGY & QUALITY

The methodology of electronic system design, the range of production processes in electronic manufacture, and the quality control procedures at both prototype and full production stages.

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

■ EEB841 MINING ELECTROTECHNOLOGY

Definition of hazardous locations; methods of protection of electrical equipment; intrinsically safe circuits, flame proof equipment; power supply systems in mines; planning, voltage regulation, fault levels, dynamic operation; earthing in mines; monitoring and control equipment; communications systems in mines; testing and certification of mining equipment; gas explosion testing; assessment of intrinsically safe equipment, CTI testing; temperature rise and high current testing.

Course: EE44
Prerequisite: EEB531
Credit Points: 7
Contact Hours: 3 per week

■ EEB880 AEROSPACE DESIGN 4

Practical design assignments consisting of the realisation of complete system designs for a specific aspect of the avionics industry; assignments require that design problems be solved analytically and the results confirmed by equipment construction and practical measurement; factors such as reliability, complexity, economic considerations and system (and sub-system) optimisation; computer-aided design; computer simulation and programming may be required.

Course: EE43
Prerequisite: EEB780
Credit Points: 7
Contact Hours: 3 per week

■ EEB887 DESIGN 3

Detailed design and realisation of typical electronic and power based sub-systems used in all areas of electronic systems and power systems engineering.

Course: EE44, IF23
Prerequisite: EEB788
Credit Points: 6
Contact Hours: 3 per week

■ EEB888 DESIGN 4

System design techniques and practice on typical electronic systems and power systems, taking into account such factors as realisability, reliability, complexity, economic considerations and optimisation.

Course: EE44, IF23
Prerequisite: EEB887
Credit Points: 10
Contact Hours: 3 per week

■ EEB890 ADVANCED INFORMATION TECHNOLOGY TOPICS

The latest techniques in information engineering systems: image enhancement, image restoration, computer vision; practical aspects of digital spectral estimation and linear system identification.

Course: EE44
Prerequisites: EEB591, EEB602, MAB894
Credit Points: 7
Contact Hours: 3 per week

■ EEB891 SIGNAL COMPUTING & REAL-TIME DSP

Signal theory; speech processing; image processing and real time DSP; the fundamentals of signal processing concepts; applications of signal processing techniques.

Courses: EE44, IF23
Prerequisites: EEB602, EEB968, EEB967
Credit Points: 8
Contact Hours: 3 per week
■ EEB901 INDUSTRIAL EXPERIENCE 1
Students should engage in at least five weeks employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
Course: IF23 Contact Hours: 5 weeks

■ EEB902 INDUSTRIAL EXPERIENCE 2
See EEB901.
Course: IF23 Contact Hours: 5 weeks

■ EEB903 INDUSTRIAL EXPERIENCE 3
See EEB902.
Course: IF23 Contact Hours: 5 weeks

■ EEB922 COMPUTER CONTROLLED SYSTEMS
Computer control of typical process control systems; numerical control of machine tools and an introduction to robotics; optimal control and self-adaptive control systems; sequential control systems.
Courses: EE44, IF23 Prerequisite: EEB621 Credit Points: 7 Contact Hours: 3 per week

■ EEB932 AUTOMATIC FLIGHT CONTROL
Derivation of transfer functions for aircraft and missiles including effects of vibration on servo systems along with servo actuators and sensors; use of conventional and modern control theory to analyse and design lateral-directional stability augmentation systems and control augmentation systems; study of autopilot design for various tasks including turn co-ordination and automatic landing, stabilisation of aircraft and adaptive control systems.
Course: EE43 Co-requisite: EEB947 Prerequisites: MEB551, MEB553, MEB611 Credit Points: 7 Contact Hours: 3 per week

■ EEB933 COMBAT SYSTEMS
Sound generation propagation and analysis in the maritime environment; principles and application of lasers to sighting and guidance systems; principles of detection of submarines using magnetometers; infrared propagation and its use in detection and weapons guidance; including ECM/ECCM; sonar processing; laser processing and guidance; radar guidance/sighting; gun sights; weapons control systems; IFF/transponders; command and control; magnetic anomaly detection; tactical nav systems; infra-red.
Course: EE43 Prerequisite: EEB947 Credit Points: 7 Contact Hours: 3 per week

■ EEB934 ADVANCED COMMUNICATIONS & NAVIGATION SYSTEMS
Expansion of previous theory; develop an increased understanding of systems previously described; complex algebra required for error-correcting codes and auto-correlation and cross-correlation of pseudo-noise sequences; investigation and simulation of error-correcting communication systems; detailed investigation into modern communication systems; theory of acquisition and tracking using delay-lock and similar techniques; use of fast-fourier and parallel processing the Global Positioning System (GPS); position fixing using GPS.
Course: EE43 Co-requisite: EEB947 Prerequisites: EEB362, EEB562, EEB662, EEB968 Credit Points: 7 Contact Hours: 3 per week

■ EEB935 ADVANCED SATELLITE SYSTEMS
Design of communication systems for spacecraft; spacecraft and ground stations performance; special modulation methods; coherent frequency translation modes of operation; analysis of intermodulation distortion; carrier regeneration or synchronisation and acquisition and tracking requirements; analogue and digital processing of signals in the presence of noise; factors affecting accuracy of ranging; characterisation of spacecraft components and a critical evaluation of alternative design methods; design parameters of various aerial systems; design of low-noise amplifiers; description of B-MAC television system.
Course: EE43 Prerequisites: MEB692, MEB790 Credit Points: 7 Contact Hours: 3 per week

■ EEB947 RADAR & RADIO NAVIGATIONAL AIDS
Radar equation; theory of reception; matched filtering; principles of detection; types of radars; primary and secondary radar; surveillance; tracking; navigation; terrain-following radar; radar techniques including doppler extraction, moving target indicator, pulse compression, ranging parameter optimisation, application of matched filtering and Wiener and Kalman filtering; detailed and systematic study of navigational systems; microwave landing systems.
Course: EE43 Prerequisites: EEB561, EEB562, EEB662, EEB968 Credit Points: 6 Contact Hours: 3 per week

■ EEB951 HIGH VOLTAGE EQUIPMENT
Review of modern insulting materials; high voltage test methods and apparatus; characteristics of electrical insulation theories of breakdown in dielectrics; non-destructive testing methods, dielectric loss angle, partial discharge; voltage surge distribution in power equipment; overhead line insulation and lightning.
Course: EE44 Co-requisite: EEB742 Credit Points: 7 Contact Hours: 3 per week

■ EEB954 ELECTRICAL ENERGY UTILISATION
Power reticulation in building, energy management, fire protection systems, illumination technology, air conditioning plant, building supervising and control systems, lifts.
Course: EE44 Prerequisite: EEB553 Credit Points: 7 Contact Hours: 3 per week

■ EEB955 POWER ELECTRONICS APPLICATIONS
Review of power electronic switching devices; variable speed AC and DC drives; high voltage DC transmission (HVDC); standard static VAR compensators and new developments. Uninterruptible power supplies (UPS); induction heating; high frequency switching technology in variable speed AC drives; power electronic physical layout considerations.
Courses: EE44, IF23 Prerequisite: EEB682 Credit Points: 7 Contact Hours: 3 per week

■ EEB956 PHOTOVOLTAIC ENGINEERING
This unit deals with the various aspects of photovoltaic systems including flat panel and concentrating solar cell arrays, series-parallel connection for optimal array design, array measurements, power conditioning, load management, energy storage, system costs, and balance, of sub-systems.
Course: EE44 Prerequisite: EEB587 Credit Points: 7 Contact Hours: 3 per week

■ EEB961 COMMUNICATIONS TECHNIQUES
Modern communication techniques including switched networks, broadcast, point-to-point sys-
systems; microwave and optical links; radio navigation and radar; associated electronic devices.
Courses: EE44, IF23  Prerequisite: EEB967
Credit Points: 7  Contact Hours: 3 per week

**EEB962 MICROWAVE SYSTEMS ENGINEERING**

Microwave thermionic and semiconductor devices; amplifier design using scattering parameters; passive microwave devices; non-linear networks and ferrites; array theory and design, microwave antennas.
Courses: EE44, IF23  Prerequisite: EEB962
Credit Points: 7  Contact Hours: 3 per week

**EEB967 DIGITAL COMMUNICATIONS**

The theory and applications of digital communication 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: EE44, IF23  Prerequisite: EEB967
Credit Points: 7  Contact Hours: 3 per week

**EEB968 DIGITAL SIGNAL PROCESSING**

Introduction to digital signal processing; discrete Fourier transform; discrete convolution; digital filtration and spectral estimation.
Courses: EE44, IF23  Prerequisite: EEB962
Credit Points: 6  Contact Hours: 3 per week

**EEB969 DIGITAL SPECTRAL ANALYSIS**

Modern spectral estimation, parametric and non-parametric; time frequency analysis and instantaneous frequency estimation; definition and implementation of higher order spectra; application to signal detection and classification.
Courses: EE44, IF23  Prerequisite: EEB968
Credit Points: 7  Contact Hours: 3 per week

**EEB971 APPLIED ELECTRONICS**

Analysis of the characteristics and applications of a variety of integrated devices; particular attention is given to new products; errors and quality of design.
Courses: EE44, IF23  Prerequisite: EEB973
Credit Points: 6  Contact Hours: 3 per week

**EEB972 INTEGRATED ELECTRONIC TECHNIQUES**

Commercially available integrated circuits and their typical applications in industry; design rules, limitations and methods of VLSI fabrication.
Courses: EE44, IF23  Prerequisite: EEB973
Credit Points: 7  Contact Hours: 3 per week

**EEB980 AEROSPACE LAW**

Aviation law, national and international; cargo constraints, restricted airspace, transport of people and animals, dangerous cargo and firearms; the division of the upper atmosphere and space; insurance.
Course: EE43
Credit Points: 7  Contact Hours: 3 per week

**EEP101 ALGORITHMS FOR CONTROL & SIGNAL PROCESSING**

Courses: EE65, EE75
Credit Points: 12  Contact Hours: 3 per week

**EEP102 UNIX & C FOR ENGINEERS**

Introduction to Operating Systems; commonly used commands; the file structure; the Shell; the vi Editor, Shell script. Types, operators and expressions, control flow, functions, pointers and arrays, structures, input and output. Applications of C and Unix in real time signal processing and control.
Courses: EE65, EE75
Credit Points: 12  Contact Hours: 3 per week

**EEP103 COMPUTER HARDWARE & INTERFACING**

State-of-the-art digital devices; design and implementation of digital systems; microprocessors and microcontroller systems and interfacing; computer architectures, subsystems and peripherals.
Courses: EE65, EE75
Credit Points: 12  Contact Hours: 3 per week

**EEP104 REAL-TIME OPERATING SYSTEMS**

Definition and introduction: review of current commercial real time operating systems, including RT-11 and UNIX-like operating systems. Structure: management; input/output management; file management; resource allocation and scheduling; protection; job control and multi-tasking. Development of programming skills: structured programming techniques, modular programming techniques; documentation of programs; interrupt handling techniques. Using assembler and high-level languages (C, Fort, Ada, Pascal, Modula-2 etc).
Courses: EE65, EE75
Credit Points: 12  Contact Hours: 3 per week

**EEP120 NETWORKS & DISTRIBUTED COMPUTING**

The Open System Interconnection model and the more common standards (such as CCITT, IEEE and MAP) which support the model; layers 3-7 (covered in depth); layers 1 and 2 (covered by reference); the computers, software packages, and protocols; network structures (tree structures, multi-drop, star structures), software techniques (such as collision detection, tokens), data transfer protocols; examples of local area networks and wide area networks; hardware implementation of OSI layers and protocols.
Courses: EE65, EE75
Credit Points: 12  Contact Hours: 3 per week

**EEP121 PARALLEL & SUPER COMPUTING**

The latest in vector processing and parallel computing technology; students will have access to parallel computer development systems and may be required to undertake a small research project.
Course: EE65
Credit Points: 12  Contact Hours: 3 per week

**EEP122 GRAPHICS & COMPUTER VISION**

An introduction to the human visual system and the modelling of digital images; it also provides an introduction to a range of digital image process systems, transforms, image enhancement, image structural operations and pattern recognition.
Course: EE65
Credit Points: 12  Contact Hours: 3 per week
EEP123 PROCESS CONTROL & ROBOTICS
Introduction to robotics; introduction to CNC machine tools; process control; controller tuning; plant characterisation and process optimisation; computer simulation and algorithms.
Courses: EE65, EE75
Credit Points: 12 Contact Hours: 3 per week

EEP124 DATA COMMUNICATIONS
The OSI Model - overview; examples of channels; physical layer interface standards; multiple access methods; modems; data coding error detection and correction; data compression encryption; public networks.
Courses: EE65, EE75
Credit Points: 12 Contact Hours: 3 per week

EEP125 ADVANCED ENGINEERING SOFTWARE TOOLS
Numerical techniques and computer software tools in procedural and non-procedural languages as well as specialised commercial applications packages for the analysis and design of data transmission systems.
Course: EE65
Credit Points: 12 Contact Hours: 3 per week

EEP126 COMMUNICATIONS DIGITAL SIGNAL PROCESSING
Source and channel coding; waveform coding; adaptive filtering in communication; applications of speech technology in communication; applications of DSP technology; real time DSP devices and their applications in communications.
Course: EE75
Credit Points: 12 Contact Hours: 3 per week

EEP127 ADVANCED TOPIC B
An advanced topic in the field of computers and communication engineering. This topic will change from year to year and will be announced at the beginning of the year.
Course: EE75
Credit Points: 12 Contact Hours: 3 per week

EEP128 DETECTION & ESTIMATION
Introduction to the theory of random variables and probability; signal detection; hypothesis tests, Neyman-Pearson detectors; uniformly most powerful tests for Gaussian case. Examples of detection of: an unknown deterministic signal in Gaussian noise of known probability distribution; Matched-Filter interpretation; a Gaussian signal of known distribution in Gaussian noise of known distribution. Detection in the non-Gaussian case. Parameter estimation: the Maximum Likelihood Estimator.
Course: EE75
Credit Points: 12 Contact Hours: 3 per week

EEP129 IMAGE PROCESSING & COMPUTER VISION
Image representation and modelling; image enhancement; image restoration; boundary detection techniques and algorithms; image segmentation; shape description techniques; neighbourhood operators; mathematical morphology.
Courses: EE65, EE75
Credit Points: 12 Contact Hours: 3 per week

EEP135 ADVANCED DIGITAL SIGNAL PROCESSING
General properties of stationary processes; basic spectral properties of the processes; practical aspects of digital spectral estimation; identification of linear systems; digital higher-order spectral estimation; identification of non-linear systems; an update in the advances in digital signal processing.
Course: EE75
Credit Points: 12 Contact Hours: 3 per week

EEP137 ADVANCED TOPIC A
An advanced topic in the fields of computers and communication engineering. This topic will change from year to year and will be announced at the beginning of the year.
Course: EE75
Credit Points: 12 Contact Hours: 3 per week

EEP201 FUNDAMENTALS OF POWER SYSTEM EARTHING
Electrode resistance, potential gradient areas of common types of electrodes; multiple electrodes; electric shock, calculation of step and touch potentials; introduction to substation earthings; measurement of soil resistivity and electrode resistance; earthings of transmission lines; earth current distribution on faulted lines; distribution systems: MEN, SWER, safety during faults; flow of lightning currents to ground.
Courses: EE60, EE78, EE82
Credit Points: 4 Contact Hours: 3 per week

EEP202 THERMAL RATINGS & HEAT TRANSFER
Thermal conduction in simple geometries; forced and natural convection from plates and cylinders; radiation from hot surfaces; calculation of steady-state and time-varying temperatures in conductors; temperature measurement methods for high voltage equipment; thermal ratings of overhead lines; cable rating; temperature rise of power transformers.
Courses: EE60, EE78, EE82
Credit Points: 4 Contact Hours: 3 per week

EEP203 TESTING & CONDITION MONITORING
HV testing; temperature rise testing of electrical equipment; insulation testing; oil testing; condition monitoring systems.
Courses: EE60, EE78, EE82
Credit Points: 4 Contact Hours: 3 per week

EEP204 POWER SYSTEM LOAD FLOW ANALYSIS
p.u. revision; data collection methods; load flow algorithms; single and three-phase models; load flow applications; base case and contingency analysis in planning augmentation options; system operations in contingency analysis; load flow analysis methodology; practice in analysis of transmission and distribution systems using an interactive package.
Courses: EE60, EE78, EE82
Credit Points: 4 Contact Hours: 3 per week

EEP205 POWER SYSTEM FAULT CALCULATIONS
Representation of generators, lines, transformers in positive sequence equivalent circuits; unbalanced fault conditions; complete sequence representation of power system equipment; per unit positive, negative and zero sequence network diagrams; calculation of generator and transformer sequence equivalent circuits from manufacturer's test data; calculation of line sequence impedances from line layout and soil resistivity; interference with telecommunications circuits; short circuit calculations to AS3581 using an interactive computer package.
Courses: EE60, EE78, EE82 Prerequisite: EEP204
Credit Points: 4 Contact Hours: 3 per week
• EEP206 PROJECT MANAGEMENT
Activity networks; Basic Time Schedules and Gantt charts; project management packages - output reports, exercises related to electricity supply; analysis of critical path; types of resources; resource profiles and resource scheduling; methods of project administration and reporting; multi-project scheduling.
Courses: EE60, EE78, EE82
Credit Points: 4 Contact Hours: 3 per week

• EEP207 OVERHEAD TRANSMISSION LINE ROUTE SELECTION
Legislation, standards and guides: radio interference, electromagnetic fields, low frequency induction, touch potentials, structure earthing, electrolytic corrosion, clearances, land legislation, environmental impact statements; current safety and environmental issues; requirements of other public utilities - Telecom, Railways, roadworks, marine, water, gas, oil; cost of environmental enhancements and alternative technologies; right of way; route selection principles; structure types, terrain shielding, identification of material and man-made features.
Courses: EE60, EE78, EE82
Credit Points: 4 Contact Hours: 3 per week

• EEP208 ECONOMIC ANALYSIS FOR POWER SYSTEMS ENGINEERS
Cost of supply and tariff analysis; principles of economic analysis; methods of economic analysis; total life cycle costs of plant; cost benefit analysis for engineering decision making; budgeting and cost control.
Courses: EE60, EE78, EE82
Credit Points: 4 Contact Hours: 3 per week

• EEP209 POWER SYSTEM HARMONICS
Generation of harmonics; system response characteristics; effects of harmonics; reactive power compensation and harmonic control; measurement of harmonics; recommended practices including AS2279.
Courses: EE60, EE78, EE82 Prerequisite: EEP205
Credit Points: 4 Contact Hours: 3 per week

• EEP210 ABNORMAL SYSTEM VOLTAGES
Supply quality standards; 50 Hz voltage; negative phase sequence voltages; AS1359 requirements; voltage unbalance studies, modelling, measurement; voltage transients and flicker: AS2279 requirements, disturbance loads, remedial measures, transient disturbances and power system plant; power system transient analysis: EMTP studies; measurement of voltage disturbances: instrumentation, transducers, accuracy.
Courses: EE60, EE78, EE82 Prerequisite: EEP205
Credit Points: 4 Contact Hours: 3 per week

• EEP211 BASIC POWER SYSTEM PROTECTION
Protection principles and philosophy; power system components; unit and non-unit protection; relay equipment technology; relay application; equipment acquisition; basic relay setting methods; testing of relays and protection systems; protection operations.
Courses: EE60, EE78, EE82 Prerequisite: EEP205
Credit Points: 4 Contact Hours: 3 per week

• EEP212 ADVANCED POWER SYSTEM PROTECTION
Revision of fault level calculations; protection schemes; current and voltage transformer transient characteristics; relay setting calculations; design and specification of protection schemes; modern 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 ESL.
Courses: EE60, EE78, EE82 Prerequisite: EEP214
Credit Points: 4 Contact Hours: 3 per week

• EEP215 RELIABILITY
Reliability models; reliability analysis methods; corporate reliability standards; fundamentals of reliability assessment; reliability theory; determination of equipment failure rates and repair times; interval between failures, time to repair, failure modes and effects.
Courses: EE60, EE78, EE82 Prerequisite: EEP213
Credit Points: 4 Contact Hours: 3 per week

• EEP216 TRANSMISSION LINE DESIGN - ELECTRICAL
Electrical design of transmission lines with ratings of 33kV to 500kV; standard and new technology insulators: power frequency, impulse and switching flashover voltage, pollution and creepage, wet and dry flashover, mechanical characteristics; feasible structure types; tower footing resistance and counterpoise; insulation co-ordination methodology; determination of RI using state of the art methods; design to ensure that electrostatic and electromagnetic fields do not exceed NH & MRC guidelines.
Courses: EE60, EE78, EE82 Prerequisite: EEP216
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 string 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 Prerequisite: EEP217, EEP216
Credit Points: 4 Contact Hours: 3 per week
■ EEP218 INTRODUCTION TO AUTOMATED SYSTEM CONTROL & SUPERVISORY SYSTEMS

SCADA fundamentals and protocols; SCADA equipment; transmission SCADA systems, distribution automation systems, distribution control systems, PC software applications; alarm philosophy and control principles; specification of MMI; computer system platforms; communication system principles; data communications and I/O capacities and types, I/O processing; application of SCADA systems to transmission and distribution systems; cost/benefits of alternative schemes.

Courses: EE60, EE78, EE82
Credit Points: 4 Contact Hours: 3 per week

■ EEP219 HIGH VOLTAGE SUBSTATION EQUIPMENT, POWER TRANSFORMERS & REACTIVE POWER PLANT

Principles of power transformer design from distribution transformers to EHV transformers; leakage and magnetising reactance; losses, harmonics and inrush currents; short circuit forces; tests to measure ratio, losses, impedance, phasing, temperature rise; accuracy and traceability of tests; interpretation of test results; surge phenomena in windings, RSG and impulse testing of power transformers, interpretation of test results; oil cooling systems; fire protection; tap changes 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/phase at identified model frequencies; time domain dynamic simulations of power system operation; numerical models for prediction of large disturbance behaviour of interconnected power systems; stability of system under contingency and emergency conditions; stability improvement using: controlled reactive devices, special control systems, braking resistors, U/F load shedding, FACTS.

Courses: EE60, EE78, EE82
Prerequisite: EEP205
Credit Points: 4 Contact Hours: 3 per week

■ EEP222 MAINTENANCE OF ELECTRICITY SUPPLY SYSTEMS

Establishment of maintenance policies; maintenance planning; data recording and analysis; maintenance operations; maintenance program evaluation; assessment against KPI, modification of programs to account for continuing defects and failures or to reflect changing technologies.

Courses: EE60, EE78, EE82
Prerequisites: EEP208, EEP215
Credit Points: 4 Contact Hours: 3 per week

■ EEP223 LOAD FORECASTING

Nature of load patterns: categories of DSM, costs of DSM, options, benefits and limitations to DSM; tariffs and their impact; impact of economic trends on demand growth; load manipulation; load forecast methods; establishment of base loads from: historical load data, customer load predictions, and other contributing factors; prediction of growth rates; generation of load forecasts.

Courses: EE60, EE78, EE82
Prerequisites: EEP208, EEP213
Credit Points: 4 Contact Hours: 3 per week

■ EEP224 POWER SYSTEM OPERATION

Frequency control and AGC under normal load conditions, operation under emergency and contingency conditions, black starting, load shedding philosophy; generation operation; contract fuel prices, variations, automatic generation control systems; analysis of power station operating costs; establishment of optimum operating costs; management of forced outages; coordination of planned outages including assessment of risks and contingency planning; control of reactive power and voltage levels under normal and abnormal conditions; load reduction - instantaneous, delayed and planned; maintenance of consumer services and records.

Courses: EE60, EE78, EE82
Prerequisites: EEP202, EEP212, EEP215, EEP218, EEP221, EEP223
Credit Points: 4 Contact Hours: 3 per week

■ EEP230 THESIS A

Students work in industry for 100 days of supervised practice in industry. As part of this practical training, one or more linked topics are identified that are related to the work of the section in which the training is carried out. A masters thesis is prepared describing results of studies done by the student during the practical training.

Course: EE78

■ EEP231 THESIS B

Work done in this unit and the related unit EEP230 are examined by submission of a single masters thesis.

Course: EE78

■ EEP300 RESEARCH PROJECT

A computer engineering research project in the student's chosen field encompassing a literature search, design, hardware construction or writing of software, testing and publication of a thesis.

Course: EE75
Credit Points: 48 Contact Hours: 168 hours total

■ EEP301 PROJECT

Students carry out research or development work on a mini project in specified areas.

Course: EE75
Credit Points: 12 Contact Hours: 3 per week
Introduction to electric motors, generators, transformers and three phase systems.

Course: ME23
Credit Points: 6
Contact Hours: 3 per week

Process control system terminology and symbols; review of hardware; chart recorders; sizing of control valves; measurement of mass flow rate, 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, servo systems, machine control systems.

Course: EE22
Credit Points: 7
Contact Hours: 3 per week

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

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

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

Single line diagrams, pu systems, transmission line equivalent circuits, fault calculations, power flow calculations, overhead line and underground cable characteristics, power system insulation.

Course: EE22
Prerequisite: EET350
Credit Points: 7
Contact Hours: 3 per week

Three phase transformers, multivinding, 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

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

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

Oscilloscope 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

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

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

Sampling, reconstruction, spectra; quantisation, dynamic range and noise; PCM methods and circuitry, companding; delta modulation; digital trans-
mission, TDM, FDM, modulation methods; error correction and data communication protocols.

Course: EE22  
Prerequisite: EET660  
Credit Points: 7  
Contact Hours: 3 per week

■ EET791 COMPUTER PROGRAMMING 2
Development of the concepts introduced in CST390 to include the full range of features in this language; an introduction to the features of FORTRAN.

Course: EE22  
Prerequisite: CST390  
Credit Points: 7  
Contact Hours: 3 per week

■ EET840 SUBSTATIONS & PROTECTION SYSTEMS
Study insulation coordination principles, substation layout and equipment including circuit breakers, current and voltage transformers and their characteristics; an introduction to sequence components and fault calculations; a description of different types of protection systems and their integration with the power system, especially substations.

Course: EE22  
Prerequisite: EET642  
Credit Points: 7  
Contact Hours: 3 per week

■ EET860 COMMUNICATIONS TECHNOLOGY
Broadcast radio and TV, terrestrial and satellite; specialised broadcast systems, eg. police, taxi; point-to-point radio communications; telemetry; switched systems; circuit and packet switching, exchangers, traffic; use of different frequency ranges, VLF, MF, HF, VHF, UHF and SHF for radio communications; a number of compulsory industrial visits are arranged.

Course: EE22  
Prerequisite: EET570  
Credit Points: 7  
Contact Hours: 3 per week

■ EET870 INDUSTRIAL ELECTRONICS
Study of a wide range of electronic devices and circuits associated with industrial control systems; a wide range of power switching devices and their applications are studied together with electronic measurement systems and their transducers.

Course: EE22  
Prerequisite: EET570  
Credit Points: 7  
Contact Hours: 3 per week

■ EET880 DESIGN
The main concepts of electrical design and introduction to relevant specifications and standards; further work is in the form of design projects in which a written report must be submitted.

Course: EE22  
Prerequisites: Major units in selected modules  
Co-requisites: Major modules 1(d) and 2(d)  
Credit Points: 7  
Contact Hours: 3 per week

■ EET891 ADVANCED COMPUTING TECHNIQUES
Applications of computers and microprocessor systems to data collections supervisory and active control functions; real-time operating systems and software development in both low-level languages and high-level languages such as C or MODULA 2.

Course: EE22  
Prerequisite: CST390  
Credit Points: 7  
Contact Hours: 3 per week

■ EPB100 ADMINISTRATIVE THEORY
Use of political theories and models in the study of public administration; theories of democracy; individualism, pluralism, elitism, corporatism, Marxism; theories of power: McClelland, Lasswell; theories of bureaucracy: Weber, Mosca, Michels, Marx; use of management theories and models in the study of public administration: classical/traditional theory; human relations theory; systems theory and structural functionalism; action theory (Harmon).

Course: BS50  
Prerequisites: BSB102, EPB112  
Credit Points: 12  
Contact Hours: 3 per week

■ EPB101 ADVANCED ECONOMIC THEORY & POLICY
The foundations of economic thought and recent contributions to the literature of micro and macro theory and policy; their relevance for public and private decision making in the Australian context.

Course: BS50  
Prerequisites: EPB142 and EPB152 or one of the other as a co-requisite.  
Credit Points: 12  
Contact Hours: 3 per week

■ EPB102 APPLIED ECONOMETRICS A
Beometric models widely used by business to improve forecasting and decision making as well as by government to assist in the policy formulation process; the practical problems encountered in using the single equation econometric model; model assumptions; specification error and testing; alternative functional forms; multicollinearity; serial correlation; heteroscedasticity; the use of dummy variables; introduction to the statistical package SAS.

Course: BS50  
Prerequisite: EPB110  
Credit Points: 12  
Contact Hours: 3 per week

■ EPB103 APPLIED ECONOMETRICS B
Single equation methods such as lagged dependent variables and principle components with applications in economics; simultaneous equation methods, identification problems; estimation methods such as indirect least square, two stage least squares and three stage least squares; important practical issues relating to the non-stationarity of most economic data.

Course: BS50  
Prerequisite: EPB102  
Credit Points: 12  
Contact Hours: 3 per week

■ EB110 APPLIED ECONOMIC TECHNIQUES I
Aspects of regression analysis with particular application to the estimation of demand, production and cost functions and the interpretation of results; approaches to forecasting including time series smoothing methods, the classical decomposition model and extensions of regression; optimal resource allocation using linear programming, project management and inventory control modes.

Course: BS50  
Prerequisites: MBA173 and EPB110 (or equivalent)  
Credit Points: 12  
Contact Hours: 3 per week

■ EPB105 ASIAN ECONOMIC DEVELOPMENT
An analysis of economic change in Asia since 1820; the response of Japan, China and Southeast Asia to European intrusion and the growth of the international economy; the economic consequences of colonisation; the impact of war; development policies; ASEAN; the rise of the NICs.

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

■ EPB106 AUSTRALIAN ECONOMIC HISTORY
The Australian economy and its economic institutions from the 1890's to World War II; analysis of post-war economic growth and fluctuations; arbitration, conciliation and wage fixation, immigration policy, capital inflow, institutional arrangements; Australia's links with the international economy; trading agreements; the contribution of manufacturing, agriculture,
minerals and energy, labor, investment and technology in historical context; Australia's deteriorating economic performance since the 1970's and the opportunities presented by the development of the Pacific Basin; the future for Australia.

Courses: BS50, ED50, NS48
Credit Points: 12  Contact Hours: 3 per week

EPB107 BUSINESS ECONOMIC FORECASTING
Review of deterministic forecasting models; properties of stochastic time series; concepts of stationarity and the autocorrelation function; identification of autoregressive, moving average and ARIMA models; introduction to non-linear least squares estimation; diagnostic checking to determine model adequacy; forecasting and adaptive forecasting; seasonal forecasting models and their application.
Course: BS50  Prerequisite: EPB110
Credit Points: 12  Contact Hours: 3 per week

EPB108 BUSINESS IN ASIA
The business and cultural environments of Japan, China, the NICs and ASEA; the operation and management of the major Asian economies; social and institutional foundations of the economies concerned; interaction between Asia and Australia.
Course: BS50
Credit Points: 12  Contact Hours: 3 per week

EPB109 BUSINESS METHODOLOGY
The concepts of basic statistical methods and their applications in business; descriptive statistics, probability concepts and probability distributions; inferential statistics; correlation and regression.
Courses: BS50, IF53  Prerequisite: EPB110
Credit Points: 12  Contact Hours: 3 per week

EPB110 BUSINESS STATISTICS
Sources of data; descriptive statistics; probability concepts; discrete and continuous distributions; statistical inference for 1, 2 and 3 or more population comparisons of parameters; simple regression and correlation; use of the statgraphics package.
Course: BS50  Prerequisite: EPB109
Credit Points: 12  Contact Hours: 3 per week

EPB111 COMPARATIVE ECONOMIC SYSTEMS
The study of comparative economic systems; methods of comparison; structural dimensions as systemic factors; socio-political settings and economic systems; capitalism and its critics; socialist planning and administrative decentralisation; socialist planning and manipulative decentralisation; the role of the state in the market economy; socialist economic reforms; transition to a market economy; structural change and economic development; convergence.
Courses: BS50, ED50  Prerequisites: EPB140 and EPB150
Credit Points: 12  Contact Hours: 3 per week

EPB112 CRITICAL ANALYSIS
The anatomy of valid argument in the social sciences, argument analysis from premise to conclusion; examination of causes, fallacies in argument to foster a critical stance; application of the fundamentals of reasoning to organisation principles; rule making issues and the enforcement problem; strategies for change; dealing with clients; responding to rhetoric.
Courses: BS50, NS48
Credit Points: 12  Contact Hours: 3 per week

EPB114 ECONOMIC DEVELOPMENT
The economics of development of the Third World; examination and application of economic principles, alternative theories and policies to the understanding of significant development problems such as poverty, inequality, unemployment, debt, rural stagnation, economic stabilisation, resource depletion and sustainability. As these problems of development or underdevelopment are rooted in social and institutional causes as well as economic causes, the economic principles are combined with institutional and structural analyses to provide a better understanding of the problems.
Courses: BS50, ED50  Prerequisites: EPB140 and EPB150
Credit Points: 12  Contact Hours: 3 per week

EPB115 ECONOMIC MODEL BUILDING
Model specification and theory formulation; investigating the model characteristics and the underlying assumptions of convexity, concavity and regularity; theoretical appraisal of single and simultaneous equation model building and audit usefulness in pacifying and solving economic issues and problems.
Course: BS50  Prerequisites: EPB104, EPB142, EPB152
Credit Points: 12  Contact Hours: 3 per week

EPB116 ECONOMIC PRINCIPLES 1
The economic problem and its basis in scarcity; contemporary Australian microeconomics institutions; aspects of market demand, supply and elasticity; cost-ing principles; profit maximisation; Australian market structure; price and output decisions in different market types; relevance of microeconomics for the macro economy; economic institutions in the macro economy; measurement of GDP, recession and prosperity; income determination and distribution; role of the Reserve Bank; managing the external economy; integrated monetary and fiscal policies and aspects of the current economic debate.
Courses: BS50, IF53, NS48  Incompatible with: EPB140 and EPB150
Credit Points: 12  Contact Hours: 3 per week

EPB117 ECONOMICS OF INDUSTRY
An analysis of: a selection of industrial structures; measures and determinants of industry concentration, market concentration and consumer surplus; partial equilibrium market power and concentration; pricing policies for oligopolists and monopolistically competitive firms; entry-deterrence pricing; issues in Australian industry policy - the Trade Practices Act and Price Surveillance Authority effectiveness.
Courses: BS50, BS53  Prerequisites: EPB140 and EPB150 (EPN102) or EPB172
Credit Points: 12  Contact Hours: 3 per week

EPB120 EUROPEAN ECONOMIC HISTORY
The emergence and spread of industry; Europe's involvement with the world economy; international movements of capital and technology; developments in manufacturing; agriculture; minerals and energy.
Course: BS50
Credit Points: 12  Contact Hours: 3 per week

EPB121 EUROPEAN INTEGRATION
The political economy of European integration in the post-war era; the influence of major European economies on the integration process; the institutional framework; emphasis on current issues, Eastern
Europe post~ 1992, the global economy and implica~
tions for Australia.
Course: BS50
Credit Points: 12
Contact Hours: 3 per week

B EPB124 GOVERNMENT
Government in the national and international context;
political concepts and principles, models of govern~
ment, Westminster and presidential systems;
federalism and constitutionalism; judicial review and
the High Court; political parties and elections; public
service and public enterprise; intergovernmental rei a~
tions; pressure groups and the trend to corporatism;
international influences on government policy.
Courses: BS50, IF52, IS43, LW3I, NS48
Credit Points: 12
Contact Hours: 3 per week

B EPB125 GOVERNMENT & BUSINESS
The political context of development: a review of
major trends in Australian government policies
towards business; ideology and govemment~business
relationships: liberalism, socialism and their contemporary derivatives; intergovernment relations and
business policy; the regulatory framework; the big
government debate; interest representation: interest
groups, political parties and processes; the trend to
corporatism; taxation and welfare policies and business; government, business and the primary sector,
manufacturing, the transport sector, resource
development, and finance; science and technology.
Course: BS50
Prerequisites: EPB 124 or HUB686 or EPN I 02
(MBA students)
Credit Points: 12
Contact Hours: 3 per week

B EPB127 IDSTORY 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: EPB 140 and EPB 150 (EPN 102) or
EPBI72
Credit Points: 12
Contact Hours: 3 per week

B EPB130 INTERNATIONAL ECONOMICS
Theories of trade; balance of payments; Australia's
export dilemma; foreign investment in Australia;
GATI; OECD; commodity agreements; tariff and
other barriers to trade; the spot and forward FX
markets; the national debt; Keynesian, monetary and
portfolio balance models of the open economy; the
EC; A SEAN; international monetary arrangements;
work capital markets.
Prerequisites: EPB 142, EPB 152
Course: BS50
Credit Points: 12
Contact Hours: 3 per week

B EPB1311NTERNAT10NAL POLITICS &
BUSINESS
Australian business exists within a vitally important
international environment who's structure, especially
as regards access to various national markets, is particularly detennined by national governments and a
range of international agreements entered into by
those governments. This unit examines the international political system and its impact upon business;
the major actors in the system, with an emphasis upon
the bilateral and multilateral agreements of major

impact for Australian business; security, production,
finance, transport, trade, energy, and transnational
organisations; the place of Australia in the system;
regions of central interest to Australian business.
Courses: BS50, NS48
Credit Points: 12
Contact Hours: 3 per week

B EPB1321NTERNATIONAL 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; GATI; 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: EPB 140, EPB 150
Credit Points: 12
Contact Hours: 3 per week

B EPB133 GLOBALISATION & WORLD
BUSINESS
The international, economic, financial and business
environment and analyses the impact of globalisation
on Australia's economy and its business firms;
measures to improve competitiveness, trade blocs,
global business strategies, technological change, conflict in product and export markets; Europe/North
American/Asian economic relations.
Course: BS50
Credit Points: 12
Contact Hours: 3 per week

B EPB134LABOURECONOMICS
This unit applies analytical tools acquired from the
preceding units investigating specific market applications both at the micro and macro levels. Topics
include: the demand and supply of labour, investment
in human capital, market structures and their effect on
equilibrium wage levels; job search; discrimination;
collective bargaining; minimum wages; enterprise
bargaining; unemployment; inflation; the Phillips
Curve in Australia.
Prerequisites: EPB 154, EPB 142
Course: BS50
Credit Points: 12
Contact Hours: 3 per week

B EPB13SLOCALGOVERNMENT
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 ad~
ministration; local government in the UK; corporatism in local government; EARC; EARC process
and new local government legislation.
Course: BS50 Prerequisite: EPB I 24 or EPNI 0 l
Credit Points: 12
Contact Hours: 3 per week

B EPB136LOCALGOVERNMENT
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 major behavioural objectives are to introduce students to important models of operations research; students are made aware of how these models are used in accounting and/or management decision-making situations; students become familiar with solving problems through their own calculations and the use of a computer; students gain an appreciation of the strengths and weaknesses of the models.

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

EPB144 MATHEMATICAL ECONOMIC APPLICATIONS  
Differential calculus; rules of differentiation; comparative statistics; implicit function theorems; 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  
Credit Points: 12  
Contact Hours: 3 per week

EPB150 MICROECONOMICS  
The nature of the economic problem and the economic way of thinking; the theory of consumer behaviour; the nature of demand, preference and indifference theory; the nature of supply, the price mechanism and the operation of the market; short and long run costs; profit maximisation, market structure, factor markets and market failure.

Courses: BS50, ED50, IF31, IS43, IT20, NS48, PU48  
Incompatible with: EPB116 and EPB173  
Credit Points: 12  
Contact Hours: 3 per week

EPB151 MICROECONOMIC POLICY  
A methodological framework based on the tenets of welfare economics allowing the student to assess microeconomic policy in action in both the public and private sectors. Topics include: efficient market outcomes, market failure, the role of the government, public goods, agriculture policy, manufacturing policy, externalities and the environment.

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

EPB152 MICROECONOMIC THEORY  
The theory of consumer demand showing the dual relationship between preference and demand theory; the concept of elasticity and demand analysis; the theory of the firm through extensions into production and cost theory. Monopoly and competitive pricing behaviour and welfare economics.

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

EPB154 NATIONAL GOVERNMENT  
The philosophical foundations, trends and reform processes across the whole spectrum of national government in Australia. Topics include: political theories and models; their relevance for Australian national government; theories of democracy: liberalism, pluralism, elitism, marxism, corporatism,
contemporary committee system, scrutiny

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: EPB124  Contact Hours: 3 per week

EPB155 POLICY & PROGRAM EVALUATION

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; reformism and radical traditions: totalitarianism, communism, socialism and social democracy; relevance for past and present political systems; theories of power and participation: Lukes, Lindblom, Pateman; case studies; theories of the liberal-democratic state: liberalism, freedom and equality, marxism and the capitalist state, theories of the liberal-democratic state: the public choice approach; corporatism and democracy: initiatives, possibilities and problems; state power and democracy; re-evaluation of basic concepts.

Course: BS50  Prerequisite: EPB100 or HUB686  Contact Hours: 3 per week

EPB157 PUBLIC ENTERPRISE

Public and private enterprise; a descriptive and comparative perspective; the extent and socio-economic significance of public enterprises; the development of public enterprise to World War I; the development of public enterprise from World War I to date; policy and planning in public enterprise; control systems and problems; personnel policies and problems; financial policies and practices; assessing the performance of public enterprise: models and criteria; privatisation and the Commonwealth; State Government and privatisation; the future of state intervention.

Course: BS50  Prerequisites: EPB124 and either EPB116/EPB140/EPB150 or EPN101 and EPN102  Contact Hours: 3 per week

EPB158 PUBLIC FINANCE

The broad speciality of public sector economics; the microeconomic analysis of traditional public finance; the theory, incidence and impact of government taxation and expenditure measures; theoretical perspective and the impact of taxation and expenditure measures on personal and corporate behaviour; functions of government and growth of government activity in a mixed economy.

Course: BS50  Prerequisites: EPB140 and EPB150 (EPN102) or EPB172  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; legitimization and succession; policy implementation: determinants of policy: economic and political; policy theory.

Course: BS50  Prerequisite: EPB100 or for non public administration students, the completion of 8 units in the relevant degree program, including an introductory government or politics unit. EPN101 for MBA students.

Credit Points: 12  Contact Hours: 3 per week

EPB160 PUBLIC SECTOR ECONOMICS

The reasons for government intervention in the economy: the ways in which the effectiveness of this intervention may be measured. Topics include: the competing goals of efficiency and equity; theories of first-best and second-best; the importance of externalities; the public goods controversy; privatisation, deregulation and reregulation.

Course: BS50  Prerequisite: EPB152  Contact Hours: 3 per week

EPB162 REFORM & THE PUBLIC SECTOR

The development of the existing body of law, rules and regulations governing accountability; efficiency and effectiveness in the public sector through all administrative processes and levels of government, as well as the various mechanisms available for the purpose of review. The need for reform and review from early developments in administrative and political history through to contemporary developments.

Course: BS50  Prerequisites: BSB102 and EPB112 (or MNB184 pre-1992)  Contact Hours: 3 per week

EPB163 RESEARCH & SURVEY METHODS

Australian statistical information; demographic processes; the presentation of quantitative as well as qualitative data; questionnaire construction; how to conduct surveys; sampling design; sample accuracy; sample size; confidence intervals; hypothesis testing plus an introduction to correlation, regression and time series analysis. Computer work involves SPSS.

Courses: BS50, ED50, PU48  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 cities, systems; regional stability and volatility.

Course: BS50  Prerequisite: EPB172 or EPN102 (MBA students)  Contact Hours: 3 per week

EPB166 SPECIAL TOPIC – PUBLIC POLICY

This unit aims to help the student apply in detail the modes of analysis developed in the core units to specific policy areas; their immediate relevance can be demonstrated and a thorough understanding of a policy area gained.

Course: BS50  Contact Hours: 3 per week

EPB167 STATE GOVERNMENT

State Government institutions, politics and public policy processes; comparison of State Governments.
around Australia with respect to constitutions, parlia­ments, executive government, political parties, inter­est groups, policy processes, elections and electoral systems; Queensland political culture; the public ser­vice; commissions of accountability and various public policy issues.

Course: BS50  
Prerequisite: EPB124  
Credit Points: 12  
Contact Hours: 3 per week

■ EPB168 TRANSPORT & COMMUNICATION ECONOMICS
The application of microeconomic principles to transport and communication; location decision, demand, costs, pricing, investment principles, regulation, issues and policy.

Course: BS50  
Prerequisites: EPB140 and EPB150 (EPN102) or EPB172  
Credit Points: 12  
Contact Hours: 3 per week

■ EPB169 ECONOMICS OF INFORMATION
Information as a commodity; the demand for information; the economics of the production of information; the costs of information; the cost, pricing and changing out of information within organisations; the market supply of information; information technology and the supply curve; the structure of the information industry; information and industry concentration; public good characteristics of information; government intervention and economic impacts.

Course: BS50  
Credit Points: 9  
Contact Hours: 2 per week

■ EPB171 ECONOMIC ANALYSIS & POLICY
Theoretical constructs of welfare economics and cost-benefit analysis; economic rationales for government policy in major areas including: the environment; resource depletion; public investment; taxation; federal fiscal relations; education finance; income distribution; industry.

Course: ED50  
Prerequisites: EPB140 and EPB150  
Incompatible with: EPB151 and EPB152  
Credit Points: 12  
Contact Hours: 3 per week

■ EPB173 TECHNOLOGY DEVELOPMENT & INTERNATIONAL BUSINESS
The role of technological development as a central determinant of the economic performance of nations and regions, and the commercial performance of firms.

Course: BS50  
Prerequisite: 96 credit points of undergraduate study  
Incompatible with: EPB140 and EPB150  
Credit Points: 12  
Contact Hours: 3 per week

■ EPN104 POLICY ANALYSIS
A central aim of the program is to develop skills in the analysis of policy content and policy process; it provides a basic methodological framework for the systematic development of those skills with two related objectives: (a) to examine a range of models of public policy processes with a view to determining their validity and utility, (b) to develop a capacity for policy analysis, utilising a variety of conceptual frameworks. Topics include: policy design, formation and implementation and theories of policy.

Courses: BS62, BS83  
Prerequisite: An undergraduate degree  
Credit Points: 12  
Contact Hours: 3 per week

■ EPN106 PROGRAM MANAGEMENT
Understanding of program management and evaluation in the public sector, with an emphasis on skills development; theory and methodology of evaluation research; qualitative and quantitative tools and the application of these to a public sector program.

Courses: BS62, BS83  
Prerequisite: An undergraduate degree  
Credit Points: 12  
Contact Hours: 3 per week

■ EPN108 DEVELOPMENTS IN MICROECONOMIC THEORIES
At a time when microeconomic theory is being applied to a host of contemporary economic developments including privatisation, deregulation, microeconomic reform and environmental management it is important for honours graduates to be familiar with these developments. Discussion of refinements in microeconomic theory such as hedonic pricing models, invalid preference theory, contestable market theory, theories of regulation, strategic entry deterrence, networks and vertical integration theories, underpays and public utility theories will take place in this unit; explores refinements in microeconomic theory which have contemporary use in the development of government policies in areas such as the environment, energy, public enterprises, industrial development, transport and telecommunications.

Courses: BS62, BS83  
Prerequisite: An undergraduate degree or major in economics.  
Credit Points: 12  
Contact Hours: 3 per week

■ EPN109 INTERNATIONAL BUSINESS POLICY & COMPETITIVE STRATEGIES
This unit expands and builds upon the theoretical and conceptual basis of analytical decision making in international Business Policy. Emphasises recent developments in competitive and anti-competitive trade practices at a business, cultural and negotiating level. Topics include: trade policies in relation to analysis of product cycles, technology based trade services, tourism and agribusiness; contemporary issues such as structural adjustment policies, innovation and entrepreneurship, global strategic objectives, business plans and market entry strategies.

Courses: BS62, BS83  
Prerequisite: Undergraduate degree or major in international business  
Credit Points: 12  
Contact Hours: 3 per week

■ EPN110 REGIONAL STUDY
Regional understanding is crucial to international success. This unit aims to analyse a region's economic,
business and government environment, its key institutions and trade and investment relation with other countries, particularly Australia. The unit will endeavour to extend and advance the analytical, evaluative and expressive skills of students to consolidate their understanding of policy issues in a regional dimension. These studies will be chosen from the Asia-Pacific and 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: B862, B883
Prerequisite: Undergraduate degree or major in international business
Credit Points: 12 Contact Hours: 3 per week

EP111 CONTEMPORARY MACROECONOMIC THEORIES

Macroeconomic theories form the foundation for national and international policy prescriptions. It is essential for honours graduates to be familiar with the latest theories impinging on policy making in both English speaking and non-English speaking countries. This unit introduces students to the latest theoretical developments in the field of macroeconomics using both qualitative and quantitative approaches. It places these theories in their historical, philosophical and societal contexts. This unit will look at New-classical and New-Keynesian theoretical approaches to a range of issues. These include: expectation theories, supply-side economics, theories of labour markets, monetary theories and growth theories (including the role of international trade). Also differences in the theoretical foundations of macroeconomic policies employed in different countries will be highlighted.

Courses: B862, B883
Prerequisite: Students must have an undergraduate economics degree or economics major.
Credit Points: 12 Contact Hours: 3 per week

EPP101 ECONOMIC ANALYSIS

Australia's international trading performance relative to other industrialised nations; the potential economic impact on quality control systems on primary, secondary and tertiary sections of Australian industry; economics of the firm and the quality factor, quality as a determinant of demand, demand elasticity, goods attribute theory; tools for incorporating quality into investment decisions; opportunity and marginal costs; x-inefficiency; increased profitability resulting from quality initiatives.

Courses: B877, B883, IF69
Credit Points: 6 Contact Hours: 5 per week

EPX100 ELEMENTS OF LABOUR ECONOMICS

Price theory and its application to the Australian labour market: demand and supply of labour; determination of wages and employment; factors influencing the relative wage structure.

Course: BS10
Credit Points: 12 Contact Hours: 3 per week

EPX102 MACROECONOMIC ANALYSIS

The structure of the Australian economy; determination of income, employment and the price level; government policy in relation to aggregate labour market variables.

Course: BS10
Credit Points: 12 Contact Hours: 3 per week

ESA310 GEOLOGY

An introduction to geological materials, emphasising chemical concepts and processes. Aspects studied include the origin and constitution of the earth, introductory mineralogy, igneous, sedimentary and metamorphic petrology, study of physical and structural geology, geomorphology, stratigraphy and economic geology. Field excursions as required.

Course: SC10
Credit Points: 8 Contact Hours: 3 per week

ESB122 EARTH SCIENCE 1

Basic geologic principles, physical geography, geomorphology, weathering, erosion, river and coastal environments, groundwater, deserts and aeolian processes. The earth and the solar system, mineralogy, classification and origin of igneous, metamorphic and sedimentary rocks, structural geology, plate tectonics, economic geology. Practical work includes examination and identification of major rock-forming minerals, economic minerals and rock specimens, structural exercises, and interpretation of topographic and geologic maps and aerial photographs. Field excursions to local areas of geological interest.

Courses: ED50, SC30
Prerequisite: ESB122
Credit Points: 12 Contact Hours: 5 per week

ESB312 MINERALOGY & OPTICAL MINERALOGY

Introductory crystallography; fundamentals of crystal chemistry, mineral stability and reactions; crystallisation, growth and habit of the geologic framework of minerals; classification of minerals; systematic treatment of the physical, chemical and structural properties of minerals; techniques of mineral analysis; identification in thin section and grain mounts. Field excursions to mineralogic sites.

Courses: ED50, SC30
Prerequisite: ESB122
Credit Points: 12 Contact Hours: 5 per week

ESB342 STRUCTURAL GEOLOGY

The geometry of map-scale structures. Principles of deformation: strain and rigid motion, measurements of strain in deformed rocks, deformation paths, strain rate, homogeneous and non-homogeneous strain, normal and shear stress, Mohr diagram. Deformation mechanisms: elastic and thermal expansion, plastic deformation within crystals, flow by pressure solution, compaction, stress-strain relations. Fracture and brittle behaviour: the Mohr envelope, role of cracks and fluid in the fracture of rocks, fracture experiments, effects of pre-existing fractures, fracture of anisotropic rocks, brittle-plastic transition. Classes of structures: joints: origin, surface morphology and relation to other structures; faults: normal, strike-slip, thrust and detachment faults; folds: description and classification, kink bands, chevron folds, boudinage, mechanisms and mechanics. Practical work includes a series of assignments of increasing complexity; field work involves mapping deformed terrain.

Courses: ED50, SC30
Prerequisite: ESB392
Credit Points: 12 Contact Hours: 5 per week
ESB362 ECONOMIC MINERAL DEPOSITS
Mineralogy, genesis, use and value, mining methods and beneficiation of the different groups of mineral resources; major overseas deposits and Australian deposits. Unit includes practical work and field and industrial visits.
Courses: ED50, SC30
Prerequisites: ESB122, ESB222
Credit Points: 12
Contact Hours: 5 per week

ESB392 FIELD TECHNIQUES & STUDIES
Methods used in the accumulation, analysis and interpretation of geological field data. Geological mapping, sampling and presentation of reports. The unit includes an extended excursion (five days or more), during which students will be required (individually or in groups) to map the geology of an assigned area. Assessment will be based on the production of a geological map to the prescribed scale, together with supporting explanatory notes. Other weekend excursions to areas of geological interest may be included.
Courses: ED50, SC30
Prerequisites: ESB122, ESB222
Credit Points: 12
Contact Hours: 5 per week

ESB422 SEDIMENTOLOGY & STRATIGRAPHY
Principles of sedimentation; the sedimentary cycle; weathering; fluid flow and sediment transport; sedimentary structures; textures; grain size analysis; classification of sedimentary rocks and economic deposits; sediment depositional environments and introduction to facies analysis; diagenesis; sedimentation and tectonics. Principles of stratigraphy and basin analysis including lithostratigraphy, biostratigraphy, seismic stratigraphy, and sequence stratigraphy. The unit includes project-based practical assignments, several short field excursions and one weekend excursion.
Courses: ED50, SC30
Prerequisites: ESB312, ESB392
Credit Points: 12
Contact Hours: 5 per week

ESB462 LITHOLOGY
The description and classification of igneous, metamorphic and sedimentary rocks in thin section and hand specimen; optical mineralogy; textural identification and classification. Field excursions of short duration are normally required.
Courses: ED50, SC30
Prerequisite: ESB312
Credit Points: 12
Contact Hours: 5 per week

ESB502 PACIFIC MARINE GEOLOGY
The regional geology of the Pacific Ocean and in particular the South West Pacific, including its tectonic framework, island arc magmatism and types of volcanism. Deep and shallow marine and on-shore examples are considered. Broad aspects of physical and chemical oceanography (eg. circulation and climate) including features such as the El Nino and Greenhouse effects. Resources of the region: deposits related to environment and formation with terrestrial examples; marine deposits: non-metallic and engineering materials; conventional and alternative energy sources. Types and chemistry of marine sediments (deep and shallow). Specific problems related to engineering geology, coastal zone protection and hydrogeology. Interaction of man with the Pacific environment.
Courses: ED50, SC30
Prerequisites: ESB392 and at least one of ESB342, ESB422, ESB442, ESB452, or ESB462
Credit Points: 12
Contact Hours: 5 per week

ESB512 IGNEOUS & METAMORPHIC PETROLOGY
The origin, formation and geologic history of igneous and metamorphic rocks as determined from field and laboratory studies of occurrences; mineral assemblages; rock compositions and textures; interpretation of rock and mineral compositional diagrams; application of experimental work and detailed computer modelling of petrochemical processes. Practical work and field excursions.
Courses: ED50, SC30
Prerequisite: ESB462
Credit Points: 12
Contact Hours: 5 per week

ESB519 GEOLOGY FOR ENGINEERS
The basic principles and theories of geology, emphasising the way in which mineralogy and petrology, geologic structures, geomorphology and groundwater interact with, and are related to, engineering design and construction, the engineering properties of rock and the effect of geologic hazards on engineering construction; case histories on the relevance of geology to the civil engineer's workplace.
Courses: CE42, PS47
Credit Points: 6
Contact Hours: 3 per week

ESB522 HYDROGEOLOGY
The hydrological cycle; the origin, occurrence and movement of groundwater; geology and character of aquifers; the chemistry and quality of groundwater and their monitoring; exploration methods; drilling and testing methods and equipment. Practical exercises with pump tests, groundwater flow, material...
permeability, field testing, chemical analysis and computer modelling.

Course: SC30  Prerequisite: ESB442
Credit Points: 12  Contact Hours: 5 per week

- ESB532 APPLIED GEOPHYSICS
  The theory of exploration geophysics. Gravity, magnetic and radiometric, well logging, seismic reflection and refraction, electrical resistivity, induced polarization and electromagnetic techniques. The reduction and manipulation of geophysical data and their interpretation, field data acquisition and computer modelling. Practical studies of the main techniques. Experience in a variety of geophysical methods is gained during a field excursion.
  Course: SC30  Prerequisites: ESB392, MAB212, PHB122  Credit Points: 12  Contact Hours: 5 per week

- ESB552 APPLIED GEOCHEMISTRY
  Techniques for establishing regional geochemical patterns and their use in land use evaluation and environmental impact studies. Recognition of primary and secondary dispersion patterns and their use in the discovery of ore deposits. The geochemical impact of the Australian landscape; chemical analyses; rationalisation and interpretation of geochemical data; computing and statistical analysis. Geochemical surveys based upon bedrock, ironstone and gossan, soils, stream sediments, lake sediments, water, biogeochemical materials and gases. Off-shore geochemistry. Special problems of gold geochemistry. Practical work includes an industry or research field project requiring several days of field work and a selection of case history assignments based upon environmental and exploration problems.
  Course: SC30  Prerequisites: ESB452, MAB227  Credit Points: 12  Contact Hours: 5 per week

- ESB562 MINERAL EXPLORATION
  Mineral exploration; crustal evolution and ore genesis; metallogenic epochs and provinces; wall rock alteration; gossans; the mineral potential of the sea bed; isotopic studies and ore genesis; geothermometry; fluid inclusions; sampling, drilling, core logging, mineragraphy. Field and industrial visits. Part of the assessment is based on student seminars.
  Courses: ED50, SC30  Prerequisites: ESB342, ESB442  Credit Points: 12  Contact Hours: 5 per week

- ESB582 GEOLOGICAL FIELD EXCURSIONS
  Field excursions in Queensland or northern New South Wales emphasising geologic mapping. Includes lectures and tutorials. Assessment is based entirely on the field reports and geologic maps. This is a year long unit. Field excursions will be conducted during the first semester and the mid-year breaks.
  Courses: ED50, SC30  Prerequisites: ESB342, ESB462  Credit Points: 12  Contact Hours: 5 per week

- ESB602 GEOLOGICAL INVESTIGATIONS
  Students are required to formulate a research problem with specific aims and objectives, develop the methodology and collect, analyse and interpret data to produce a solution to the problem. Research problems may be field based, requiring the projection of a detailed map, collection of representative samples and observation and analysis of structures and mineralisation and/or include a substantial exploratory component to conduct detailed analyses of rock geochemistry or petrography. Assessment is based on the production of both a written and an oral report.
  Course: SC30  Prerequisite: Approval from Head of School  Credit Points: 12  Contact Hours: 5 per week

- ESB612 EARTH RESOURCES MANAGEMENT
  Appreciation of earth resources; their distribution and uses; societal and environmental impacts and future alternatives; economic mineral resources; energy sources; water and soil resources; realities and limits of earth resources; resource management; conservation versus exploration; waste disposal; environmental pollution; future technological developments and their possible effects on earth resources. The unit also includes management in applied geology, professionalism and ethics together with an introduction to civil and mining law. This includes: mining acts and miner's rights; licensing procedures for prospecting search and exploration; mining leases on crown lands and mining on private land; the enforcement of mining interest; petroleum legislation in Australia; company structures; joint ventures; practical work involves applications for exploration licences, claim and leases. A field trip may be included.
  Courses: ED50, SC30  Prerequisite: ESB362  Credit Points: 12  Contact Hours: 5 per week

- ESB622 ENGINEERING GEOLOGY
  The inter-related fields of engineering, environmental geology and soil and rock mechanics. The topics studied are those most likely to apply to the work of the engineering or environmental geologist in tropical urban and coastal areas. Topics include: investigation techniques and philosophies for the engineering of slopes, coastal structures, dams, buildings and subsurface openings; practical investigation methods; the input of geology into urban and coastal developments; the mechanical and chemical properties of soils and rocks; seepage; shear strength; bearing capacity; consolidation theory; stresses and displacements, in situ stresses; earthquakes and slope stability.
  Courses: ED50, SC30  Prerequisites: ESB392 and one of ESB342, ESB422, ESB442 and ESB462  Credit Points: 12  Contact Hours: 5 per week

- ESB632 ADVANCED GEOPHYSICS
  The main geophysical disciplines are treated in detail in terms of data processing and interpretation. Emphasis on particular methods will vary depending on current market demands and innovative techniques. Case histories are used to illustrate successful program design and implementation. Cooperative sessions with exploration companies and appropriate field work will be included in the unit.
  Course: SC30  Prerequisites: ESB532 and MAB222  Credit Points: 12  Contact Hours: 5 per week

- ESB642 STRUCTURAL GEOLOGY & GEOTECTONICS
mechanisms, breccia pipes, sedimentary intrusive and extrusive structures. Practical component is based on a series of assignments using data from mineral exploration, civil engineering projects, complex deformation terrain, and petroleum and coal applications.

**Course:** SC30
**Prerequisite:** ESB342
**Credit Points:** 12
**Contact Hours:** 5 per week

**ESB662 MINING GEOLOGY & FEASIBILITY**

Topics include: mine mapping, mining methods, the geologist's role in the mine, mining hazards and safety requirements. Solutions to problems involving the concepts of present value of money, place value, unit value, recoverable value, cash flow, discounted cash flow, DCFROI, payback, discounted payback, net present value, depreciation, depletion, sinking fund, annuity, diminishing annuity, compound interest, taxation and its effect on one reserves and mine profitability, price forecasting, mining costs, metal marketing, exchange rates, sampling, tonnage grade calculation, resources and reserves, sensitivity analyses, spreadsheets. Practical work in both laboratory and industrial settings and problem solving tutorials.

**Courses:** ED50, SC30
**Prerequisite:** ESB552
**Credit Points:** 12
**Contact Hours:** 5 per week

**ESB672 GEOLOGY OF FOSSIL FUELS**

Coal properties, classification, genesis and analysis; hand specimen study and microscopy; hydrocarbon generation from coal and oil shale; coalfield geology and subsurface mapping techniques; basin analysis; coal production and economics. Origin and characteristics of petroleum fluids including generation, accumulation and migration through time and space; study of structural and stratigraphic traps and reservoir rock characteristics; application of drilling, logging and geophysical and correlation techniques to quantify these aspects; correlation techniques including seismic stratigraphy; economics of production. Field excursions of short duration as required, together with practical assignments.

**Courses:** ED50, SC30
**Prerequisite:** ESB422, ESB552
**Credit Points:** 12
**Contact Hours:** 5 per week

**ESB700 PROJECT**

All students undertaking honours are required to select and undertake, in consultation with a supervisor, a substantial project in an appropriate area. Each project will be assessed on the basis of an extensive written report and an oral presentation.

**Course:** SC60
**Credit Points:** 48

**ESB701 GEOLOGICAL CASE STUDIES**

Preparation of case history assignments of one or several projects from inception to completion. This includes the philosophy of the project, project development, project results. The case history should be selected to complement the student's project thesis. The study includes literature research from published and unpublished sources and if possible, interviews with project personnel. Presentation of the case history may include some outline of the following: relevant maps, sections, geochemical synthesis, and appropriate specimen material.

**Course:** SC60
**Credit Points:** 10
**Contact Hours:** 3 per week

**ESB702 COMPLEMENTARY STUDIES**

Studies include a selection from: participation in research seminars; oral communication skills; written communication skills; formal coursework in occupational health and safety, scientific and industrial ethics, philosophy and methodology of science, and science policy and research funding options; development of research management strategies; preparation and presentation of proposals for research projects; coursework material from other accredited courses as directed by the project supervisor and Head of School.

**Course:** SC60
**Credit Points:** 16
**Contact Hours:** 6 per week

**ESB711 ADVANCED RESOURCE GEOLOGY**

Metallogenic epochs and provinces; ore genesis models; advanced basin analysis; isotope geology; fluid inclusions and geothermometry; advanced mineralogy; resource geochemistry; resource petrology; new materials, aspects of special rocks, alteration zones, paragenesis; resource trends, exploration philosophy; resource assessment; geostatistics, pattern drilling methodology.

**Course:** SC60
**Prerequisite:** As approved by Honours (Geology) coordinator
**Credit Points:** 6
**Contact Hours:** 2 per week

**ESB712 ADVANCED ENGINEERING GEOLOGY**

Principles and scientific basis underlying the theory of engineering geological investigations and the application of modern techniques in analysis and investigation. Coursework is structured around engineering geology thesis topics being pursued in the current year, but include: application of continuous seismic profiling, engineering behaviour on normally consolidated Holocene sediments, engineering geology of open pit mines, slope and underground opening stability, slope stability in tropical residual soils, geotechnical problems in damsite foundations.

**Course:** SC60
**Prerequisite:** As approved by Honours (Geology) coordinator
**Credit Points:** 6
**Contact Hours:** 2 per week

**ESB713 PETROCHEMISTRY**

The petrology, geochemistry, and petrogenesis of igneous and metamorphic rocks. Topics vary according to student interest but include: field, petrologic, geochemical, isotopic and experimental aspects of magma generation and/or metamorphism. Quantitative modelling of magmatic processes using phase petrology, chemistry, major and trace element geochemistry, stable and radiogenic isotopes. Petrographic analysis of igneous and metamorphic textures.

**Course:** SC60
**Prerequisite:** As approved by Honours (Geology) coordinator
**Credit Points:** 6
**Contact Hours:** 2 per week

**ESB714 GLOBAL PLATE TECTONICS**

Investigation of recent advances in global plate tectonics; the petrology, sedimentology, structural, geophysical and resource geology of divergent and convergent plate margins; application of plate tectonic concepts to the Australian continent. A field excursion is compulsory.

**Course:** SC60
**Prerequisite:** As approved by Honours (Geology) coordinator
**Credit Points:** 6
**Contact Hours:** 2 per week

**ESB716 ADVANCED TOPICS IN GEOPHYSICS**

Advanced geophysical theory and interpretation; applications of palaeomagnetic studies to geological
situations; the analysis of data and design of suitable filters using different mathematical transforms; computerised interpretation of large data sets; introduction to tomography and three-dimensional seismic interpretation.

Course: SC60
Prerequisite: As approved by Honours (Geology) coordinator
Credit Points: 6 Contact Hours: 2 per week

ESN120 ADVANCED TOPICS IN EARTH SCIENCE 1
This unit facilitates students in developing an advanced understanding of a topic in earth science that is highly relevant to their proposed research. The content is therefore variable and depends on the earth science topic chosen.

Course: SC80
Credit Points: 12

ESN130 COMPUTER APPLICATIONS IN EARTH SCIENCE
Examination of up to five computer programs relevant to a particular aspect of earth science operating on a range of systems; readings on the theoretical base for each program; case studies for each application and an assessment of the results of the applications.

Course: SC80
Credit Points: 12

ESN140 RESEARCH METHODOLOGY 1
A variety of field and laboratory techniques for the collection of data in a particular earth science discipline; the practical application of these techniques, strategies for assessing their appropriateness for particular problems; the theoretical basis of the research.

Course: SC80
Credit Points: 12

ESN150 RESEARCH METHODOLOGY 2
See ESN140.
Course: SC80
Credit Points: 12

ESN160 SEMINARS
Students may present several seminars ranging from a summary of background to a particular topic, to a preliminary thesis presentation.

Course: SC80
Credit Points: 12

ESN170 LITERATURE SURVEY
Develops the detailed background of a student’s research topic; extends the student’s knowledge into current and relevant literature.

Course: SC80
Credit Points: 12

EST219 ENGINEERING GEOLOGY
The definitions and principles of geology; rock types and the effects of weathering leading to soil formation. Identification of common mineral and rock types, the occurrence and nature of rock defects or discontinuities; the flow and control of groundwater by stratigraphy; rock structure and surface profile; the effects of rivers and coastal wave action in erosional/sedimentary cycles.

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

FNB100 AUSTRALIAN FINANCIAL MARKETS
System efficiency and the intermediation process; term structure of interest rates; the Australian banking and payments system; merchant bank and finance company operations; the operations of the Australian Stock Exchange; financial systems regulation; trading and pricing of money market/capital market securities; the options and futures market.

Course: BS50
Prerequisites: FNB107 or FNB111 or FNN102, EPB140
Credit Points: 12 Contact Hours: 3 per week

FNB103 COMPARATIVE FINANCIAL SYSTEMS
Introduction to the operations of important overseas capital markets, regulation and structure.

Course: BS50
Prerequisite: FNB100
Credit Points: 12 Contact Hours: 3 per week

FNB104 COMPUTER APPLICATIONS IN FINANCE
Students learn the necessary skills to undertake analysis and applied research in business finance. Topics include: programming and data file manipulation using dBase IV; ordinary least squares regression; SPSS-PC statistical computer software.

Course: BS50
Prerequisites: FNB112, ISB892
Credit Points: 12 Contact Hours: 4 per week

FNB105 COMPUTER APPLICATIONS IN MANAGERIAL ACCOUNTING
Consideration of selected managerial accounting areas: master budgeting, cash budgeting, cost estimation, cost allocation, variance analysis, cost-volume-profit analysis; application of appropriate software tools: spreadsheet software, accounting package, graphics software, statistical analysis software.

Course: BS50
Prerequisite: ISB892 Co-requisite: FNB123
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 Co-requisite: FNB123
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, BS50, IF53
Credit

Theoretical development of the CAPM model, its uncertainty, the CAPM model. Practical asset management, search; beta estimation; valuation theory; use of finance research tools; anomalies and Credit

Courses:

FNB111 FINANCE 1
The institutional framework terminology, the basic instruments, their uses and pricing, financial mathematics, NPV, risk and returns, certainty and uncertainty, the CAPM model, Practical asset management, firm valuations, investments and capital budgeting. Courses: BS50, IF31
Prerequisites: AYB110 or AYB100, EPB150 or EPB116
Incompatible with: FNB107
Credit Points: 12 Contact Hours: 4 per week

FNB112 FINANCE 2
Theoretical development of the CAPM model, its practical application and its relationship to efficient market hypothesis. Capital structure, dividends, short term assets, leasing, takeovers, options and futures. Courses: BS50, IF31 Prerequisite: FNB111
Credit Points: 12 Contact Hours: 4 per week

FNB113 FINANCE 3
A study of contemporary finance research, event studies; beta formation; valuation theory; use of finance research tools; anomalies and extension of finance theories; students are required to complete a research project combining theory and practice. Course: BS50 Prerequisite: FNB112
Credit Points: 12 Contact Hours: 4 per week

FNB114 FINANCIAL INSTITUTIONS - LENDING
Finance theory and the lending function; cost of bank funds; the evaluation of retail loans, lending to small business; financial statement analysis; corporate lending and securities; financing international trade; problem loans and credit scoring. Course: BS50 Prerequisite: FNB107 or FNB111 or 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 Prerequisite: FNB111 or FNN102 Incompatible with: FNB124
Credit Points: 12 Contact Hours: 4 per week

FNB116 FINANCIAL MANAGEMENT FOR ENGINEERS
Introduction to the theory and practice of financial management in Australia, the nature of business finance and firm objectives, business structures, debt and the organisation of the Australian capital markets; NPU calculations; project evaluation. Courses: EE43, ME45, ME46
Incompatible with: FNB125
Credit Points: 8 Contact Hours: 2 per week

FNB117 FINANCIAL MODELLING
The development of a basic model within an organisational environment; operation of computer modelling languages; analysis and development of forecasting models; specialist financial models; model development as part of the decision support system. Course: BS50 Incompatible with: AYB101 Prerequisite: FNB111/FNB106/BS892
Credit Points: 12 Contact Hours: 4 per week

FNB120 INTERNATIONAL FINANCE
Foreign exchange; government assistance to exporters and importers; international money markets; risk measurement in foreign exchange; foreign exchange market efficiency; Eurobond and Euronote financing; international capital budgeting; cost of capital in international finance; foreign takeovers and other acquisitions; legislative aspects; accounting issues; taxation issues; international financial economics; transfer pricing. Courses: BS50, IF53 Prerequisites: FNB111, FNB100 (recommended) Credit Points: 12 Contact Hours: 4 per week

FNB121 ISSUES IN FINANCE
The finance framework; positive versus normative methods; Kuhn’s model of progress; the resolution of traditional finance problems; regulation and finance, market failure; the finance solution. Course: BS50 Prerequisites: FNB111, FNB123 Credit Points: 12 Contact Hours: 4 per week

FNB122 MANAGEMENT ACCOUNTING
The nature of management accounting; cost concepts; cost profit volume analysis; relevant costs and special decisions; flexible budgets; responsibility accounting; job and process costing; introduction to finance; financing decisions: equity v debt, leasing, investment dividends; introduction to financial maths; understanding the financial press. Course: ED50 Prerequisite: AYB110 Incompatible with: FNB123
Credit Points: 12 Contact Hours: 4 per week

FNB123 MANAGERIAL ACCOUNTING 1
Introduction to managerial accounting, the role of the management accountant and cost concepts; costing systems including actual/normal/standard systems under job and process costing; introduction to budgeting; accounting for the factors of production: materials, labour and overheads; extension of basic costing systems for multiple products and spoilage; direct and absorption costing. Courses: BS50, IF31 Prerequisite: AYB110 Incompatible with: FNB122
Credit Points: 12 Contact Hours: 4 per week

FNB124 MANAGERIAL ACCOUNTING 2
The application of the conceptual framework of the finance paradigm to provide a positive explanation of managerial accounting; interrelationships between managerial accounting, economics of firms, business finance, regulation, organisation behaviour and computer applications; agency theory responsibility accounting and cost allocation; decisionmaking and relevant costs; pricing techniques, advertising and transfer pricing; performance evaluation. Courses: BS50, IF31 Incompatible with: FNB115 Prerequisites: FNB111, FNB123 Credit Points: 12 Contact Hours: 4 per week

FNB125 PERSONAL & CORPORATE FINANCE
The Australian financial environment from both a personal and corporate point of view; goals and functions of finance; project evaluation; evaluation and selection of investment projects, management of working capital; leverage; cash forecasting and management, financial statement analysis. This unit is not available to BS50 BBus(Accy) or BBus(B&F) majors. Course: EE44 Incompatible with: FNB116 Credit Points: 4 Contact Hours: 2 per week
■ FNN126 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.
Courses: BS50 Prerequisite: FNB112 or FNN102
Credit Points: 12 Contact Hours: 3 per week

■ FNN100 ADVANCED CAPITAL BUDGETING
Application of the theoretical constructs developed in undergraduate finance units to complex problems in investment appraisal.
Courses: BS70, BS87 Prerequisite: FNB112
Credit Points: 12 Contact Hours: 3 per week

■ FNN101 FINANCE HONOURS
An advanced coverage of the theory of financial management, building on work done in the undergraduate course with reference to empirical evidence where available; topics include: capital markets, investment decisions, market equilibrium, the capital asset pricing model, arbitrage pricing theory, capital structure, dividend policy, efficient capital markets; provides a theoretical basis allowing for evaluating policy problems in the area of financial management, a prerequisite for further specialisation in this area.
Courses: BS60, BS70, BS81, BS87
Credit Points: 12 Contact Hours: 3 per week

■ FNN102 MANAGERIAL FINANCE
Introduction to the world of finance and financial management. Topics include: the finance function, the role of the financial manager, the Australian financial environment; sources of funds; present and future value; time value of money; financial mathematics; cost of funds, the firm investment decision; investment evaluation techniques; cash budgeting; working capital management; capital budgeting; dividend policy and financial structure policy.
Course: BS81 Prerequisites: AYN101/AYN112
Credit Points: 12 Contact Hours: 3 per week

■ FNN103 FINANCIAL MODELLING
Modelling as an organisational planning tool; the development and manipulation of databases in order to provide information sources for model building; the use of the modelling concept for solving investment and forecasting problems and analysing performance.
Courses: BS70, BS87 Prerequisites: FNB111, FNB123
Incompatible with: FNB117
Credit Points: 12 Contact Hours: 3 per week

■ FNN104 FINANCIAL RISK MANAGEMENT
An advanced postgraduate finance unit which covers four areas of risk management: portfolio, investment, exchange and insurance. Topics include: portfolio theory, performance evaluation, benchmark problems, hedging, portfolio insurance in the crash of 1987, managing exchange risk, risk reduction, self insurance, new tax rules and superannuation fund performance, interest rate risk, rating agencies, duration, immunisation. Emphasis on empirical research.
Courses: BS70, BS87 Prerequisite: FNB112
Credit Points: 12 Contact Hours: 3 per week

■ FNN105 INTERNATIONAL FINANCE
The theory and practice of international finance; the relationship between domestic and international capital markets, interest rate and exchange rate determination, risk management of foreign exchange, international trade finance, offshore investment, legislation, transfer pricing, accounting and taxation aspects.
Courses: BS70, BS87 Prerequisite: FNB120
Credit Points: 12 Contact Hours: 3 per week

■ FNN106 MANAGERIAL ACCOUNTING HONOURS
Theoretical issues that constitute the foundations of managerial accounting theory and research; an investigation of the rationale and usefulness of managerial accounting; review the research and literature in the areas of strategic management; management control systems; decentralisation and organisational structures; managerial performance measurement; executive performance and compensation; cost estimation and allocation.
Courses: BS60, BS70, BS87 Prerequisite: FNB124
Credit Points: 12 Contact Hours: 3 per week

■ FNN110 MANAGERIAL ACCOUNTING ISSUES A
Issues associated with decentralisation and responsibility accounting, performance evaluation, cost allocation, budgeting, the new management accounting viewed from the framework of financial economics.
Courses: BS70, BS87 Prerequisite: FNB124
Credit Points: 12 Contact Hours: 3 per week

■ FNN111 MANAGERIAL ACCOUNTING ISSUES B
The practical managerial accounting issues currently facing contemporary management. Topics include: quality and strategic product development, productivity control, advanced budgeting techniques, program budgeting, and management control systems.
Courses: BS70, BS87 Prerequisite: FNB123
Credit Points: 12 Contact Hours: 3 per week

■ FNN112 SPECIAL TOPIC - MANAGERIAL ACCOUNTING & FINANCE
Issues of significance in managerial accounting and finance. This unit is offered when required.
Courses: BS70, BS87
Credit Points: 12 Contact Hours: 3 per week

■ FNN113 MANAGERIAL ACCOUNTING FOR ENGINEERS
An explanation of accounting concepts and terminology and a coverage of the accounting communication and reporting system of financial statements; using accounting information for special decision-making; financial modelling as a decision support system; how costs are accumulated for manufacturing control purposes; current issues in accounting for manufacturing including activity based costing, costing for quality, costing for productivity.
Courses: ME76
Credit Points: 12 Contact Hours: 3 per week

■ FNN300 ACCOUNTING 2 (PY)
This unit aims to satisfy the professional year syllabus of the Institute of Chartered Accountants in Australia in applied areas of managerial accounting, finance and auditing. The unit builds upon the undergraduate framework in these areas. Topics are revised annually by the Institute with a focus on applied practice.
Courses: BS70, BS87 Prerequisite: AYN300
Credit Points: 12 Contact Hours: 3 per week

■ FNN301 MANAGEMENT ACCOUNTING (PY)
This unit is designed to satisfy an elective topic in the professional year program of the Institute of Chartered Accountants in Australia. The syllabus is revised annually and applied advanced managerial
topics are included as the profession determines necessary for senior managerial accountants.

Courses: BS70, BS87
Prerequisite: FNB124
Credit Points: 12
Contact Hours: 3 per week

**FNN303 MANAGEMENT ACCOUNTING** (MBA)

Management accounting and the issues confronting a management accountant. On completion of the unit, students should have an appreciation of various management accounting concepts, and be able to apply these concepts to business/accounting situations. Topics include: the nature of management accounting; cost concepts; cost profit-volume analysis; relevant costs and special decisions; flexible budgeting; responsibility accounting; costing.

Course: BS81
Prerequisite: AYN101 or AYN112
Credit Points: 12
Contact Hours: 3 per week

**FNP101 QUALITY COST ANALYSIS**

Accounting language in AS2561; classification of costs, nature of fixed and variable costs for cost analysis; development of cost groupings within an organisation, use of cost allocation and cost control methods; prevention and appraisal cost data sources. Master budget, flexible budgets, derivation of standards for cost control, isolating variances, reviewing sub-standard production; burden of overhead costs, hiding the cost of poor quality production - single run case; overheads in service and non-profit organisations; identifying the cost of production in a process -continuous run, pricing of partly finished goods and at production checkpoints; activity based costing as a means to optimise quality costs.

Course: BS77
Credit Points: 6
Contact Hours: 3 per week

**HLN001 LITERATURE REVIEW**

**HLN002 RESEARCH PROJECT**

**HLN003 THESIS PRESENTATION**

These three units combine to constitute the research/thesis component of the Master of Health Science. The thesis in total provides students with an opportunity to formally extend and synthesise their work undertaken 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 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: HS50, HS52, HS58
Credit Points: 12

**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: HS50, HS52, HS58
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: HS50, HS52, HS58
Prerequisite: MANO09 or HSN405
Credit Points: 12

**HLP103 DISSERTATION**

This unit is broken into a number of components which are completed over successive semesters (as appropriate for full-time or part-time course structure). A written report in the form of a dissertation proposal must be submitted by the end of week 6 in the semester in which enrolment in the dissertation commencement.

Courses: HS50, HS52, HS58
Co-requisite: All other units in Honours program
Credit Points: 48

**HMB171 FITNESS, HEALTH & WELLNESS**

This unit involves students in the study of systems of the human being basic to physical activity. The inter-relationships of health, physical activity and wellness, historically and dimensionally, is investigated. Basic principles of conditioning and exercise prescription to demonstrate the impact of physical activity on lifestyle diseases, health behaviours and wellness.

Courses: ED51, HM42
Credit Points: 12
Contact Hours: 3 per week

**HMB172 LIFESPAN GROWTH & MOTOR DEVELOPMENT**

This unit provides students with knowledge and understanding of essential physical growth concepts and the theoretical perspective of major development; maturational/descriptive and Neuro-behavioral, special reference to the physical activity setting.

Course: HM42
Credit Points: 12
Contact Hours: 4 per week

**HMB173 SOCIAL & PSYCHOLOGICAL DIMENSIONS OF PHYSICAL ACTIVITY**

An introduction to social and psychological considerations of physical activity; why study sport?; the sociological dimensions; historical determinants; sport and socialisation, business, education and the future. The psychological dimensions; coaching; motivation; aggression and violence; parents in children’s sport. The socio-psychological issues of exercise; healthism; dieting; sport and the aged.

Course: HM42
Credit Points: 12
Contact Hours: 3 per week

**HMB202 PHYSICAL EDUCATION 2**

This unit is practically based. Students work through a systematic approach to the teaching of physical education. The micro-teaching involves four state primary schools. The preparation and planning of physical education activities is highlighted. There is a strong emphasis throughout on action learning and action research skills. Outcomes includes the development of reflective teachers of physical education.

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

**HMB204 PHYSICAL ACTIVITY STUDIES 1**

Students pursue one of three strands: the science of physical activity incorporating physiology, anatomy and biomechanical principles which govern the body's movements in a variety of movement situations; a socio-cultural studies strand in which the
historical, political and socio-cultural factors that have influenced the development of Australian sport are considered; a motor development and skill acquisition strand which will incorporate theoretical and applied aspects of motor learning in such a way that appropriate methods for meeting the particular needs of each learning situation are developed.

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

HMB205 PHYSICAL ACTIVITY STUDIES
The content is offered in three strands to enable students to gain an indepth knowledge in the one of their choice: Science of Physical Activity enables students to gain experience assessing the components of physical fitness in the laboratory and then implement these skills in the community; Adapted Physical Activity incorporates designing community programs for handicapped and disabled people; socio-cultural studies provide an initial view of the relationship between physical activity and the social world.

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

HMB242 HEALTH STUDIES
This level two unit is offered in parallel strands and expands some of the issues raised in the level one unit. Students follow a strand focussing on individual health, or a strand focussing on health as a community issue. Students choosing to follow the individual strand focus on their development of a personal action plan to gain an indepth knowledge in the one of their choice: Science of Physical Activity enables students to gain experience assessing the components of physical fitness in the laboratory and then implement these skills in the community; Adapted Physical Activity incorporates designing community programs for handicapped and disabled people; socio-cultural studies provide an initial view of the relationship between physical activity and the social world.

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

HMB243 HEALTH STUDIES
This level three unit extends in depth some of the issues addressed in the level one and two units. The dual strand developed in the level two unit continues, following an individual or a community focus. In the individual strand the focus narrows to look at the former status of children. In the latter strand the focus is on drug issues and their use in Australia.

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

HMB271 MOTOR CONTROL & LEARNING
Overview of relevant theories and research in motor control and learning for acquisition of skilled motor behaviour; a knowledge of information processing and sensory systems; memory processes; factors contributing to motor learning; laws of simple movements; motor programs and motor control processes.

Course: HM42
Credit Points: 12 Contact Hours: 4 per week

HMB272 BIOMECHANICS
The application of mechanics as they apply to human movement and sports performances including: kinematics and dynamics of human body models; quantitative analysis; impact; work and power.

Courses: HM42, ME46
Credit Points: 12 Contact Hours: 4 per week

HMB273 EXERCISE PHYSIOLOGY
Energy systems; aerobic and anaerobic systems; bioenergetics; fuels for energy. Fitness components: aerobic capacity, strength, power, muscular endurance, flexibility. Training and conditioning: effect on the system of the body; methods and techniques; training for different populations (children, females, aged); training for specific sports and activities. Evaluation of fitness: tests for all fitness parameters; essential practical and laboratory procedures.

Course: HM42
Prerequisite: LSB231 or equivalent
Credit Points: 12 Contact Hours: 4 per week

HMB274 FUNCTIONAL ANATOMY
Surface anatomy of the trunk and upper and lower limb; morphological and mechanical properties of bone, muscle-tendon units with implications for physical activity; joint structure and function; analyses of movement tasks including walking and running; cinematography and electromyography in functional anatomy of movement tasks.

Courses: HM42, ME46
Credit Points: 12 Contact Hours: 4 per week

HMB275 EXERCISE & SPORT PSYCHOLOGY
Introduction to the psychological factors which influence performance, participation and adherence to both sport and exercise programs; personality and the athlete; attention and arousal; relaxation theory and practice; aggression and psycho-social development, leadership and team cohesion.

Course: HM42
Credit Points: 12 Contact Hours: 3 per week

HMB276 RESEARCH IN HUMAN MOVEMENT
Principles of research: purposes, philosophy, applications. Quantitative research: principles of test construction and administration; basic statistics; basic research design hypothesis testing. Qualitative research: methodology; data collection; theory building. Research presentation: writing a research report; developing conclusions. Application of research: examples in human movement; related literature.

Course: HM42
Credit Points: 12 Contact Hours: 4 per week

HMB301 HEALTH & PHYSICAL EDUCATION
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: 3 per week

HMB302 HEALTH & PHYSICAL EDUCATION
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
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: EDSO
Credit Points: 12  Contact Hours: 5 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: EDSO, EDSO
Credit Points: 12  Contact Hours: 3 per week

HMB306 DEVELOPMENTAL & INTEGRATED PHYSICAL ACTIVITY
This unit provides the theoretical basis to enable teachers of physical education to program 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: EDSO  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: EDSO  Prerequisite: HMB308
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: EDSO
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: EDSO
Credit Points: 12  Contact Hours: 3 per week

HMB311 MOVEMENT ANALYSIS
This unit is designed to introduce students to the anatomical and mechanical foundations of human movement, an appreciation of which is necessary to understand and interpret performance skills. Knowledge of the skeletal structure, joints and muscle actions, combined with an understanding of the mechanical principles which govern the body’s movements are the essential components of this unit.

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

HMB313 SOCIO-CULTURAL FOUNDATIONS OF PHYSICAL ACTIVITY
This unit is designed to lay a foundation in the disciplines of the socio-cultural areas which underpin the study of human movement. It serves as an introduction to the historical, sociological, philosophical, anthropological and cultural foundations of sports, games and leisure activities.

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

HMB314 PERFORMANCE SKILLS 1
This unit involves application of scientific principles to the analysis and development of techniques in all major swimming strokes, water rescue methods and track and field events. Students develop 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: EDSO
Credit Points: 12  Contact Hours: 6 per week

HMB315 PERFORMANCE SKILLS 2
In this unit various game forms are analysed in order to identify fundamental game skills and problem areas in skill development. Emphasis is placed on the application of relevant skills to suit game situations; of appropriate strategies for teaching and coaching selected sports to a variety of age groups and on the interpretation of rules in a competitive situation.

Course: EDSO
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: EDSO
Credit Points: 12  Contact Hours: 6 per week

HMB317 OUTDOOR EDUCATION
The value and place of outdoor education in schools and the community; development of proficiency in a number of outdoor pursuits; light-weight, minimum impact camping; leadership skills and safety techniques; the Australian natural environment; promotion of positive attitudes towards natural environments.

Course: EDSO
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: EDSO
Prerequisite: HMB313 or consent of lecturer.
Credit Points: 12  Contact Hours: 3 per week
Students are required, with guidance, to propose, carry out and report on some achievable enquiry into life in other countries act to enhance international understanding of the global village.

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

■ HMB324 ADVANCED PERFORMANCE LABORATORIES

Investigation of selected advanced theoretical structures and application to a performance activity.

Course: ED50
Prerequisites: Compulsory Level 1 and Level 2 units
Credit Points: 12
Contact Hours: 3 per week

■ HMB325 INDEPENDENT STUDY

Students are required, with guidance, to propose, carry out and report on some achievable enquiry which may take a variety of forms, from a development of previously undertaken units to a supplementary option chosen to expand the scope of their studies in human performance and physical education.

Course: ED50
Prerequisites: Compulsory Level 1 units
Credit Points: 12
Contact Hours: 3 per week

■ HMB327 MICROCOMPUTERS IN PHYSICAL EDUCATION & SPORT

This unit is offered to familiarise students with the benefits of applying microcomputer technology to the fields of physical education and sport. Content includes demonstration and evaluation of relevant software, database management, grading and administration programs and the development of task specific programs, for individual institutions.

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

■ HMB328 INTERNATIONAL PHYSICAL EDUCATION & SPORT

This unit is designed to provide students with an international perspective on physical education and sport. Comparative studies in this field give insight into life in other countries act to enhance international understanding of the global village.

Course: ED50
Prerequisite: HMB304 or HMB321 or consent of lecturer
Credit Points: 12
Contact Hours: 3 per week

■ HMB329 PLAY & CULTURE

A study of the play element in non-literate societies providing insight into play in contemporary societies. The anthropology of play provides a perspective not only for analysing play behaviour itself, but also for describing other cultural experience.

Course: ED50
Prerequisite: HMB313 or consent of lecturer
Credit Points: 12
Contact Hours: 3 per week

■ HMB332 HEALTH RELATED FITNESS

The role of health related fitness in the community and in the school for the attainment of optimal health.

Course: ED50
Prerequisite: PUB327
Credit Points: 12
Contact Hours: 3 per week

■ HMB333 CHILD & ADOLESCENT HEALTH

Child and adolescent health and the wide range of factors that impact on the health of individuals in these two crucial stages of life. An analysis is made of skills required for health enhancing behaviours and experience provided in some of the skills needed to assess and maintain the health status of children.

Courses: ED50, ED51
Credit Points: 12
Contact Hours: 3 per week

■ HMB335 INDIVIDUAL GAMES & SPORTS

These sports offer a different perspective from team games by demanding a higher level of self-directed involvement. Students specialise in three sports such as archery, golf, orienteering, fencing, squash, table tennis.

Course: ED50
Credit Points: 12
Contact Hours: 4 per week

■ HMB337 ORGANISATION & MANAGEMENT IN PHYSICAL EDUCATION & SPORT

School physical education departments and sporting associations are middle-sized organisations requiring direction for servicing a large client base with a fluctuating budget. In this unit students examine the role of administrators, management and leadership styles, and the administration of monies, facilities and human resources in a sports setting.

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

■ HMB340 PHYSICAL EDUCATION CURRICULUM STUDIES I

This unit is designed only for those students who have chosen to do a double major in physical education. It extends the understanding developed in HMB310 and focuses particularly on teaching within the classroom setting. Students are introduced to strategies used to develop higher order thinking skills and are encouraged to experiment with their use.

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

■ HMB341 SPORTING & CAMPING ADMINISTRATION

The primary school physical educator is responsible for the organisation of educational programs both at school and in other educational and sporting settings. This elective unit assists students in understanding and organising a variety of sporting tournaments, carnivals and camping programs as educationally sound, safe and enjoyable experiences for children.

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

■ HMB342 THE DEVELOPMENT OF TEACHING SKILLS IN PHYSICAL EDUCATION

This unit is designed around micro-teaching and involves student teachers, children and their working environment in schools. It promotes excellence in teaching, preparation and planning with an emphasis on active learning and research. Physical education teacher education students develop a greater understanding of their prospective working environment.

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

■ HMB343 ENVIRONMENTAL HEALTH

The focus of this curriculum elective unit is on educational responses to the growing concern about environmental hazards and their detrimental effects on human health. Emphasis on the curriculum implications of knowledge will assist children to make a positive contribution to health policy.

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

■ HMB344 HUMAN RELATIONSHIPS EDUCATION

This curriculum elective unit has a dual focus: effective interpersonal communication by teachers as members of the school community; and the curriculum and pedagogical process for teaching children. Care, personal development, work experience and community-based learning characterise these curriculum programs. Students are introduced...
to these processes through lectures, seminars, workshops and appropriate field study experiences.
Course: EDS1
Credit Points: 12  Contact Hours: 3 per week
HMB345 MOTOR DEVELOPMENT & PERFORMANCE IN DISABLED CHILDREN
In this unit students examine the effects of a wide range of intellectual, sensory, neurological, orthopaedic and physiological disorders on the motor development and performance of children. Assessment techniques for evaluating motor development and performance are combined with program planning and implementation with specific cases.
Course: EDS1
Credit Points: 12  Contact Hours: 3 per week
HMB361 FUNCTIONAL ANATOMY 2
Anthropometric protocols for the measurement of the body; morphological considerations; changes in body size and composition including skeletal, muscle and fat mass; body composition assessment methods: direct and indirect methods suitable to laboratory and field settings: somatotyping, maturation and performance; postural implications; exercise.
Course: HM42
Credit Points: 12  Contact Hours: 4 per week
HMB362 BIOMECHANICS 2
Research techniques within biomechanics; analysis of force systems; photographic, cinematographic; goniometric and electrophysiological analysis of movement; mass of inertial characteristics of the human body and biomechanical models.
Course: HM42  Prerequisite: HMB272
Credit Points: 12  Contact Hours: 4 per week
HMB363 INDEPENDENT STUDY
To meet the specific interest of students beyond content offered within existing units; conceptualise, plan and execute a research study including survey of literature, development of an action plan, reflection on a practice or situation, and proposal for future action. The student works at an advanced level and autonomously under the supervision of a lecturer.
Course: HM42
Credit Points: 12  Contact Hours: 4 per week
HMB364 SEMINARS IN HUMAN MOVEMENT
Offered to capitalise on the expertise of resident or visiting staff, special needs and interests of students, and to create flexibility in unit offerings. These may include special expertise, high quality limited period research projects, seminars, conferences and new initiatives by staff and students. An interest group will study the area chosen cooperatively.
Course: HM42
Credit Points: 12  Contact Hours: 4 per week
HMB370 PHYSICAL EDUCATION CURRICULUM STUDIES 2
The focus of this unit is divided between issues and directions of current trends in curriculum development and advanced strategies used to achieve variety in the presentation of indoor and outdoor lessons.
Course: ED30  Prerequisite: HMB310
Credit Points: 12  Contact Hours: 3 per week
HMB371 MOTOR CONTROL & LEARNING 2
Major recent theories in motor control and learning; centralist and peripheralist theories; concepts of coordination and skill; control and learning of complex movements; interlimb coordination; interacting schemas; visual-spatial, force and temporal aspects and sequencing of complex movements. Research design in motor control and learning.
Course: HM42  Prerequisite: HMB271
Credit Points: 12  Contact Hours: 3 per week
HMB372 BIOPHYSICAL BASES OF MOVEMENT REHABILITATION
Overview of rehabilitation including medico-legal aspects; health professionals in the rehabilitation process; exercise specialist, medical practitioner, physiotherapist, specialist physician; exercise prescription; overview of responses to injury implications for exercise programs; modalities of treatment: exercise and rest; immobilisation, cryotherapy and hydrotherapy; exercise prescription rehabilitation.
Course: HM42
Credit Points: 12  Contact Hours: 3 per week
HMB374 PSYCHOLOGY OF REHABILITATION
Practical application of psychological skills beneficial to the physical and psychological rehabilitative process: topics include: specific rehabilitation strategies; vicarious ego support; trauma from athletics; psychological process; disabled athletes.
Course: HM42  Prerequisite: HMB275
Credit Points: 12  Contact Hours: 3 per week
HMB375 ADAPTED PHYSICAL ACTIVITY
Similarities and differences in the motor development and performance with intellectual, sensory, neurological, physiological, orthopaedic, 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 mainstream and disorder specific groups; dance and aquatics.
Course: HM42  Prerequisite: HMB271
Credit Points: 12  Contact Hours: 4 per week
HMB376 MOTOR DEVELOPMENT IN CHILDREN
Theoretical perspective of normal and abnormal motor development, incorporating maturational, descriptive and behavioral aspects; underlying sensory, perceptual, neurological and cognitive changes which influence motor development in children. A theoretical understanding of gross and fine movement behaviour; and intellectually disabled, audito- impaired and neurologically impaired children.
Course: HM42  Prerequisite: HMB271 or at lecturer’s discretion.
Credit Points: 12  Contact Hours: 4 per week
HMB377 CHILDREN IN SPORT
Physical development of the young athlete; physical maturation; benefits of participation in sport and physical activity; psycho-social issues: positive and negative effects of participation including competitive stress; injuries to the growing skeleton; overtraining, overuse injuries; strength training in childhood and adolescence; promotion of safety in sport: accreditation of teachers and coaches; policy guidelines for junior sport, Aussie sport program.
Course: HM42
Credit Points: 12  Contact Hours: 4 per week
HMB380 PHYSICAL EDUCATION CURRICULUM STUDIES 2B
This unit is designed only for those students doing a double major in physical education and focuses par-
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: ED50  
Prerequisite: HMB340

Credit Points: 12  
Contact Hours: 3 per week

**HMB381 EXERCISE PHYSIOLOGY 2**

Theoretical component: an extension of material covered in exercise physiology: respiratory, circulatory, and muscular systems; cardiac dynamics; hormonal and biochemical aspects of exercise. Laboratory component: familiarity with all equipment in the laboratory; testing procedures and methodology; interpretation and evaluation of results.

Course: HM42

Prerequisite: HMB273  
Co-requisite: HMB382

Credit Points: 12  
Contact Hours: 3 per week

**HMB382 EXERCISE PRESCRIPTION**

Students research and analyse the physiological methods and procedures used in training and conditioning programs of all forms and levels of physical activity. The conditioning needs of specific populations are studied. The application of fitness assessment and exercise prescription is an integral aspect.

Course: HM42

Prerequisite: HMB273 or at lecturer's discretion.

Credit Points: 12  
Contact Hours: 3 per week

**HMB383 WORKPLACE HEALTH**

The historical and current position of workplace health as one emerging focus of occupational health and safety issues, laws, policies, programs and union, employer and employer perspective are analysed in conjunction with the role of workplace health professionals. The planning, development, promotion, implementation and administration of programs from a fitness counselor's perspective.

Course: HM42

Credit Points: 12  
Contact Hours: 3 per week

**HMB384 INJURY PREVENTION & REHABILITATION**

Roles and responsibilities of health professionals: first aid, injury prevention, rehabilitation, health training and facility management; prevention of injury: conditioning and fitness components, methods of evaluation of performance, personal responsibilities, protective equipment; types of injury: primary (indirect, direct and overuse) and secondary; structural classification of injury; procedures for management and rehabilitation: specific injuries.

Course: HM42

Credit Points: 12  
Contact Hours: 3 per week

**HMB390 HEALTH EDUCATION CURRICULUM STUDIES 1**

The nature of health education as an applied curriculum area. Insights into relevant Queensland syllabus and curriculum documents are provided; competencies in planning and teaching are developed and close links are made with teaching practice.

Course: ED50

Prerequisites: EDB323 and at least 48 credit points in the relevant discipline area

Credit Points: 12  
Contact Hours: 3 per week

**HMB391 PROMOTION OF PHYSICAL ACTIVITY**

Physical education departments, schools and sports organisations are constantly seeking funds, participants and spectators, and often the limiting factor is the low profile of the groups concerned. In this unit students examine the role of marketing and promotion, identify client and market mix, and develop strategies for the promotion and funding of activities.

Course: ED50

Credit Points: 12  
Contact Hours: 3 per week

**HMB392 ORGANISING TOURNAMENTS & EVENTS**

Competition is fundamental to all sports whether it be against oneself or another party. In this unit the philosophies related to competition and award systems for a varying client mix are examined; the complexities of, and skills required for, organisation of major sporting events in schools and other settings are discussed; and utilisation of human and facility resources in these settings is considered.

Course: ED50

Credit Points: 12  
Contact Hours: 3 per week

**HMB393 SPORT & EQUITY**

The inequalities that exist in society's major institutions, with particular reference to sport and physical education. The aim is to develop knowledge of government policy and legislation regarding equity in public, private and corporate establishments, as well as within educational settings.

Course: ED50

Prerequisite: HMB321 or HMB394 or consent of lecturer

Credit Points: 12  
Contact Hours: 3 per week

**HMB394 HISTORY OF PHYSICAL EDUCATION & SPORT**

The historical evolution of physical education, sports and games with their role and relevance in societies past and present. It extends the historical focus of HMB313 Socio-Cultural Foundations of Physical Activity and, itself provides the foundation for contemporary analyses of sport in society.

Course: ED50

Prerequisite: HMB313

Credit Points: 12  
Contact Hours: 3 per week

**HMB395 HEALTH EDUCATION CURRICULUM STUDIES 2**

The focus of this unit is divided between issues and directions associated with current trends in curriculum development and advanced strategies used to achieve variety in the presentation of health lessons.

Course: ED50  
Prerequisite: HMB390

Credit Points: 12  
Contact Hours: 3 per week

**HMB410 PHYSICAL EDUCATION CURRICULUM: SECONDARY**

The factors responsible for current physical education curriculum development. Emerging trends are studied to highlight the implications for physical education programs; challenges the student to design a secondary curriculum that reflects current trends.

Courses: ED26, ED32

Credit Points: 12  
Contact Hours: 3 per week

**HMB411 PHYSICAL EDUCATION CURRICULUM: PRIMARY**

The notion of the teacher of physical education and the classroom teacher reflecting on their experiences is of prime importance to the nature of this unit. An examination of the principles and procedures which are used within the physical education curriculum and the individual's classwork is central to the outcome. Action research methods are explained and linked to the sociological qualities of current curriculum prac-
Students in the Bachelor of Applied Science are required to undertake a project in Year 4. Students will undertake a project in analysis procedures. Groups will present a formal colloquium at the end of Semester 1.

Course: ED26
Credit Points: 12
Contact Hours: 3 per week

HMB412 HEALTH EDUCATION CURRICULUM PLANNING

Analysis and application of curriculum design theory and curriculum research to health education in primary and secondary schools. A focus on a curriculum design project is supported with a situational analysis of the project setting and is evaluated in a report on the effectiveness of the process.

Course: ED26
Credit Points: 12
Contact Hours: 3 per week

HMB440 MOTOR DEVELOPMENT & LEARNING IN CHILDREN

The role of reflexes and early voluntary movements in the development of the child; fundamental patterns of movement (walking, running, jumping, throwing, catching) and their sequential development; development of comprehension and manipulation; theories of motor learning; evaluation of perceptual-motor, sensory-motor and psycho-motor theories.

Course: ED26
Credit Points: 12
Contact Hours: 3 per week

HMB441 SOCIOLOGY OF SPORT

A sociology of sport; historical and contemporary perspectives; sport in Australia; Australia's sporting heritage; corruption of sport; control of sport; media and sport; inequality in sport; social issues in sport.

Course: ED26
Credit Points: 12
Contact Hours: 3 per week

HMB442 ADMINISTRATION IN PHYSICAL EDUCATION & SPORT

Identification of duties of the administrator; administration theory; leadership styles and conflict resolution; budgeting and money management including sponsorship and fundraising; planning for a range of events; processes and procedures of management against a school and club setting.

Course: ED26
Credit Points: 12
Contact Hours: 3 per week

HMB471 PROJECT 1

Students in the Bachelor of Applied Science are required to undertake a project in Year 4. Students will work in small groups on original topics. Work will include: a literature review and the presentation of experimental hypotheses, research methodology and analysis procedures. Groups will present a formal colloquium at the end of Semester 1.

Course: HM42
Credit Points: 12
Contact Hours: 3 per week

HMB472 PROJECT 2

The implementation of the plan, the analysis of results and publication of a report. Groups present a formal colloquium at the end of Semester 2.

Course: HM42
Credit Points: 12
Contact Hours: 3 per week

HMB473 PRACTICUM 1

A structured and supervised initial vocational experience linked to the student's specialised strand of study: the reality of the workplace; professional expectations; work ethics; client contact; the range of environments in the sport industry; practical application of specialist knowledge and skills in clinic settings. Reflective analysis of the experience.

Course: HM42
Credit Points: 12
Contact Hours: 3 per week

HMB474 PRACTICUM 2

As an extension of HMB473, an intense vocational experience undertaken as an internship over a minimum period of twenty days full-time employment: operational tasks to include management and administration; independent professional skills and knowledge; full client services illustrating effective communication skills and a comprehensive reflective analysis of the internship.

Course: HM42
Credit Points: 24

HMB610 CLINICAL MEASUREMENT

Blood flow and volume, plethysmography; cardiorespiratory measurement; electrical impedance imaging; anthropometry and body composition; measurement of normal and pathological gait; kinematic and kinetic analyses of human movement and performance; functional evaluation of orthotics and prostheses; electromyography; ergonomic and environmental issues; measurement of special populations.

Course: ME46
Prerequisites: HMB272, HMB274
Credit Points: 8
Contact Hours: 3 per week

HMB611 HUMAN PERFORMANCE

Human adaptation to physical activity; performance efficiency and enhancement in children and adolescents; performance characteristics of adults and the elderly; human performance and the environment; performance evaluation and restoration/enhancement in the injured or disabled population.

Course: ME46
Prerequisites: HMB272, HMB274
Credit Points: 8
Contact Hours: 3 per week

HMB614 BIOPHYSICAL BASES OF MOVEMENT REHABILITATION

The rehabilitation process; introduction to rehabilitation protocols; mechanisms of injury and repair and functional restoration; principles of exercise prescription and rehabilitation; modalities of treatment; modalities of exercise prescription in rehabilitation.

Course: ME46
Credit Points: 8
Contact Hours: 3 per week

HMB615 EXERCISE PHYSIOLOGY

Bioenergetics; exercise metabolism; hormonal response to exercise; muscle structure and function; circulatory adaptations, respiration and acid-base balance during exercise; temperature regulation, training and conditioning; body composition and nutrition; fitness testing and assessment procedures.

Course: ME46
Credit Points: 8
Contact Hours: 3 per week

HMB616 PSYCHOLOGY OF REHABILITATION

Factors that predispose to injury and behavioural change; the psychological process of rehabilitation; teaching specific psychological rehabilitation and coping strategies; the grief process; the rehabilitation psychologist's role in the rehabilitation team; disabled athletes.

Course: ME46
Credit Points: 8
Contact Hours: 3 per week

HMB617 WORKPLACE HEALTH

History of workplace health; legal aspects; role of associated professionals; trends in mortality and morbidity; workplace health; promotion agencies and programs; economic considerations; program promotion.

Course: ME46
Credit Points: 8
Contact Hours: 3 per week
■ HMB801 SPORT & MASS MEDIA
The commercialisation and development of sport and the mass media are inextricably linked and the nature and implications of this relationship will be the foundation for the investigation of this unit. This unit will examine the past, present and future aspects of this relationship through examination of current issues.
Course: BS50
Credit Points: 12  Contact Hours: 3 per week

■ HMB802 STRUCTURE & POLICY IN AUSTRALIAN SPORT
An understanding of the structure and policies of Australian sport is fundamental for administrators who are required to operate through the levels of government for the conduct, promotion and funding of their chosen sport. The relevant documentation and strategies for operating within the system.
Course: BS50
Credit Points: 12  Contact Hours: 3 per week

■ HMB803 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) is 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

■ HMB602 READINGS IN HUMAN MOVEMENT STUDIES
This unit enables students to explore the breadth of their chosen sub-discipline in contrast to the more specific focus of their thesis topic to follow. This unit provides the opportunity for students to develop a compendium of readings in an area(s) not catered for in other units comprising their specialisation. Students select advanced readings in their chosen field and submit a comprehensive annotated bibliography that critically reviews the available literature. This work is conducted under the supervision of a lecturer allied to the chosen area of study.
Course: HL88
Credit Points: 12  Contact Hours: 3 per week

■ HMB603 SCIENTIFIC BASES OF HUMAN PERFORMANCE
This unit provides the opportunity to develop theoretical and practical knowledge of selected topics representative of the scientific bases of human performance. Topics include: material from the recognised sub-disciplines of human movement science, functional anatomy, biomechanics, and exercise physiology. The unit investigates changes in the human energy systems, musculo-skeletal system and cardiovascular system that occur when the body is placed in a physically stressful situation (exercise being the predominant stressor considered). Specific applications to the physical activity setting.
Course: HL88
Credit Points: 12  Contact Hours: 3 per week

■ HMN604 SOCIAL ISSUES IN SPORT
An advanced in depth analysis of the diverse social issues which have permeated sport in Australia. The necessity for a critical cultural analysis has been necessitated by issues such as discrimination, violence, drugs, elitism, ethnocentrism, internationalism, politicisation, commercialisation and quantification. The focus will be on the analysis of the nature, role and significance of sport in modern society. The unit is designed for professionals and practitioners in the field of sport and physical activity who are in the corporate setting, educational domain and government and community departments.
Course: HL88
Credit Points: 12  Contact Hours: 3 per week

■ HMP015 SCHOOL HEALTH PROGRAM PLANNING
Planning, implementation and evaluation of school health programs. Analysis of a range of planning models in health education and health promotion.
Course: ED31, PU69  Prerequisite: HMP014
Credit Points: 12  Contact Hours: 3 per week

■ HMP401 PHYSICAL EDUCATION CURRICULUM STUDIES 1
Nature of physical education as an applied curriculum area; interpreting and managing the physical education practical and theoretical learning environment with particular attention to learner safety, maximum participation and teaching for cognition in practical activities; Mosston’s spectrum of teaching styles.
Course: ED32  Prerequisite: HMP420
Credit Points: 12  Contact Hours: 3 per week

■ HMP402 PHYSICAL EDUCATION CURRICULUM STUDIES 2
Clarification of the motives and roles of physical education as a medium for education; exploration of the current physical education documents and the value orientations implicit within language in physical education; the affective domain in physical education; teaching in unusual environments; evaluation and selection of learning experiences.
Course: ED32  Prerequisite: HMP421
Credit Points: 12  Contact Hours: 3 per week

■ HMP403 HEALTH EDUCATION CURRICULUM STUDIES 1
Nature of health education as an applied curriculum area; relevant Queensland syllabus and curriculum documents; competencies in planning and teaching are developed and close links made with teaching practice.
Course: ED32
Credit Points: 12  Contact Hours: 3 per week

■ HMP404 HEALTH EDUCATION CURRICULUM STUDIES 2
Issues and directions associated with current trends in curriculum development; advanced strategies used to achieve variety in the presentation of health lessons.
Course: ED32
Credit Points: 12  Contact Hours: 3 per week

■ HRB100 ADVANCED ORGANISATIONAL BEHAVIOUR
Investigation and analyses of major organisational behaviour issues undertaken within a context of organisational effectiveness and the quality of worklife; analysis of relevant literature; application of concepts via case studies, surveys and/or projects.
Course: BS50  Prerequisite: HRB130
Credit Points: 12  Contact Hours: 3 per week

■ HRB101 ADVANCED TRAINING & DEVELOPMENT
Planning and programming management and supervisory development; career planning, developing a complete training program; advanced training techniques: case study, role play, laboratory training, simulations, games, programmed instruction, computer assisted instruction, individualised learning
video and learning; managing the training and development function: planning, organising staffing, direct controlling; the competencies of a trainer. Experiential and project activities.

Course: BSB50  
Prerequisite: HRB120  
Credit Points: 12  
Contact Hours: 3 per week

HRB102 ADVOCACY & NEGOTIATION
Preparation and conduct of various types of negotiated industrial cases; preparation of tribunal documentation; preparation and presentation of cases before industrial tribunals; direct bargaining and enterprise-based bargaining.

Course: BSB50  
Prerequisite: HRB131 or HRN105  
Credit Points: 12  
Contact Hours: 3 per week

HRB103 EMPLOYMENT REGULATION & ADMINISTRATION
The formal regulatory requirements that establish 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: BSB50  
Prerequisite: HRB131 or HRN105  
Credit Points: 12  
Contact Hours: 3 per week

HRB104 FOUNDATION HR COMPETENCIES
The personal and interpersonal competencies (in both cognitive and affective domains) which form the foundations from which a HRM practitioner must operate. It aims to develop knowledge of, and skills in, self-awareness, personal and interpersonal development and interpersonal processes. It emphasises the design of process to achieve outcomes.

Course: BSB50  
Prerequisite: COB129  
Co-requisite: 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 practical skills is expected in this unit.

Courses: BSB50, BS74  
Prerequisite: HRB131 or HRN104  
Credit Points: 12  
Contact Hours: 3 per week

HRB106 INDEPENDENT STUDY IN MANAGEMENT
A review of an organisation by examining some aspects of its management processes and practices; preparation of a report for the organisation.

Course: BSB50  
Prerequisite: BSB102 or HRN104  
Credit Points: 12  
Contact Hours: 3 per week

HRB107 INDEPENDENT STUDY HRD
Enables students to demonstrate a competence in directing their own learning; essential for professionals who must subsequently keep themselves up-to-date in their area of expertise; students either individually or in small groups, undertake one or several learning activities with the approval of a supervisor; appropriate activities could include literature review, research (mini-thesis), project, practicum (work placement), or anything else deemed acceptable by the supervisor.

Course: BSB50  
Prerequisite: HRB101 and HRN104  
Credit Points: 12  
Contact Hours: 3 per week

HRB108 INDEPENDENT STUDY HRM
Enables students to demonstrate an ability to direct their own learning, a key competence for professionals who must keep themselves up-to-date in their area of expertise; students either individually or in small groups, undertake one or several learning activities with the approval of a supervisor; appropriate activities could include literature review, research (mini-thesis), project, practicum (work placement), or anything else deemed acceptable by the supervisor.

Course: BSB50  
Prerequisite: Completion of at least 48 credit points from the HRM major  
Credit Points: 12  
Contact Hours: 3 per week

HRB109 INDUSTRIAL DEMOCRACY
The theoretical basis for the range of industrial democracy schemes which have been developed. It focuses on employment relationships, organisation of work and productivity. Comparative industrial democracy especially Britain, Sweden, Germany and Japan and their relevance to Australia.

Course: BSB50  
Prerequisite: HRB131 or HRN105  
Credit Points: 12  
Contact Hours: 3 per week

HRB110 INDUSTRIAL LAW
The development and role of law in industrial relations in Australia; industrial relations legislation; common law contract of employment; industrial torts; other statute and case law related to the above.

Course: BSB50  
Prerequisite: HRB131 or HRN105  
Credit Points: 12  
Contact Hours: 3 per week

HRB111 INDUSTRIAL MANAGEMENT
The management process, planning, leading, organising, controlling; human resources management aspects of communication, motivation, leadership and teamwork, with practical applications to planning and control, personnel relations, job design.

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

HRB113 INDUSTRIAL RELATIONS HISTORY
The emergence and development of labour movements and employer groups; the ideas which gave rise to and shaped these institutions. Although the focus is on Australia, relevant European and North American experience is included.

Course: BSB50  
Credit Points: 12  
Contact Hours: 3 per week

HRB114 INDUSTRIAL RELATIONS INSTITUTIONS
The history, structure, functions and role of the industrial relations system at both state and federal levels, including trade unions and employer associations; award restructuring and the movement to decentralised bargaining arrangements; interrelationship of industrial relations with human resource management towards the development of employee relations.

Course: BSB50  
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: BSB50  
Prerequisite: HRB114 or HRN105  
Credit Points: 12  
Contact Hours: 3 per week
■ HRB116 INNOVATION & ENTREPRENEURSHIP
The nature and processes of innovation and new venture creation; assessment of the entrepreneur and new venture team, as well as the business opportunity and the resources required; methods of establishing ventures along with legal and financing issues; problems with, and effective management strategies for innovation; focuses on developing a comprehensive, professional standard business plan for a proposed new venture; the negotiation of new venture deals.
Course: EBS4
Credit Points: 4
Contact Hours: 2 per week

■ HRB117 INTERNATIONAL HUMAN RESOURCE MANAGEMENT
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
Prerequisite: BSB102 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 faci; ethics and international management.
Course: BS50
Prerequisite: BSB102 or HRN104
Credit Points: 12
Contact Hours: 3 per week

■ HRB119 INTERVIEWING & COUNSELLING
Development of practical skills in aspects of employment interviewing through an introduction to the theory and principles of interviewing, and supervised experience. The characteristics of the interview situation; the interviewer, the interviewee and their interactions; interview areas include the personal interview; information seeking and the employment interview: recruitment, appraisal, disciplinary and exit; personality theory, guidance, counselling, training techniques; an emphasis on the human skills required to facilitate the development of others, either in individual interaction or group interaction.
Course: BS50
Prerequisite: BSB102 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/audiosvisuals; administering a training course; evaluating learning, writing and scoring test items; follow-up training.
Course: BS50
Prerequisite: Completion of at least 96 credit points or HRN104
Credit Points: 12
Contact Hours: 3 per week

■ HRB121 MANAGEMENT
Career progression of the practising engineer from a technical to a managerial role; activities to be performed for effective management; development of theoretical and practical skills in planning, organising, controlling and leading; project teams; interpersonal interaction and teamwork; application of theoretical material to case study analysis.
Course: EBS4
Credit Points: 4
Contact Hours: 2 per week

■ HRB125 MANAGEMENT STRATEGY & POLICY
The process of strategy applied to modern management; external environmental assessment and internal organisational context; analytical skills in the formulation, implementation and evaluation of organisational strategic capability.
Course: BSS0
Prerequisites: BSB102 and HRB127 (recommended)
Credit Points: 12
Contact Hours: 3 per week

■ HRB126 MANAGEMENT PROCESSES
Principles from management and organisation theories, from concepts to application; decision making, initiating and changing structure, planning and applying strategies; control systems; systems development; analytical and critical skills in the context of the activities and structures directed to achieving organisational objectives.
Course: 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
Prerequisite: BSB102
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
Prerequisite: HRB131 or HRN104
Credit Points: 12
Contact Hours: 3 per week

■ HRB129 OPERATIONS & PRODUCTION MANAGEMENT
The application of qualitative management principles and quantitative management science principles to the organisational sub-system of the production/operations environment; organisation as a dynamic system, affected by internal and external forces; techniques for analysing and controlling operations; modelling and scheduling operations; inventory planning; on-site investigations.
Course: BS50
Prerequisite: BSB102 or HRN104
Credit Points: 12
Contact Hours: 3 per week

■ HRB130 ORGANISATIONAL BEHAVIOUR
Impact that individuals, groups, and structure have on behaviour within organisations; theories, research and applications for understanding, predicting and developing people in organisations. Topics include: abilities, learning, work motivation and attitudes, leadership, group dynamics and decision making, conflict, organisational symbolism and culture.
Courses: BS50, NS48, PU48
Credit Points: 12
Contact Hours: 3 per week
HRB131 PERSONNEL MANAGEMENT & INDUSTRIAL RELATIONS
Influences impacting on personnel management and industrial relations; the theoretical foundations of personnel management and industrial relations.
Courses: BS50, IF52, IF53, IS43, IT220, NS48, PU04, PU45
Credit Points: 12  Contact Hours: 3 per week

HRB133 EQUITY AT WORK
Historical, legal and social perspectives on current issues surrounding equal employment opportunity and anti-discrimination initiatives; workplace implications of current laws and in particular, likely and possible impacts in making personnel related decisions; concepts and applications of the principle of merit; day to day impacts of equity legislation; practical models for EEO management planning.
Course: BS50
Credit Points: 12  Contact Hours: 3 per week

HRB134 RECRUITMENT & SELECTION
This unit has an applied focus but draws on conceptual and research foundations and job analysis competencies developed in HRB105. Contextual issues of the legal and social environment as well as labour markets are considered. Recruitment: from the perspective of both the organisation and the individual; recruitment strategies; selection techniques including aptitude and ability testing, work samples, assessment centres and interviews; technical issues including validity, reliability and utility analysis.
Course: BS50  Prerequisite: HRB105 or HRN104
Credit Points: 12  Contact Hours: 3 per week

HRB135 SMALL BUSINESS MANAGEMENT
Australian small business and how to effectively manage a small business. Topics include: managing the functional areas of small businesses; managing risk (insurance), theft and fraud; managing growth; managing small businesses with problems; personal management for small business.
Courses: BS50, ED23, ED50, IF53  Prerequisite: BS102 or HRN104
Credit Points: 12  Contact Hours: 3 per week

HRB136 STRATEGIC HUMAN RESOURCE MANAGEMENT
The cornerstone of the HRM major: the primary objective is to integrate HR concepts and issues into the wider business and environmental context; a range of historical features, professional and ethical matters are considered; an experiential approach based in cases and/or simulations is adopted.
Course: BS50  Prerequisite: HRB105 or HRN104
Credit Points: 12  Contact Hours: 3 per week

HRB137 WAGES & EMPLOYMENT
The forces which determine wage and employment levels; the various types of labour markets; collective bargaining and skill formation processes. The relationship between these aspects and industrial relations institutions are addressed.
Course: BS50  Prerequisite: HRB131 or HRN105
Credit Points: 12  Contact Hours: 3 per week

HRB138 WORK & SOCIETY
Work and work organisations in industrialised society and their relationship with industrial relations processes and structures. Examination of work, work organisations and relations at work from a range of perspectives. The influence of control over work, work practices and technological change in an industrial relations context.
Course: BS50  Prerequisite: HRB131 or HRN105
Credit Points: 12  Contact Hours: 3 per week

HRB140 MANAGEMENT & TECHNOLOGY
Exploration of the links between technical process, product innovation and management structure, policy and practice; emphasises the consequences of changes to technologies for the organisation.
Course: BS50  Prerequisite: BS102 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 areas, in particular the relationship between the various agencies of the state and public sector units.
Course: BS50  Prerequisite: HRB131 or HRN105
Credit Points: 12  Contact Hours: 3 per week

HRB146 SPECIAL TOPIC HRM
Offered as required; aims to permit an in-depth examination of an issue of importance to HRM; content varies depending on the issue examined.
Course: BS50  Prerequisite: HRB131 or HRN105
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  Prerequisite: BS102 or HRN105
Credit Points: 12  Contact Hours: 3 per week

HRB148 MANAGING PEOPLE AT WORK
Introduction to the theory, process and practice of management and organisations with special reference to an engineering environment; importance of people in the achievement of organisational objectives.
Course: ME35
Credit Points: 8  Contact Hours: 2 per week

HRB149 HUMAN RESOURCES & INDUSTRIAL RELATIONS
Influences impacting on human resource management and industrial relations in an engineering environment; theoretical foundation of human resource management and industrial relations.
Course: ME35
Credit Points: 8  Contact Hours: 2 per week

HRB150 COMPARATIVE INDUSTRIAL RELATIONS
This unit examines industrial relations processes which operate under a range of social, economic, cultural and political arrangements. Emphasis is placed upon both European and Pacific-rim systems.
Course: BS50  Prerequisite: HRB131 or HRN105
Credit Points: 12  Contact Hours: 3 per week

HRB402 PUBLIC PERSONNEL MANAGEMENT
Principles of public sector management; public sector staffing structure; planning; organising/staffing; grievance resolution; reviews; development; personnel management issues; revision.
Course: BS50  Prerequisite: HRB131 or HRN104
Credit Points: 12  Contact Hours: 3 per week
HRB403 QUALITY MANAGEMENT
Introduction to the role of quality in the modern organisation; relation between quality management and strategic management as a total management philosophy; international quality programs and implications for Australia; organising for quality.
Course: BS50
Credit Points: 12
Contact Hours: 3 per week
Prerequisite: BSB102 or HRN104

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: BS52, BS83
Credit Points: 12
Contact Hours: 3 per week

HRN104 INTRODUCTION TO MANAGEMENT
The functions and roles of managers; concepts and principles and their practical applications; the key management functions; areas of planning, organising, staffing, directing and controlling; production/operations management and the management of quality; entrepreneurship and business planning; important problems, opportunities and trends facing managers in Australia analysed from the viewpoint of relevant academic disciplines.
Courses: BS74, BS78, BS81, ED23
Credit Points: 12
Contact Hours: 3 per week

HRN105 LABOUR-MANAGEMENT RELATIONS
Employee relations; employee and union action; the role of governments and industrial tribunals; alternative methods and pressures to change traditional Australian systems; the Australian system of labour management relations; systems of regulation in the employment area; negotiating skills; the resources required for mobilising change in this area.
Courses: BS78, BS81, ED23
Credit Points: 12
Contact Hours: 3 per week

HRN106 MANAGEMENT, TECHNOLOGY & SOCIAL CHANGE
The development of management theory and an analysis of management within complex organisational structures. The unit focuses on managers as participants in an organisational dynamic that is both influenced by and influences such factors as the current social state of technology, government and community pressures.
Course: BS83
Credit Points: 12
Contact Hours: 3 per week

HRN108 PEOPLE IN ORGANISATIONS
The internal operation of organisations and the behaviour of people in them; exploration of a range of theories and models of individual and organisational level influences on group behaviour. This exposure encourages students to critically evaluate such theories and models, and the implications for management behaviour.
Courses: BS70, BS74, BS78, BS81, ED23
Prerequisite: HRN104
Credit Points: 12
Contact Hours: 3 per week

HRN112 BUSINESS POLICY
Develops a manager's knowledge, analytical understanding and action-taking competencies. The paradigm adopted is that of strategic management: analyses of stakeholders, environments and capabilities, strategy formulation, and strategy implementation. Teaching methodologies emphasise the process of management as well as analysis, content and concepts. At the conclusion of this unit, students should understand how and why strategic decisions are made, and be prepared to make them.
Courses: BS70, BS81, BS86
Prerequisite: 72 credit points from MBA core or approval of course coordinator
Credit Points: 12
Contact Hours: 3 per week

HRN113 MANAGEMENT FOR ENGINEERS
The staffing function; leadership and motivation principles and their application; time management; stress management; industrial relations systems and issues; personal and organisational communication; management 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 systems, the requirements for occupational health and safety and the role of trade unions.
Course: BS86
Credit Points: 6
Contact Hours: 3 per week

HRN115 CONTEMPORARY ISSUES IN HRM
Postgraduate students need to be familiar with the contemporary issues and the current theoretical and practical developments within their field of specialisation. These matters need to be pursued at a level of intellectual rigour beyond that required for an undergraduate degree. The main objective of this unit is to identify, analyse and report on contemporary issues in HRM. To research information relevant to identified topics. Content may vary according to which issues are current or predictably important in the future. Special expertise of staff, visiting scholars or distinguished HRM professionals may be utilised.
Courses: BS62, BS83
Credit Points: 12
Contact Hours: 3 per week

HRN116 HRM CASES
This unit further develops students' capacity to analyse, evaluate and solve business problems and encourages them to develop the facility for independent thought and critical analysis. In this unit students will be required: (a) Examine a HR function in an organisation, and report observations. (b) Relate these observations to relevant theory and recent research. (c) Develop an integrated view of HR, including its functions, processes, stakeholders, and environment. Finally the unit will focus on any conceptual, theoretical, research, or practical material relevant to the cases.
Courses: BS62, BS83
Credit Points: 12
Contact Hours: 3 per week

HRN117 INDUSTRIAL RELATIONS & WORK ORGANISATION
This unit will encourage students to develop critical awareness of current debates in the area. It will also develop the students' critical, analytical and intellectual powers at an advanced level. It will connect the social, organisational and legislative aspects of industrial design relation within an analytical framework, and will enhance knowledge of workplace studies. Through this unit students will be
introduced to the social aspects of industrial organisation and industrial relations. Workplace studies are included and associated legislative aspects. Concepts such as the new 'Managerialism'.

**Course:** 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

### HRP101 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

### HRP102 HUMAN FACTORS IN QUALITY

Quality: an issue about business and people; leadership for quality improvement; motivation for quality improvement; paradigm shift; business as teamwork; quality improvement and human resources; employee participation strategies; training and education; ergonomics, technology and a human environment; quality of products and services.

**Course:** BS77  
**Credit Points:** 6  
**Contact Hours:** 3 per week

### HRP103 INDUSTRIAL RELATIONS STRATEGIES & POLICIES

Examination of policy formation in industrial relations at national and local levels in areas including wage policies, job security, job design, bargaining structure and union matters.

**Course:** BS74  
**Credit Points:** 12  
**Contact Hours:** 3 per week

### HRP104 INDUSTRIAL RELATIONS PRACTICES

Industrial relations practices and policies; research techniques for industrial relations issues, case research, preparation and presentation; institutional framework of industrial relations practices in Australia.

**Course:** BS74  
**Credit Points:** 12  
**Contact Hours:** 3 per week

### HRP105 INDUSTRIAL RELATIONS PROCESSES

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

**Course:** BS74  
**Prerequisite:** HRP104  
**Credit Points:** 12  
**Contact Hours:** 3 per week

### HRP106 INDUSTRIAL RELATIONS & SOCIETY

Economic and political context pertinent to industrial relations; aspects of theories of political economy related to labour and production; issues in political and economic strategies and policies relevant to industrial relations, for example, social welfare, income distribution and unemployment.

**Course:** BS74  
**Credit Points:** 12  
**Contact Hours:** 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 of an open systems model to introduce some of the key processes of personnel management at a theoretical and skill level; fosters knowledge, analytical and operational competencies; topics include: human resource management models, HRM and organisational strategy, human resource planning/job analysis, recruitment and selection, training and development, equity and career management.

**Course:** BS73  
**Prerequisite:** HRP104 or HRP107  
**Credit Points:** 12  
**Contact Hours:** 3 per week

### HRP111 QUALITY SYSTEMS MANAGEMENT

Quality management principles and systems put a new perspective on management theories and practices; introduction to management theories and concepts; relation to and impact on strategic management of the range of quality issues.

**Course:** BS77  
**Credit Points:** 12  
**Contact Hours:** 3 per week

### HRP112 MANAGEMENT OF SERVICE QUALITY

Application of quality management principles to services and processes in service operations and organisations; marketing; differentiations of services from products; implications for management.

**Course:** BS77  
**Credit Points:** 12  
**Contact Hours:** 3 per week

### HRX101 INDUSTRIAL RELATIONS & MANAGEMENT

Professionalism in industrial relations; pre-emptive bargaining; enterprise bargaining; alternative strategies; functional specialisations and the division of professional labour.

**Course:** BS10  
**Credit Points:** 12  
**Contact Hours:** 3 per week
HRX105 INDUSTRIAL RELATIONS SKILLS 3
Negotiation processes in industrial relations; duties, responsibilities and skills of negotiators; handling grievances at the workplace; award interpretation; local responsibilities.
Course: BS10
Credit Points: 12
Contact Hours: 3 per week

HRX106 INDUSTRIAL RELATIONS SKILLS 4
Formal advocacy and negotiation; operations within the conciliation and arbitration tribunals; collective bargaining in common law agreements; award creation and variation.
Course: BS10
Credit Points: 12
Contact Hours: 3 per week

HRX110 WORKPLACE ISSUES
Policies on current industrial relations issues in the workforce. Australian and overseas initiatives.
Course: BS10
Credit Points: 12
Contact Hours: 3 per week

HRX111 SAFETY & INDUSTRIAL RELATIONS
Current systems and practices in occupational safety and health programs. Industrial relations system in Australia and the management techniques which may be employed to create a good industrial relations climate on a site or in an industry.
Course: CE21
Credit Points: 7
Contact Hours: 2 per week

HRB002 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

HRB003 PHILOSOPHY & NURSING 1
A general introduction to philosophical questions and reasoning. Students have the opportunity to examine the ways in which personal beliefs and values impact on the nature of human beings and on nursing practice. Topics include: the nature of philosophy and political philosophy; the concept of personhood; spirituality and caring; critical thinking in nursing practice.
Course: NS48
Credit Points: 8
Contact Hours: 3 per week

HRB004 PHILOSOPHY & NURSING 2
Exploration of bioethics providing a foundation for the nursing professional in the handling of moral dilemmas intrinsic in the provision of health care. Topics include: introduction to ethics; bioethics in the social context; the process of moral decision making; ethics and professional nursing practice.
Course: NS48
Credit Points: 8
Contact Hours: 3 per week

HRB005 SOCIAL ETHICS & HUMAN RELATIONSHIPS
Philosophical and pedagogical issues underpinning the human relationships dimension of classroom practice and school cultures (e.g. concept of personhood, the nature of love, power, desire, human rights); sociocultural factors and changes generating moral dilemmas in society; case studies of moral issues and moral decision making; the ethics of teaching 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

HRB007 HEALTH & ETHICS
An introduction to ethics within a health care context. It particularly focuses on the role of health care educators exploring the ethical challenges confronting them and the ways in which they may cultivate moral sensitivity as part of community 'well-being'.
Course: ED50
Credit Points: 12
Contact Hours: 3 per week

HRB111 APPROACHES TO LITERATURE
Introduction to theories and practice of literary criticism and cultural analysis. The unit applies theoretical approaches (including new criticism, structuralism and post-structuralism, Marxist, psychoanalytic and feminist perspectives) to the study of texts chosen from a variety of genres and media.
Course: ED26
Credit Points: 12
Contact Hours: 3 per week

HRB201 PEOPLE & THE NATURAL ENVIRONMENT 1
The geomorphological systems which are creating the surface of the earth and with which human systems interact; the probable effects of the interaction of human and physical systems.
Course: ED50
Credit Points: 12
Contact Hours: 3 per week

HRB202 INTRODUCTION TO GEOGRAPHY
The nature and purpose of geography in terms of its conceptual structure and enquiry approaches; technologies, methods, skills used by geographers.
Course: ED50
Credit Points: 12
Contact Hours: 3 per week

HRB207 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
Prerequisite: HRB201
Credit Points: 12
Contact Hours: 3 per week

HRB311 THE STUDY OF HISTORY
This unit provides an introduction of some of the key issues inherent in the study of history. It considers the role and importance of history for contemporary society and examines differing theories of history. It also considers the nature of the New History and evaluates the importance of historical studies in the socialisation process.
Course: ED26
Credit Points: 12
Contact Hours: 3 per week

HRB312 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

HRB313 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
Ill contexts and at a higher level of complexity than civilisation and the Aborigine; the origins of an 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

■ HUB619 LOTE 2

This unit focuses on furthering students' proficiency in a LOTE using communicative teaching techniques as outlined in the ALL guidelines. The major emphasis of the teaching program, expressed at an holistic level, relates to communication. Learners should be able to compose and comprehend a LOTE in both written and spoken modes in a range of genres and contexts and at a higher level of complexity than LOTE, Level 1. This is done through lectures, workshops, tutorials and language tapes.

Course: ED41 Prerequisite: HUB418
Credit Points: 12 Contact Hours: 3 per week

■ HUB649 LOTE 3

At this level students are able to deal with more complex sociocultural information. In addition, they broaden their target language resource as well as develop an ability to use it; use more complex language structures and broader vocabulary; develop fluency; expand and fine-tune registers, genres, etc. and develop more theoretical/abstract discourse as the need arises in activities related to content.

Course: ED41 Prerequisite: HUB419
Credit Points: 12 Contact Hours: 3 per week

■ HUB600 AUSTRALIAN SOCIETY & CULTURE

Historical, political, economic and cultural information about Australia and Australians; egalitarianism; religion, frontier and rural Australia; the historical and future role of technology in Australia.

Courses: HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

■ HUB601 HUMAN IDENTITY & CHANGE

What it means to be human; ways human identities (eg. cultural, sexual, professional) are created and transformed; issues of identity, morality and change confronting human units in their encounters with the demands of contemporary life.

Courses: HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

■ HUB602 THE HUMANITIES TRADITIONS

Humanities traditions; current debates about the role of humanities in society; adopts a history of ideas approach in considering contributions of major writers from both western and eastern civilisations.

Courses: HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

■ HUB603 TEXTS & INTERPRETATION

Active analysis of various texts selected from a cross-section of contexts, genres and media; contemporary methods of textual analysis and critical approaches to cultural studies; processes involved in the coding and decoding of signs; forms of narrative and the structuring of experience; the role of unconscious mental processes in the production and interpretation of texts; textual representations of gender.

Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

■ HUB610 APPROACHES TO ASIA/PACIFIC BASIN STUDIES

A general introduction to the history and emerging political economy of the Asia/Pacific region; historical core/periphery structures; the ascent and decline of powerful imperial and new Asian cores such as Japan; systemic and anti-systemic movements and Australia's particular role in this region.

Courses: ED50, ED51, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

■ HUB611 INDONESIAN SOCIAL GEOGRAPHY

Indonesia’s physical environment, human settlement and land use patterns; an historical profile; ethnic groups, histories and developments of an ethos; Australia since World War II; urbanisation and nationalism and federation, Australia between the wars; Australia's particular role in this region.

Courses: ED50, ED51, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

■ HUB612 MODERN INDONESIAN STUDIES

An understanding of contemporary Indonesia; regional political and economic influences including ASEAN; domestic politics; demographic issues; Australia-Indonesian relationships.

Courses: ED50, ED51, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

■ HUB613 SOCIAL GEOGRAPHY OF THAILAND

A critical understanding of the geography and history of Thailand; its cultural and social diversity; geographical influences; the situation of cultural minorities; traditional agricultural systems; ancient and modern history; religious beliefs and practices.

Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

■ HUB614 CONTEMPORARY THAILAND

Geopolitical and economic influences in the Asian region influencing contemporary Thailand; urbanisation and industrialisation; poverty; health and welfare; tourism and international aid.

Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

■ HUB615 MODERN CHINA & JAPAN

Historical developments in China and Japan during the nineteenth and twentieth centuries; the sophistication and complexity of Chinese and Japanese societies; historical evidence to examine commonly held stereotypes of China and Japan; evaluates the recent history of the area.

Courses: ED50, ED51, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

■ HUB616 MODERN INDIA & SOUTH-EAST ASIA

A comparative study of the national independence struggles in India and Vietnam with some investigation of post-independence societies.

Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

■ HUB617 WOMEN, AID & DEVELOPMENT

Challenges existing notions of development; evaluates current models of development and aid in
This unit concentrates principally on twentieth century American literature and on the ways in which writers present. Analyses the link between 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

**HUB618 ASIAN WOMEN: TRADITION, COLONISATION & REVOLUTION**

Uses case studies to provide a broad analysis of Asian women's experiences of tradition, colonialism and revolution; highlights the linkages between traditional culture, colonialism and revolution; provides an appreciation of both the historical experiences and some of the contemporary concerns of Asian women.

Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

**HUB619 PACIFIC CULTURE CONTACT**

Key concepts including mobility, religion, morality, leadership, civilisation, society, change and continuity; develops an appreciation of culture and sensitivity towards those groups or individuals who do not share a particular cultural heritage; case studies and comparative analysis focus on the people of the Pacific at the time of initial European contact.

Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

**HUB620 THE PACIFIC SINCE 1945**

Analyses the link between culture and history in a post-contact context of change and continuity in the contemporary Pacific; overviews the events since 1945 that are important in the lives of Pacific Island people; presents key concepts including mobility, adaptation, change, tradition, continuity, modernisation, conflict and independence.

Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

**HUB621 NORTH AMERICAN STUDIES**

A comparative approach to the histories of Canada, the United States and Mexico; key themes including patterns of early settlement, the development of political institutions, the treatment of minorities, and the interaction of these three nations up to the present.

Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

**HUB622 LATIN AMERICAN STUDIES**

Uses case studies dealing with Latin American history and political economy from pre-conquest period to the present day; focuses on US/Latin American relations and contemporary systemic/anti-systemic cases such as the national security state doctrines of authoritarian Chile/Argentina and radical Cuba and Nicaragua.

Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

**HUB623 ASIA/PACIFIC POLITICAL STUDIES**

Studies the structural and ideological bases of Asia/Pacific leading countries within a broad world system overview; special emphasis on political models of development and cultural studies; case studies of systemic (eg. Taiwan) and non-systemic models (eg. NPA) are undertaken.

Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

**HUB625 AMERICAN LITERATURE**

This unit concentrates principally on twentieth century American literature in the years preceding World War II and in the post-war reconstruction period to the present. Particular emphasis on major pre-occupations in literature and on the ways in which writers have responded to, and interpreted, political and social currents in the pre and post World War II periods.

Courses: ED50, HU20
Credit Points: 12 Contact Hours: 3 per week

**HUB650 INTRODUCTORY INDONESIAN 1**

An introduction to the development of the macro skills of speaking, listening, reading and writing in the Indonesian language; examines customs and language etiquette and non-verbal communication.

Courses: BS50, ED50, ED51, HU20, IF36
Credit Points: 12 Contact Hours: 4 per week

**HUB651 INTRODUCTORY INDONESIAN 2**

Develops macro skills in the Indonesian language; focuses on socio-cultural aspects of Indonesia; analytically studies the Indonesian language.

Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB641
Credit Points: 12 Contact Hours: 4 per week

**HUB652 INDONESIAN LANGUAGE & CULTURE 1**

Students are expected to communicate at an elementary level in Indonesian; analytically study the language; study traditional Indonesian literature.

Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB642
Credit Points: 12 Contact Hours: 4 per week

**HUB653 INDONESIAN LANGUAGE & CULTURE 2**

Develops fluency in communicative activities; traditional and contemporary Indonesian literature.

Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB643
Credit Points: 12 Contact Hours: 4 per week

**HUB654 INDONESIAN LANGUAGE & CULTURE 3**

Develops a high degree of proficiency in Indonesian; students are expected to understand the complex language structure; Indonesian media sources.

Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB644
Credit Points: 12 Contact Hours: 4 per week

**HUB655 INDONESIAN LANGUAGE & CULTURE 4**

Develops maximum proficiency in Indonesian; emphasises fine tuning of speaking, listening, reading and writing; studies of Indonesian media sources.

Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB644
Credit Points: 12 Contact Hours: 4 per week

**HUB647 IN-COUNTRY SUMMER SCHOOL OR EQUIVALENT**

This unit is held in residence at a designated foreign university for four to six weeks of concentrated learning; aims to enhance student's proficiency in the four macro skills; increases student's understanding of the cultural context in which the target language is used.

Courses: BS50, ED50, HU20
Credit Points: 24

**HUB648 IN-COUNTRY SEMESTER OR EQUIVALENT**

Students follow an approved course of study at a designated foreign university for a semester. The unit aims to improve language skills in an immersion situation and at the same time provide the cultural experience of living in the country of the language being studied for an extended period of time.

Course: HU20
Credit Points: 48
■ HUB660 INTRODUCTORY JAPANESE 1
Students with little or no previous experience in the Japanese language are introduced to the four skills of listening, speaking, reading and writing; hiragana script is studied from the outset and some simple kanji are introduced; appreciation of cultural aspects.
Courses: BS50, ED50, ED51, HU20
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
Prerequisite: Year 12 Japanese or equivalent
Credit Points: 12  Contact Hours: 4 per week

■ HUB663 JAPANESE LANGUAGE & CULTURE 2
Consolidates and develops listening, speaking, reading and writing skills through an integrated approach; students read material written in hiragana, katakana and an increasing number of kanji; cultural aspects are incorporated within the relevant language situations.
Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB662
Credit Points: 12  Contact Hours: 4 per week

■ HUB664 JAPANESE LANGUAGE & CULTURE 3
An intermediate level unit aiming to impart an understanding of the values stipulated for Japanese culture and society; enhances students' language skills.
Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB663
Credit Points: 12  Contact Hours: 4 per week

■ HUB665 JAPANESE LANGUAGE & CULTURE 4
Continues the theme of understanding the values stipulated for Japanese culture and society; enhances students' language skills.
Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB664
Credit Points: 12  Contact Hours: 4 per week

■ HUB666 JAPANESE LANGUAGE & CULTURE 5
Focuses on the Japanese media; extends skills in listening, speaking, reading and writing to an advanced level by exposure to natural language.
Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB665
Credit Points: 12  Contact Hours: 4 per week

■ HUB667 JAPANESE LANGUAGE & CULTURE 6
Focuses on the media; extends students' linguistic skills to a level where they can access authentic media resources, express opinions and discuss issues.
Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB666
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
Prerequisite: HUB670
Credit Points: 12  Contact Hours: 4 per week

■ HUB671 INTRODUCTORY FRENCH 2
Develops a range of language skills; stresses oral/aural skills; extends reading comprehension and writing in French.
Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB670
Credit Points: 12  Contact Hours: 4 per week

■ HUB672 FRENCH LANGUAGE & CULTURE 1
Designed to meet the needs of students who have completed Year 12 French (or equivalent), focuses on speaking, listening and reading skills.
Courses: BS50, ED50, ED51, HU20
Prerequisite: Year 12 French or equivalent
Credit Points: 12  Contact Hours: 4 per week

■ HUB673 FRENCH LANGUAGE & CULTURE 2
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: HUB672
Credit Points: 12  Contact Hours: 4 per week

■ HUB674 FRENCH LANGUAGE & CULTURE 3
Continues the development of the four macro skills; the French media and how news is constructed in France.
Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB673
Credit Points: 12  Contact Hours: 4 per week

■ HUB675 FRENCH LANGUAGE & CULTURE 4
Equips students to debate issues or discuss texts, visual and written using verbal and non-verbal means; attention is paid to the four macro skills; the French media and how news is constructed in France.
Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB674
Credit Points: 12  Contact Hours: 4 per week

■ HUB676 FRENCH LANGUAGE & CULTURE 5
Students are introduced to modern French theatre; continues the development of the four macro skills.
Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB675
Credit Points: 12  Contact Hours: 4 per week

■ HUB677 FRENCH LANGUAGE & CULTURE 6
Introduces the works of selected French writers; two hours a week are spent on a study of French for academic purposes.
Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB675
Credit Points: 12  Contact Hours: 4 per week
HUB680 APPROACHES TO AUSTRALIAN STUDIES
Introduces the Australian Studies major; focusses on cultural themes within Australian history; includes an examination of the shock felt by pre-1850s immigrants, racial conflict and naturalisation processes. Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB682 SOCIAL MOVEMENTS IN AUSTRALIA
New social movements in Australia since the 1960s; includes green, women's, peace, Aboriginal and Third World development movements; comparison with overseas and old social movements. Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB683 AUSTRALIAN GEOGRAPHICAL STUDIES
Expands the geographical understanding of students into the cultural area, enabling them to appreciate the significance and interrelationships of issues of people, land, resources, energy and technology. Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB685 RESOURCES, PLANNING & DEVELOPMENT
This unit considers the various development options open to Australia. Attention is paid to Australia's economic history and current economic structures. Courses: HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB686 INTRODUCTION TO POLITICS: AN AUSTRALIAN PERSPECTIVE
The institutional and ideological bases of political life in a democratic society such as Australia; examines ways in which political traditions, political parties, government and non-government organisations interact to make decisions. Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB687 CONTEMPORARY MORAL PROBLEMS
Introduction to applied ethics and moral philosophy through an analysis of a range of contemporary issues within an Australian context, eg. uses of technology, genetic engineering, nuclear energy, overpopulation, environmentalism, war, terrorism, civil disobedience, pacifism, racism, sexism, abortion, euthanasia, suicide and sexuality. Courses: HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB690 THEMES IN AUSTRALIAN HISTORY
Covers historical and cultural material on Australian mythologies and historiographies; European and Aboriginal understandings of the land; Aboriginal mapping and art; the construction and importance of cities; ways in which notions such as motherhood were enlisted in nationalism. Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB691 WOMEN'S PAST - WOMEN'S HISTORY TO FEMINIST HISTORIOGRAPHY
Challenges a masculine version of history; considers the historiographical debate on the development of women's history in the Australian context; explores a range of issues including case studies of women's issues and experiences; encourages the process of documenting women's history via testimony. Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB692 CONSPIRACY & DISSENT IN AUSTRALIAN HISTORY
Uses case studies to reflect conspiracies as well as protest movements in nineteenth and twentieth century Australia; includes nineteenth century land grab conspiracies; Aboriginal resistance; anti-war movements; the Petrov affair; the 1975 dismissal. Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB693 AUSTRALIAN RACE RELATIONS
Race relations within Australia before and after British settlement and locates material within a comparative international framework. Theories of race, trade routes, racial violence and resistance. Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB700 ABORIGINAL & TORRES STRAIT ISLANDER CULTURE STUDIES
An appreciation of the two distinct indigenous cultures of Australia; how external forces to Aboriginal and Torres Strait Islander cultures caused social, economic and political changes; traditional family life and organisation. Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB701 ABORIGINAL & TORRES STRAIT ISLANDER LITERATURE
Despite the fact that it represents the indigenous culture of Australia, the oral tradition of Aborigines and Torres Strait Islanders has only recently begun to be appreciated. By examining this tradition, its continuation to the present day and its transformation into published texts, this unit seeks to open the eyes of students to a different world view. Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB702 THE AUSTRALIAN DREAMING: THE INDIGENOUS CONSTRUCTION
A philosophical overview of Aboriginal and Torres Strait Islander culture; draws upon a variety of conceptual approaches; examines theories which underpin indigenous constructions of reality. Courses: HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB703 POLITICS & POLITICAL CULTURE IN INDIGENOUS AUSTRALIA
Addresses the issues underlying the multifaceted world of indigenous politics; land rights; language rights; health; education; fishing rights and heritage. Courses: HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB710 AUSTRALIAN LITERARY STUDIES
A critical appreciation of various texts from Australia's literary tradition; considers the impact of social values, political and artistic movements upon literature production and genres; the dichotomy of mainstream and marginalised writing in various groups and periods of Australia's cultural traditions. Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week
HUB711 AUSTRALIAN WOMEN'S WRITING
The literary contribution of Australian women writers from the nineteenth and twentieth centuries to Australian culture and society; focuses on a number of significant texts that raise crucial issues in their representation of women's lives and identities.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB712 AUSTRALIAN CHILDREN'S & ADOLESCENT FICTION
Children's and adolescent novels within the cultural context of nineteenth and twentieth century Australia; focuses on textual analysis of major generic types; considers issues such as race, gender, class and regionalism in fiction for young Australians.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB720 APPROACHES TO EUROPEAN STUDIES
A broad introduction to the major studies sequence in European studies; uses historical and literary perspectives to highlight major themes in the development of European society and culture.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB721 THE CLASSICAL WORLD
The emergence and development of European society from earliest times to 500 AD; in alternate semesters it examines the major political, social and economic trends in classical Greek or Roman society.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB722 FOUNDATIONS OF MODERN EUROPE
The formation of modern Europe from the late Middle Ages to the end of the nineteenth century; the emergence of secularism and the rise of nation states.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB723 EUROPE IN THE TWENTIETH CENTURY
Considers traumatic events of the twentieth century; emphasises significant trends in political, economic and social changes; examines the implications of the momentous changes which have taken place in Europe over the last few years.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB724 NINETEENTH CENTURY ENGLISH LITERATURE & CULTURE
Focuses on two major literary genres: the novel and poetry; their evolution and variety in a time of profound economic, political and social change in England between 1790 and 1880; examines the variety of response of a number of literary artists to these changes and the ways narrative and verse forms were adapted and evolved.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB725 TWENTIETH CENTURY ENGLISH LITERATURE & CULTURE
Critical analysis of key British literary texts of the twentieth century (prose, poetry, drama); the theoretical and cultural movements that underpin them.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB726 EUROPEAN LITERATURE & SOCIAL CHANGE
Uses a broadly defined European perspective to explore how literary texts respond to, influence and are in turn influenced by social and cultural forces; set texts are explored from a range of thematic perspectives: industrialisation and the impact of new technologies, war and civil unrest, political power and citizenship, colonialism and post-colonialism.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB727 EUROPEAN LITERATURE & IDENTITY
Explores selected European literary texts from different periods and regions with a focus on identity 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; emphasises recent theoretical and performance strategies in Shakespearean genre studies.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB730 WOMEN'S WRITING & REPRESENTATION
Examines ways women have been represented in literary and non-literary texts; identifies cultural contexts in which women write and are represented; examines nineteenth and twentieth century texts by European writers by and about women.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

HUB735 INTRODUCTORY GERMAN 1
An introductory unit in the German language for students with little or no previous knowledge of German; equips students with some of the basic communication skills for a variety of everyday situations.
Courses: BS50, ED50, ED51, HU20, IF36
Credit Points: 12 Contact Hours: 4 per week

HUB736 INTRODUCTORY GERMAN 2
An intensive introductory unit in the German language; develops basic communication skills.
Courses: BS50, ED50, ED51, HU20
Prerequisite: HUB735
Credit Points: 12 Contact Hours: 4 per week

HUB737 GERMAN LANGUAGE & CULTURE 1
Designed for students who have completed Year 12 German or its equivalent; consolidates the four language skills of reading, writing, listening and speak-
current practical ethical dilemmas.

II HUB750 UNDERSTANDING 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: HUB20, IF36
Credit Points: 12 Contact Hours: 3 per week

II 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: HUB20, IF36
Credit Points: 12 Contact Hours: 3 per week

II 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: HUB20, IF36
Credit Points: 12 Contact Hours: 3 per week

II 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: HUB20, IF36
Credit Points: 12 Contact Hours: 3 per week

II 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: HUB20, IF36
Credit Points: 12 Contact Hours: 3 per week

II 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: HUB20
Credit Points: 12 Contact Hours: 3 per week

II HUB771 POLITICAL IDEOLOGIES

A study of the political spectrum of ideologies and their intellectual foundations; the intellectual origins and nature of contemporary ideologies such as feminism, racism, and the green movement.

Course: HUB20
Credit Points: 12 Contact Hours: 3 per week

II 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: HUB20
Credit Points: 12 Contact Hours: 3 per week
quality and level of living; concepts of social wage,

Forms and patterns of consumption of social goods, income distribution and measures of ownership and control of production in market and market situations.

Credit Points: 12
Contact Hours: 3 per week

HUB802 POLICS & PRODUCTION

Political economy of production; form of economic calculation and theories of value, profit and interest; calculation and theories of value, profit and interest;

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.

Credit Points: 12
Contact Hours: 3 per week

HUP001 ETHICS & HUMAN RELATIONSHIPS EDUCATION

Philosophical approaches to human relationships; moral philosophy and education; development of an integrated and clearly articulated agreement for a philosophy of human relationship education.

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.

Credit Points: 12
Contact Hours: 3 per week

HUP003 ETHICS: THEORY & PRACTICE

The theory and practice of moral decision-making; current ethical issues.

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.

Credit Points: 12
Contact Hours: 3 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.

Credit Points: 12
Contact Hours: 3 per week

ISB180 COMPUTER APPLICATIONS

Application of technologies in a teaching context; the use of writing and publishing software; graphics design software; numerical software tools; personal project management tools; communications technologies and computer peripherals used in the production of computer-generated materials.

Credit Points: 12
Contact Hours: 2 per week

ISB183 INTRODUCTION TO COMPUTERS IN PLANNING

The use of computers in planning. Overview of computers; problems and advantages of computer use; hands on experience in using QUT's computer facilities, particularly PCs; gaining access, file structures, information storage and retrieval, editing and related utility functions; flow-charting and programming logic. Simple programming exercises. Spreadsheets and databases. Geographical information systems. Word processing on microcomputers.

Credit Points: 4
Contact Hours: 1 per week

ISB382 MICROCOMPUTER APPLICATIONS

Commercial microcomputer systems as they apply to science; includes an introduction to three major microcomputer applications; the design and implementation of spreadsheet models and creation of reusable templates; the use of a database management system (DBMS) including design of data files, creation of data views and reports; an introduction to problem definition, solution design and modular programming in conjunction with the DBMS; understanding the basic capabilities of word processing packages and their applications.

Credit Points: 8
Contact Hours: 3 per week

ISB385 MICROCOMPUTER SOFTWARE APPLICATIONS

Provides a basic understanding of commercial microcomputer systems as they relate to applied science. It includes an introduction to three major microcomputer applications; the design and implementation of spreadsheet models and creation of reusable templates; the use of a database management system (DBMS) including design of data files, creation of data views and reports; an introduction to problem definition, solution design and modular programming in conjunction with the DBMS; and an understanding of the basic capabilities of word processing packages and their applications.

Credit Points: 4
Contact Hours: 2 per week
ISB393 COMPUTER BASED INFORMATION SYSTEMS
Introduces engineering students to commercial computer applications: systems concepts, file management and database systems. As practical work, the combination of database/spreadsheet package VP-Planner has been selected.
Course: EE44, ME45
Pre/Corequisites: CSB191, CSB291
Credit Points: 4 Contact Hours: 2 per week

ISB863 DATABASE THEORY & TECHNIQUES
Logical and physical models of information systems; characteristics; use of a structured query language to query existing curriculum databases and construct new ones; the sociological implications of the utilisation of public and private databases.
Course: ED50
Credit Points: 12 Contact Hours: 3 per week

ISB865 INFORMATION SYSTEM MODELLING
Modelling of information systems; relational systems; fact oriented approaches; conceptual schema design.
Course: ED50
Pre/Corequisite: ISB863
Credit Points: 12 Contact Hours: 3 per week

ISB892 BUSINESS COMPUTING
Provides business students with a practical understanding of computers as used in various business environments; the theory of hardware, software, types of processing and data storage methods. Students gain a thorough understanding of the role of computing in business, the efficient design and implementation of microcomputer software solutions (wordprocessing, spreadsheets and databases) to specific business problems, and an understanding of the implications of computers for business in terms of security, privacy, legal issues and current developments.
Courses: AA21, BS30, ED50, IF31, PU48
Credit Points: 12 Contact Hours: 4 per week

ISN100 INFORMATION SYSTEMS I
Advances in information system development approaches and techniques. It examines the theoretical basis underlying current approaches to decision support. A special focus is on the impact on information systems development of increased user involvement.
Courses: CS36, CS55, IS50, IS61
Prerequisite: ITB222
Credit Points: 12 Contact Hours: 3 per week

ISN110 FORMAL SYSTEMS SPECIFICATION
The description of information systems by means of formal languages: the concepts of formal specification, compared to informal specification languages such as structured English: how to formally specify a system; how to prove properties of that system, how to develop an executable implementation of the system and how to prove the equivalence of the two.
Courses: IS50, IS61
Prerequisite: ITB322
Credit Points: 12 Contact Hours: 3 per week

ISN130 OBJECT-ORIENTED SYSTEMS
Object-oriented systems as an alternative to traditional procedurally based systems; looks at their benefits and weaknesses, including key concepts of data abstraction and encapsulation and the techniques of inheritance, polymorphism and genericity. Students learn to identify and design object classes. Builds competence in selection of strategies appropriate to improved systems design leading to longer-term maintenance costs.
Courses: IS50, IS61
Prerequisite: ITB224
Credit Points: 12 Contact Hours: 3 per week

ISN160 KNOWLEDGE-BASED SYSTEMS
This unit assumes a background in conventional systems concepts, programming and database, and an exposure to fundamental expert systems concepts. It explores four major themes in knowledge-based systems: (a) conceptual: problem selection and structure, inference and knowledge representation; (b) technical: declarative and functional programming; (c) pragmatic: improving the yield from existing information bases; and (d) methodological: questions associated with the definition, design and control of knowledge-based systems.
Courses: IS50, IS61
Prerequisite: ISN110, ITB243 (or equivalent)
Credit Points: 12 Contact Hours: 3 per week

ISN170 SPECIAL STUDIES
Students are offered the opportunity to study specific topics which are not dealt with elsewhere in the course and which are seen at the time of offering to be significant to business information systems. It takes account of the very dynamic nature of the information systems field in allowing treatment of newly emerged topic areas. Use of specialist knowledge and skills among the information systems staff at the time.
Courses: IS50, IS61
Prerequisite: See School announcements.
Credit Points: 12 Contact Hours: 3 per week

ISN180 HUMAN COMPUTER INTERFACE
The most significant issues and activities of the Human Computer Interface (HCI) and software design includes the perceptual basis of the presentation of visual information, the basic aspects of visual information processing and facets of representation of knowledge; the development of expert systems and how they change the nature of interaction between person and machine and reviews features of interactions with systems, eg. keyboards through to advanced input modes. On completion, students should be able to apply principles from the current research in different aspects of HCI interactions and will be aware of future developments in this field.
Course: IS50
Credit Points: 12 Contact Hours: 3 per week

ISN190 COMPARATIVE STUDY OF INFORMATION AGENCIES
Philosophies and modes of information provision which apply in different cultures and countries; comparative methods and studies and an investigation of sources relating to information agencies; including both libraries and computer-based information agencies worldwide. Students review and analyse examples of existing studies, services offered by different types of agencies and their community impact, national and international standards of services, the structure of the information professions, professional associations, literature, ethics and legal responsibilities in relation to national information policies and emerging trends in information provision.
Course: IS50
Credit Points: 12 Contact Hours: 3 per week

ISN200 MAJOR ISSUES IN INFORMATION TECHNOLOGY
Explores aspects of Information Technology of great potential significance to Information Systems professionals, such as the status of information system
standard of emerging technologies and data communications technology, as well as emerging social and ethical considerations with regard to information technology.

Course: IS50  Credit Points: 12  Contact Hours: 3 per week

- **ISN201 RESEARCH METHODOLOGY**

Topics of research by agreement between the student and a faculty staff member acting as a project supervisor. Students must attend lectures/seminars of approximately one hour every two weeks (on average). They will also engage in literature search and generally other design aspects of their research project.

Courses: IS50, IS61  Credit Points: 12  Contact Hours: 3 per week

- **ISN210 AUTOMATED SYSTEMS MANAGEMENT**

Identification of management challenges entailed by automated systems; the development of system specifications and Request for Proposal; evaluation of proposals; contracts and legal responsibilities; staff training and development; the effect on management structure of centralised versus distributed systems and of upgrading automated systems.

Course: IS50  Credit Points: 12  Contact Hours: 3 per week

- **ISN211 HONOURS PROJECT**

A continuation and completion of the research project initiated for ISN201.

Course: IS61  Credit Points: 12

- **ISN220 BUSINESS COMPETITOR INTELLIGENCE**

The use of competitor intelligence to enhance effectiveness of business strategies and the various methodologies and analytical techniques for obtaining and using competitor intelligence in support of strategic planning; competitor intelligence and strategic planning; the inter-relationship between intelligence and planning in corporate decision making; the organisation framework; establishing an intelligence collection network; analytical techniques; applications in different strategic environments; and sources and types of competitor intelligence.

Course: IS50  Credit Points: 12  Contact Hours: 3 per week

- **ISN240 CLASSIFICATION**

The theory and practice of the classification of knowledge and its role in the advancement of knowledge; selected schemes and their applications, research into automated classification and creation of schemes for special situations will be considered.

Course: IS50  Prerequisite: ITP312  Credit Points: 12  Contact Hours: 3 per week

- **ISN250 THE INFORMATION INDUSTRIES**

Information industries and policies; the social and legal issues involved in the expansion of these industries; the information industries in the information economy, public policy, Queensland as an information economy; information industry development abroad, information law, intellectual property, privacy/freedom of information computer crime transborder data flow/sovereignty issues, social justice and equity issues; the information society.

Course: IS50  Prerequisite: ITP330  Credit Points: 12  Contact Hours: 3 per week

- **ISN260 EVALUATION OF INFORMATION SERVICES & ORGANISATIONS**

Techniques applicable to the evaluation of libraries and other information centres; including the statistics collected, their usefulness and the means used to collect them as well as non-statistical methods and their value. Previous research will be studied to determine applicable methods and isolate trends, especially those which may have implications for the future.

Course: IS50  Prerequisite: ISN201  Credit Points: 12  Contact Hours: 3 per week

- **ISN270 SOCIAL IMPACTS OF INFORMATION TECHNOLOGY**

The significant issues in the realm of speculative information systems and technologies; scenarios of information rich/poor interactions within and without organisational environments are examined. Emerging issues in information technology and the implications for information systems and organisational structures are defined and predicted. A compact synthesis for an organisational system, incorporating environmental and societal integration is considered.

Course: IS50  Credit Points: 12  Contact Hours: 3 per week

- **ISN280 ORGANISATIONS, SYSTEMS & INFORMATION**

The structure of organisations, systems and information; theoretical aspects of environmental and managerial influences; socio-technical areas and system failures; strategies to deal with system failures; the role of information in organisations and its symbiotic relationship; constraints and alternatives.

Course: IS50  Credit Points: 12  Contact Hours: 3 per week

- **ISN290 CURRENT ADVANCES IN DATABASE TECHNOLOGY**

Current research activities and development in the area of the next generation database systems; a mixture of research papers and lecture notes on existing systems; practical and theoretical methodologies.

Course: IS50  Prerequisite: knowledge of database systems.  Credit Points: 12  Contact Hours: 3 per week

- **ISN300 INFORMATION SYSTEMS 2**

An advanced treatment of contemporary issues of information system development, particularly the development of corporate information systems.

Courses: CS36, CS55  Prerequisite: ISN100  Credit Points: 12  Contact Hours: 3 per week

- **ISN301 MINOR PROJECT**

- **ISN302 MINOR PROJECT**

- **ISN303 MINOR PROJECT**

- **ISN304 MINOR PROJECT**

Students undertake a number of minor projects to pursue specialised areas of interest, or broaden their knowledge in areas of relevance to their employment. Topics are to be decided by agreement between the student and a Faculty staff supervisor.

Course: IS50  Credit Points: 12

- **ISN320 DISTRIBUTED DATABASE SYSTEMS**

Distributed DBMS architectures, data replication and fragmentation; query decomposition and optimisation; transaction management in distributed settings;
enhance quality management; application of quality principles in the development of computer-based information systems.

### ISN380 INFORMATION SYSTEMS & QUALITY

The application of information systems knowledge to enhance quality management; application of quality principles in the development of computer-based information systems.

**Course:** BS85
**Credit Points:** 12  **Contact Hours:** 3 per week

### ISN401 MAJOR PROJECT

Students may undertake a major project as an alternative to minor projects to pursue in depth a topic of interest in keeping with the course objectives. Project topics are to be determined after discussion between the student and a supervisor from the faculty staff.

**Course:** BS86
**Credit Points:** 6  **Contact Hours:** 3 per week

### ISP380 INFORMATION SYSTEMS & QUALITY

Methodologies and techniques for achieving a high level of quality in business information systems, relating these to broader principles of quality control and quality assurance. Areas include: types of information systems; information as a resource; past and current approaches; decision making based on information systems; analysis and design; prototype concepts; information system modelling.

**Course:** BS77
**Credit Points:** 6  **Contact Hours:** 3 per week

### ISP811 BOOKS & PUBLISHING

Artistic and historical evolution of the book; judgment of book format through an understanding of production processes; techniques of printing; elements of the book; complexities of the publishing business.

**Course:** ED25
**Credit Points:** 12

### ITB001 COMPUTING PRACTICE (NOTE) 1

Designed to coordinate the practical aspects of the lecture material presented so that students both develop essential practical skills and benefit from cross-fertilisation of the individual units.

**Course:** BN10
**Credit Points:** 6  **Contact Hours:** 1 per week

### ITB002 COMPUTING PRACTICE (NOTE) 2

See ITB002.

**Course:** BN10
**Credit Points:** 6  **Contact Hours:** 1 per week

### ITB01 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 will use the basic functions of existing databases, wordprocessors and spreadsheets.

**Courses:** IF23, IF33, IF52, IT20
**Credit Points:** 12  **Contact Hours:** 3 per week

### ITB102 LABORATORY 2 (COMPUTER APPLICATIONS)

Professionals in information technology must have an ability to design and implement computer solutions for various applications using a variety of computing languages, systems and environments. This unit will provide students with the experience of designing, implementing and testing of software systems. This unit provides students with a practical experience in the design, implementation and testing of software systems. Emphasis will be on design documentation, user documentation, programming style, test documentation, the use of diagnostic aids, software monitors, analysis of results and test coverage, and the oral and written presentation of results.

**Courses:** IF23, IF33, IF52, IT20
**Credit Points:** 12  **Contact Hours:** 3 per week

### ITB210 FORMAL REPRESENTATION

This unit provides a foundation with regard to specification and implementation of information systems. As such, it gives an introduction to topics built on in subsequent units, notably those in database and systems analysis and design. Topics covered include models; facts; sets; relations; relational algebra; proof strategies and techniques; SQL; facts and relations; fact-based analysis; defining the database; referential integrity; knowledge; schemas; state transitions.

**Courses:** IF23, IF33, IT20
**Credit Points:** 12  **Contact Hours:** 3 per week

### ITB220 DATABASE DESIGN

Conceptual design of a database and its implementation in either relational, network or hierarchical logi-cal file design; network and hierarchical database systems in detail; additional relational system techniques.

**Courses:** IF33, IF52, IT20
**Prerequisite:** ITB101
**Credit Points:** 12  **Contact Hours:** 3 per week

### ITB221 LABORATORY 3 (COMMERCIAL PROGRAMMING)

This unit aims to extend student skills in program design and implementation by applying them to typical commercial problems through a widely used third generation language. The task-oriented approach supplies a vehicle for reinforcing students' knowledge of elementary design and planning theory.

**Courses:** BS50, IF33, IS28, IT20
**Prerequisite:** ITB210
**Credit Points:** 12  **Contact Hours:** 3 per week

### ITB222 SYSTEMS ANALYSIS & DESIGN 1

Develops basic systems development skills by teaching a methodology and techniques of systems analysis and design.
and design. This unit gives an introduction to all the phases of the classical systems development life cycle. The aim is to give students a balanced overview of the process of analysing and designing information systems, while ensuring that students develop the necessary skills to apply the major techniques to simple problems. Emphasis is placed on the practical application of techniques to real-world problems.

Courses: BS50, IT20
Prerequisites: ITB103, ITB210
Credit Points: 12 Contact Hours: 3 per week

ITB223 LABORATORY 4 (4GL Programming)
Introduces the role of application generators and Fourth Generation Language technology in developing information systems. As well as using these tools to create programs from detailed specifications, students will develop standards for comparing the applicability of one environment with another.

Courses: IF33, IT20 Prerequisite: ITB220
Credit Points: 12 Contact Hours: 3 per week

ITB224 SYSTEMS ANALYSIS & DESIGN 2
Expands upon the systems analysis and design techniques introduced in Systems Analysis and Design 1. Also, alternative approaches practiced in industry and other topics of importance are introduced. The aim is to provide students, who already have an overview of the unit, with an in-depth knowledge of key areas of systems analysis and design. Emphasis is placed on the practical application of techniques to problems.

Courses: IF33, IT20 Prerequisite: ITB222
Credit Points: 12 Contact Hours: 3 per week

ITB230 PROJECT
The ability to apply knowledge and skills to real-life situations is essential for information systems professionals. A six-month project, under academic supervision, is considered useful in developing students' ability to apply their knowledge and skills.

Courses: IF33, IT20
Prerequisite: Successful completion of at least 72 credit points from the Information Systems major.
Credit Points: 12

ITB231 APPLICATIONS DEVELOPMENT
This unit synthesises techniques and theory learned in earlier units by providing an opportunity for students to integrate these skills through team-based development of a major online system processing a database. The unit requires students to re-examine major design, programming and planning issues within the context of a 4GL software environment.

Courses: IT20 Prerequisite: ITB223, ITB244
Credit Points: 12 Contact Hours: 3 per week

ITB232 DATABASE MANAGEMENT
The functions of database management systems; query optimisation; concurrency control; transaction processing; crash recovery; security and integrity; the fundamentals of physical file organisation.

Courses: IF33, IT20
Prerequisite: ITB220, ITB221
Credit Points: 12 Contact Hours: 3 per week

ITB240 PROJECT
The ability to apply knowledge and skills to real-life situations is essential for information systems professionals. A six-month project, under academic supervision, is considered useful in developing students' ability to apply their knowledge and skills.

Courses: IT20
Prerequisite: Successful completion of at least 72 credit points from the Information Systems major.
Credit Points: 12

ITB241 INFORMATION SYSTEMS MANAGEMENT
Information systems practitioners have responsibility for the acquisition of computer hardware and software and for its effective and efficient use. Many practitioners also have responsibility for managing other information systems personnel. This unit covers the knowledge and skills relevant to these planning, organising and staffing responsibilities.

Courses: IF33, IT20
Prerequisite: Completion of at least 60 credit points from units in the Information Systems major.
Credit Points: 12 Contact Hours: 3 per week

ITB242 DECISION SUPPORT SYSTEMS
There is increasing pressure for computer use to be closely aligned to organisational goals. Associated with this is an increasing emphasis for the computer to assist directly in the decision making process. This unit addresses issues relating to these factors.

Courses: BS50, IT20 Prerequisite: ITB222
Credit Points: 12 Contact Hours: 3 per week

ITB243 KNOWLEDGE-BASED SYSTEMS
Examines the requirements for and development of knowledge-based systems in modern mainstream computing; provides an understanding of the techniques used in capturing and automating knowledge; and gives practical experience in designing, implementing and maintaining knowledge-based systems using a variety of software tools.

Courses: IT20
Prerequisite: ITB222 Co-requisite: ITB243
Credit Points: 12 Contact Hours: 3 per week

ITB244 SPECIAL TOPIC 1
ITB245 SPECIAL TOPIC 2
These units are designed to allow for the significant development of, or emphasis in, business computing not dealt with in other course units. Selected topics and study areas will be offered as required and when the necessary expertise is available. See School announcements for details of topics being offered.

Courses: IT20
Prerequisite: See School announcements.
Credit Points: 12 Contact Hours: 3 per week

ITB246 UNIX & C
Introduces students to the Unix operating system environment and to the C programming language. It covers the basics of both, and advanced topics relevant to software development under Unix and C. Emphasis is placed on the production of high quality software and documentation.

Courses: IT20 Prerequisites: ITB410, ITB412
Credit Points: 12 Contact Hours: 3 per week

ITB247 PROJECT
This provides for students to undertake a two-semester project. The work in one semester can be followed up in the second, or students can extend their practical skills through the second semester project.

Course: IT20
Prerequisite: Completion of at least 60 credit points from the Information Systems IT20 major.
Credit Points: 24

ITB249 THEORETICAL FOUNDATIONS OF DATABASE SYSTEMS
Theoretical foundations for the design, analysis and the unprocedural languages used in modern database
systems; set theory; abstract algebra and theory of algorithms.

Course: IT20  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: IF53, IF52, IT20
Credit Points: 12  Contact Hours: 3 per week

ITB320 LABORATORY 3 (DATABASE APPLICATIONS)
Graduates from the course are expected to have skills in the creation, maintenance and utilisation of databases of various types. This unit gives them practical exposure to the tasks involved using higher level applications programming environments.
Courses: IF52, IT20
Prerequisite: ITB102  Co-requisite: ITB220
Credit Points: 12  Contact Hours: 3 per week

ITB321 SYSTEMS ANALYSIS
In this unit information management draws on systems analysis as a central resource. Many of the techniques applied in systems analysis translate to information management. This unit gives an introduction to all phases of the classical systems development life cycle. The aim is to give students a balanced overview of the process of analysing information systems, while ensuring that students develop the necessary skills to apply the major techniques to information management problems.
Courses: IF52, IT20
Prerequisite: ITB210
Credit Points: 12  Contact Hours: 3 per week

ITB322 INFORMATION RESOURCES
The ability to obtain accurate, up-to-date, business information on an ongoing basis is today accepted as an important component of competitive success.
Course: IT20  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.
Courses: IF52, IT20
Prerequisite: 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. This unit explores the development of such concepts in order to create an awareness of both the indirect and direct impacts of information and the associated technology. Such an awareness is crucial in the effective direction of the management of information.
Courses: IF52, IT20
Prerequisite: ITB322
Credit Points: 12  Contact Hours: 3 per week

ITB331 INFORMATION MANAGEMENT 2
Auditing information resources in an organisation; relating information provision to the information needs of end users, as well as to the strategic objectives of organisations.
Courses: IF52, IT20  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 information management professionals. A one semester project, under academic supervision, is considered useful in developing students' ability to apply their skills.
Courses: IT20  Prerequisite: Successful completion of at least 72 credit points from the Information Management major.
Credit Points: 12

ITB341 INFORMATION MANAGEMENT 3
This unit pulls together many of the themes previously identified in the course of the information management major, with particular reference to information as a commodity and its use in strategic planning. It also deals with functions and practices of management that relate to provision of information services, and utilisation of technology to support them.
Courses: IF52, IT20  Prerequisite: ITB331
Credit Points: 12  Contact Hours: 3 per week

ITB342 SPECIAL TOPIC (INFORMATION MANAGEMENT)
This unit covers aspects of information management of specific interest at that time. This unit makes allowances for significant developments or emphasis in information management not included in the remainder of the course program.
Course: IT20  Prerequisite: Topic dependant
Credit Points: 12  Contact Hours: 3 per week

ITB350 PROJECT-I
The ability to apply knowledge and skills to real-life situations is essential for people planning to work as information management professionals. A one semester project, under academic supervision, is considered useful in developing students' ability to apply their knowledge and skills. As this unit is for students intending to proceed to the Honours course, this project must include an evaluative component.
Course: IT20  Prerequisite: Successful completion of at least 72 credit points from the Information Management major and 2 Pre-Honours units.
Credit Points: 12

ITB351 INFORMATION MANAGEMENT 3B (STRATEGY & PLANNING)
This unit pulls together many of the themes previously identified in the course of the information management major, with particular reference to information as a commodity and its use in strategic planning. It also deals with functions and practices of management that relate to provision of information services, and utilisation of technology to support them. In order to prepare students who are intending to proceed to an Honours program, this unit addresses performance analysis and evaluation work in more depth than the standard version of the course.
Course: IT20  Prerequisite: ITB331
Credit Points: 12  Contact Hours: 3 per week
This unit forms the basis of the major computing area of Information Technology need to be aware of and internal perspective of software modules in a procedural programming language. This unit introduces the student to the need for software quality management and control during software development.

This unit extends the introductory treatment of computer hardware and system software given in the computer architecture and device handling; resource management, deadlock. Real-time and concurrent programming in Modula-2 and process kernels. Specification of concurrent systems. Realisation of process and resource management principles in contemporary operating systems. Multiprocessor and distributed systems with special reference to multi-processor UNIX systems.

This unit introduces students to non-procedural language paradigms; viz functional logical and object-oriented programming techniques. Each is studied in the context of a well-known computer language with its computational environment. A major component of this unit is laboratory based. For each paradigm substantial program development will be included.

This unit consolidates the software engineering principles studied in earlier units as well as augmenting the material in Software Engineering. It provides students with an opportunity to work in small groups on a major project. This project shall require them to take a problem from statement to a well documented and researched solution.

This unit builds upon the concepts of encapsulation and abstraction which were introduced in Software Development 2 by examining a number of implementations of the Table abstraction and evaluates the efficiency of each implementation.

This unit extends students knowledge of the Unix environment and introduces the language C, with an emphasis on the implementation of ADTs in that language. Students will obtain extensive experience with this important practical language, including documentation and report writing. Topics covered include The Unix environment, the shell and shell programming. The language C. Implementation of a variety of data structures in C. Generic ADTs. Programming styles, documentation and standards.

This unit provides the foundation knowledge for the external and internal perspective of software modules in a system context. This unit provides students with an understanding of modules in the context of 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.

Quality software development increasingly requires design of algorithms using modules, and algorithms and data-structures for building modules. This unit provides the foundation knowledge for the external and internal perspective of software modules in a system context. This unit provides students with an understanding of modules in the context of 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.
■ ITB440 LANGUAGES & LANGUAGE PROCESSING
Syntax-directed programs permeate computing—examples are editors, formatters, command interpreters and compilers. In order to rapidly and reliably create such tools, it is necessary to understand the underlying theory of language definition, recognising automata and grammar classifications, as well as the practical realisation of recognisers in stylised, reusable code.
Courses: IF23, IT20
Prerequisite: ITB421
Credit Points: 12
Contact Hours: 3 per week

■ ITB441 GRAPHICS
The nature of computer graphics hardware and software. The design and implementation of computer graphics software so as to enable students to implement graphics systems in their application areas. Topics include: graphics hardware; graphics Kernel System and Phigs; fundamental algorithms for 2-D graphics; 3-D transformations; curve and surface modelling; colour models; hidden surface removal.
Courses: IF23, IF52, IT20
Prerequisite: ITB422
Credit Points: 12
Contact Hours: 3 per week

■ ITB442 ARTIFICIAL INTELLIGENCE
Artificial intelligence is coming out of the laboratory into the marketplace, it is important that students are exposed to the major ideas of artificial intelligence and in particular to the role of knowledge engineering in the design of practical knowledge-based systems. This unit provides a broad and comprehensive introduction to the field of artificial intelligence.
Courses: ED50, IF23, IT20
Prerequisite: ITB431
Credit Points: 12
Contact Hours: 3 per week

■ ITB443 SYSTEMS PROGRAMMING
Concurrent programming is the basis for operation system implementations, much systems programming and parallel application programming. It is a central idea in advanced computer science and an important concept in multiprocessor computers and parallel computer hardware. This unit builds upon previous introduction to concurrent systems. It introduces systems programming in an operating system that supports processes and inter-process communications. Topics covered include a review of UNIX operating system commands; Process and file management; UNIX administration, security; shell programming; the C/UNIX interface; remote procedure calls.
Courses: IF23, IT20
Prerequisite: ITB422 or ITP413
Credit Points: 12
Contact Hours: 3 per week

■ ITB444 SPECIAL STUDIES 1
■ ITB445 SPECIAL STUDIES 2
These units cover aspects of current scientific interest; it makes allowances for significant developments in computing science not provided for in the remainder of the course program. Details of topics will be published before the start of each semester.
Courses: IF23, IT20
Credit Points: 12
Contact Hours: 3 per week

■ ITB446 PROJECT
■ ITB447 PROJECT
Analysis, design and programming skills, and the underlying theory, are presented in various units; practice in those units naturally emphasises their particular specialisation. A project unit brings many of those skills together in a practical exercise of greater size and complexity, emphasising their complementary nature and the need for careful management. Students, either individually or in small groups, 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
Prerequisite: Completion of at least 72 credit points from the Computing Science major
Credit Points: 12

■ ITB448 OBJECT TECHNOLOGY
Methods and techniques of object-oriented design and implementation based on careful assessment of the underlying software engineering issues. The design of effective module interfaces is emphasised to achieve the full benefit of the object-oriented approach. Practical work focuses on building re-usable components and constructing object-oriented systems by combining existing and custom made components.
Course: IT20
Credit Points: 12
Contact Hours: 3 per week

■ ITB449 EXPERT SYSTEMS
Expert systems in the AI context; knowledge representation techniques; inference methods; uncertainty; the expert system development process; case studies of existing expert systems; the human/expert system interface; limitations and social implications of expert systems; current international knowledge-based system programs and future perspectives.
Courses: IF23, IT20
Prerequisite: ITB431
Credit Points: 12
Contact Hours: 3 per week

■ ITB450 ADVANCED COMPUTER ARCHITECTURE
This unit forms a continuation of the material introduced in the units ITB412 and ITB420. It is intended to provide students with an understanding of the organisation of contemporary computer systems and the variety of different structures which may be used for specific tasks. The style of presentation is based on a mixture of theory and case studies based on existing machines of practical or theoretical importance. Topics covered include the physical basis of the constraints of processor speed; high performance 'von Neumann' architectures; Pipelined processors, vector processors and supercomputers; Machines for protected multitasking; Conceptual models for parallel computation.
Courses: IF33, IT20
Prerequisite: ITB420
Credit Points: 12
Contact Hours: 3 per week

■ ITB451 PROJECT
This provides for students to undertake a two-semester project. The work in one semester can be followed up in the second, or students can extend their practical skills through the second semester project.
Course: IT20
Prerequisite: Completion of at least 60 credit points from the Computing Science major.
Credit Points: 24

■ ITB452 PROJECT WORK
This unit is for students intending to proceed to the Honours course following the Bachelor of Information Technology, the project will have a significant research component in addition to the practical
development of a system of greater size and complexity than previously undertaken by a student.

Course: IT20
Prerequisites: Completion of at least 72 credit points from the Computing Science major and ITB440 Languages and Language Processing.
Credit Points: 24

- **ITB453 PROJECT**
  This unit allows students to undertake a large project in one semester.
  Course: IT20
  Prerequisite: Completion of at least 60 credit points from the Computing Science major
  Credit Points: 24

- **ITB454 SOFTWARE QUALITY ASSURANCE**
  Software quality assurance as an integral part of the life cycle of software products; techniques and tools for defining and achieving high quality products; optimising resources to increase overall productivity.
  Course: IT20
  Prerequisite: ITB424
  Credit Points: 12
  Contact Hours: 3 per week

- **ITB455 SOFTWARE ENGINEERING APPLICATIONS**
  Rationale for the use of Computer Aided Software Engineering (CASE) tools; information stored in various software engineering constructs; requirements of an integrated CASE tool; existing CASE tools and methodologies.
  Course: IT20
  Prerequisite: ITB424
  Credit Points: 12
  Contact Hours: 3 per week

- **ITB456 INTELLIGENT GRAPHIC USER INTERFACES**
  Design and construction of intelligent user interfaces using multiple media.
  Course: IT20
  Prerequisite: ITB424
  Credit Points: 12
  Contact Hours: 3 per week

- **ITB520 DATA COMMUNICATIONS**
  This unit provides an introductory treatment of the major topics and issues in data communications. It is the foundation unit for the minor/major course programme in this area. Topics include: overview of data- and telecommunications networks and services; voice communication network design; digital/analog data representation; digital/analog signals; digital transmission; transmission media/impairments; link layer communications protocols; vendor implementations (HDLC, SDL); data communications network design; communications architectures; reference model for open systems interconnection (OSI); network access protocols; public switched telephone network (PSTN); packet switched data networks (PSDN); ISDN and B-ISDN; local area networks; telecommunications products and services; network control, management, and security; future trends.
  Courses: BS30, IF52, IF53, IS24, IT20
  Prerequisite: ITB410
  Credit Points: 12
  Contact Hours: 3 per week

- **ITB521 LABORATORY 3 (COMPUTER NETWORKS)**
  Students entering the field of data and telecommunications will be expected to have practical skills in various facets of the installation and management of communications systems. Topics include: physical level interfaces; communications hardware; communications network software; communications cabling; local area network configuration, installation, and operation; unix networking; network troubleshooting and re-configuration.
  Course: IT20
  Prerequisite: ITB520
  Credit Points: 12
  Contact Hours: 3 per week

- **ITB530 TRANSPORT PROTOCOLS**
  The principles, protocols, and architectures of inter-networking; routing strategies used by bridges and gateways; security and management of routing data over global networks; network interface design; medium access control; synchronous transmission; error and flow control; TCP/IP, SNA and OSI networks.
  Course: IT20
  Prerequisite: ITB521
  Credit Points: 12
  Contact Hours: 3 per week

- **ITB531 APPLICATION SERVICES**
  The protocols provided by the process layers of the Open Systems Interconnection (OSI) Reference Model and the application services provided in the process layer, in particular message handling, directory services, file transfer access and management, network management, and distributed processing.
  Course: IT20
  Prerequisite: ITB521
  Credit Points: 12
  Contact Hours: 3 per week

- **ITB532 LABORATORY 4 (NETWORK MANAGEMENT)**
  Principles of computer network management and control; practical experience in the configuration of network management software systems and in the interpretation of management information provided by these sub-systems; factors needed in assessment of the control, management, performance, availability and security of data networks and the association of these management parameters with overall systems security.
  Course: IT20
  Prerequisite: ITB531
  Credit Points: 12
  Contact Hours: 3 per week

- **ITB541 TRANSMISSION TECHNIQUES**
  High speed networks, satellite communications, fibre optics and wireless LANs; performance and optimisation of network links and the interconnection of telecommunications equipment based on the international standards: ISDN, B-ISDN, ATM.
  Course: IT20
  Prerequisites: ITB520, MAB177
  Credit Points: 12
  Contact Hours: 3 per week

- **ITB542 NETWORK PROGRAMMING**
  Interprocess communications on various network systems; concepts of network programming; setup network facilities and develop/modify network code; responsibilities and ethics of the network programmer.
  Course: IT20
  Prerequisites: ITB443, ITB531
  Credit Points: 12
  Contact Hours: 3 per week

- **ITB543 DATA SECURITY**
  Data is an asset of high value to an organisation. Its security from accidental or malicious corruption or theft is essential. Computing practitioners should be aware of the security implications of their own designs and implementations, and of the strengths and limitations of the security in their computing environment covered include management of data security, cryptography, communication security, access control, viruses and legislation.
  Course: IT20
  Prerequisite: ITB543
  Credit Points: 12
  Contact Hours: 3 per week

- **ITB544 PROJECT**
  Students, either individually or in small groups, undertake a significant project, relevant to the needs of
industry, government or a research area, carried out under the supervision of a staff member whose interests lie in the field of the project. Before work commences on the project, student(s) and supervisor must agree on the topic of the project and the scope of the work to be attempted.

**Course:** IT20

**Prerequisite:** Completion of at least 72 credit points from the Data Communications major.

**Credit Points:** 12

### ITB545 Project

Students undertake a two-semester project. The work in one semester can be followed up in the second, or students can extend their practical skills through the second semester project.

**Course:** IT20

**Prerequisite:** Completion of at least 60 credit points from the Data Communications major.

**Credit Points:** 24

### ITB546 Special Studies 1

This unit covers aspects of current scientific interest; it makes allowances for significant developments in data communications not provided for in the remainder of the course program. Details of topics will be published before the start of each semester.

**Course:** IT20

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

### ITB547 Special Studies 2

See ITB546.

**Course:** IT20

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

### ITB548 Introduction to Cryptology

Classical ciphers; modern symmetric ciphers; public key ciphers; practical cryptology.

**Prerequisite:** MAB177 or MAB493 or MAB620

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

### ITB549 Error Control & Data Compression

Data compression techniques; introduction to block codes; convolutional codes; cyclic codes and Reed-Solomon codes; coding techniques and applications.

**Courses:** IT20, MA43, SC30, SC60

**Prerequisite:** MAB177 or MAB493 or MAB620

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

### ITB560 Introduction to Cryptology

Number theory; finite field theory; information theory; classical ciphers; key ciphers; cryptology.

**Courses:** EE44, IF23  **Prerequisite:** MAB493

**Credit Points:** 7  **Contact Hours:** 4 per week

### ITB561 Error Control & Data Compression

Data compression techniques; introduction to block codes; convolutional codes; cyclic codes and Reed-Solomon codes; coding techniques and applications.

**Courses:** EE44, IF23  **Prerequisite:** MAB493

**Credit Points:** 7  **Contact Hours:** 4 per week

### ITB894 Industrial Training Experience

Consists of a one-year work experience program. For more information about this program, see the IT20 Bachelor of Information Technology entry in this Handbook.

**Course:** IT20

**Credit Points:** 24

### ITN240 Computer Security Risk Modelling

Importance of identifying, valuing and securing data assets; current state of computer risk model research and implementation; traditional models compared to demonstrate sources of data for model development; asset identification and evaluation, threat, vulnerability and dependency analysis, and collection of supporting data.

**Courses:** IS50, IS61  **Prerequisite:** ITN542

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

### ITN296 Major Project

Students may undertake a major project as an alternative to minor projects to pursue in-depth a topic of interest in keeping with the course objectives. Project topics are to be determined after discussion between the student and a Faculty staff member acting as supervisor.

**Course:** IS50

**Prerequisite:** Completion of at least 50 per cent of the Master of Information Technology.

**Credit Points:** 96

### ITN541 Computer Security

Ensures students recognise the requirement to design, implement and manage facilities in a manner consistent with an overall organisational security policy. Development of security plan; risk analysis; access control; cryptography; network security and encryption; key management; database security; secure operating systems and access control. On completion, students should be able to incorporate security and management controls into information systems in accordance with a formal risk analysis and assessment for the system.

**Courses:** CS36, CS55, IS50, IS61

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

### ITN542 Advanced Data Communications

Advanced material in data communications. Topics covered include data communications network design and management (techniques and case studies); performance modelling of communications networks; comparative evaluations of data communications products and services; data communications software design and implementation; provision of integrated communications services (voice, data, video, etc.); network security; telecommunications industry policy (e.g. deregulation vs regulation).

**Courses:** CS36, CS55, IS50

**Prerequisite:** ITB520 (or equivalent)

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

### ITN846 Advanced Topics in Cryptology

Design and cryptanalysis of ciphers; in-depth study of methods for forming secure ciphers and attacking various ciphers; secret sharing schemes; crypto-
protocols, including zero knowledge systems; current topics in cryptography.
Courses: IS23, IS30, IT20, SC60
Prerequisite: ITP548
Credit Points: 12 Contact Hours: 3 per week

■ ITP200 APPLICATIONS PROGRAMMING
Application programming is the process of developing a set of programs from a given specification. It involves the creation of an executable version of that specification and, as such, provides the crucial step into automation. The unit provides an introduction to the development of information systems using application generators and 4GL technology.
Courses: CS19, IS24
Credit Points: 12 Contact Hours: 3 per week

■ ITP201 FOUNDATIONS OF INFORMATION MODELLING
It is common to sharply distinguish between the specification and the implementation of organisation- al information systems. There are, however, many important ideas that are shared. This unit introduces notation from mathematics and logic that may be used to describe these ideas. An information system models some aspect of an organisation and contains both specific and general statements about it. The specific statements are stored in the database and the more general ones end up as programs. This unit describes how such statements may be specified in the Z notation and implemented in SQL.
Courses: IS24, IS25, CS19
Credit Points: 12 Contact Hours: 3 per week

■ ITP202 SYSTEMS ANALYSIS & DESIGN
For the creation of a useful and usable information system, it is essential that the feasibility of the system has been established, that the user’s requirements are known, and that a suitable user interface is specified. This unit develops basic systems development skills by teaching the methodology and techniques.
Courses: IS24
Prerequisite: ITP201
Credit Points: 12 Contact Hours: 3 per week

■ ITP203 APPLICATIONS DEVELOPMENT
This unit reexamines the major systems analysis, design and programming issues within the context of a particular 4GL environment. It integrates the skills acquired in other core units by involving students in the development of a non-trivial information system. Issues of teamwork, standards and project control.
Courses: IS24
Prerequisites: ITP200, ITP201, ITP202
Credit Points: 12 Contact Hours: 3 per week

■ ITP311 COLLECTION BUILDING & ACQUISITIONS
The concept of information and its relationship to information resources and needs; the various formats by which information is communicated and 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 community. Other topics include procedures for keeping collections current, evaluating their usefulness and the legal and ethical dimensions of collection building.
Courses: IS25, IT20
Credit Points: 12 Contact Hours: 3 per week

■ ITP312 ORGANISATION OF KNOWLEDGE
The organisation of knowledge in libraries and information agencies. Emphasis is placed on the descrip-
- **ITP318 ADVANCED ORGANISATION OF KNOWLEDGE**
The organisation of knowledge in libraries and information agencies. Topics include description of selected non-print media, enumerative and faceted classifications, special classifications, problems with alphabetical unit indexes and automated indexing.
Course: IS25  
Prerequisite: ITP312  
Credit Points: 12  
Contact Hours: 3 per week

- **ITP319 GOVERNMENT DOCUMENTS**
The production, acquisition and organisation of government documents and issues related to their use. Topics include why governments publish, the range of units, the value of government information, bibliographic control, freedom of information commercialisation/privatisation of government information, and organisation of government document collections. Australian, United States, United Kingdom and international government documents are studied.
Course: IS25  
Prerequisite: ITP312  
Credit Points: 12  
Contact Hours: 3 per week

- **ITP320 SPECIAL TOPIC – LIBRARY SCIENCE**
Designed to allow for significant development of, or emphasis in, library science not dealt with in other units. Topics and study areas will be offered as required when the necessary expertise is available.
Course: IS25  
Prerequisite: See School announcements.  
Credit Points: 12  
Contact Hours: 3 per week

- **ITP321 SPECIAL TOPIC – LIBRARY SCIENCE**
Allows for the significant development of or emphasis in library science not already dealt with. Selected topics and study areas will be offered as required and when the necessary expertise is available.
Course: IS25  
Prerequisite: See School announcements.  
Credit Points: 8  
Contact Hours: 2 per week

- **ITP322 INDIVIDUAL STUDY**
Students can pursue in depth a personal interest in library science not covered by the Graduate Diploma course core or other elective units. On completion of this unit, students should be able to demonstrate a detailed knowledge of the area chosen.
Course: IS25  
Prerequisite: To be determined by the nature of the study.  
Credit Points: 8  
Contact Hours: 2 per week

- **ITP323 INTRODUCTION TO RECORDS MANAGEMENT**
Records management theory, techniques and trends. Topics include the history and role of records management and the creation, control, organisation, maintenance, disposition and evaluation of records.
Course: IS25  
Credit Points: 8  
Contact Hours: 2 per week

- **ITP324 LIBRARY PROGRAMS & SERVICES**
An introduction to the evaluation of users' informational needs and the development of library programs and services to meet the needs of special groups in the community, eg. young people, elderly people, disabled people, ethnic minorities, business people, etc.
Course: IS25  
Prerequisite: ITP313  
Credit Points: 8  
Contact Hours: 2 per week

- **ITP325 PRESERVATION MANAGEMENT OF MATERIALS**
Principles, strategies and practices of preservation of materials; various preservation techniques appropriate to the major storage media; the importance of preservation planning and security as a part of all routines; the implications of subsequent losses to organisations and society should information agencies not formulate a preservation plan.
Course: IS25  
Credit Points: 12  
Contact Hours: 3 per week

- **ITP411 SYSTEMS ARCHITECTURE & OPERATING SYSTEMS**
Computer organisation; the nature and role of system software and the nature of microcomputers and computer graphics; computer systems architecture; micro-operations; instruction formats; microprocessor types; machine language; system software including operating systems, assemblers, compilers, loaders.
Course: CS19  
Credit Points: 12  
Contact Hours: 3 per week

- **ITP412 SOFTWARE PRINCIPLES**
Use of efficient data structures; languages illustrating the variety of features found in computer programming languages; structured program design techniques; advanced algorithms and methods of providing program correctness.
Course: CS19  
Credit Points: 12  
Contact Hours: 3 per week

- **ITP413 ADTS IN A C/UNIX ENVIRONMENT**
This unit extends students' knowledge of the Unix environment and introduces the language C, with an emphasis on the implementation of ADTs in that language. Students will obtain extensive experience with this important practical language, including documentation and report writing. Topics covered include the Unix Environment, the shell and shell programming, the language C, implementation of a variety of data structures in C, generic ADTs, programming styles, documentation and standards.
Course: CS19  
Credit Points: 12  
Contact Hours: 3 per week

- **ITP460 PROJECT**
Students, either individually or in small groups, undertake a substantial project relevant to the needs of industry and designed to give insight into industrial requirements. Each project is carried out under the supervision of a staff member whose interests lie in the field of the project. Before work commences on the project, student(s) and supervisor must agree on the topic of the project and the scope of the work to be attempted.
Course: CS19  
Prerequisite: Successful completion of all other core units of the Graduate Diploma in Computing Science.  
Credit Points: 12

- **ITP470 PROJECT**
See ITB460.  
Course: CS19  
Prerequisite: Successful completion of all other core units of the Graduate Diploma in Computing Science.  
Credit Points: 12

- **ITP480 PROJECT**
As for ITP460. The project expands across two semesters.
Course: CS19  
Credit Points: 24
**ITP481 PROJECT**
As for ITP460:
Course: CS19
Credit Points: 24

**JSB101 CONTEMPORARY ISSUES IN AUSTRALIAN SOCIETY 1**
Perspectives in sociology; major approaches; social structures: ethnicity, racism, aboriginality, patriarchy, feminism, the family, family violence; economic organisation: international economic order, class, wealth, poverty, work, the environment; the future.
Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

**JSB102 SOCIAL ETHICS & THE JUSTICE SYSTEM**
The ethical domain, the significance of ethics for the criminal justice system. The topics addressed are: what is ethics?; what is justice?; justice reasoning; human rights; an ethic of care; an ethic of empowerment; criminal justice work; the role of the police; the ethics of punishment and correction; being ethical.
Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

**JSB103 INTRODUCTION TO THE LEGAL SYSTEM**
Law and society; the Australian legal system; sources of our law; statutory interpretation; dispute resolution; a critical perspective of the legal system; introduction to the criminal justice process; investigation, adjudication and corrections; disadvantaged groups; the criminal justice process post-Fitzgerald.
Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

**JSB104 COMMUNICATION FOR JUSTICE PROFESSIONALS**
Techniques in communication; application in the law enforcement and justice professions; feelings; perception and analysis; interpersonal communication: cultural and ethnic minorities; Aboriginal people; special needs groups; interviewing: theory and practice; practical, oral and written tasks.
Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

**JSB105 PERSONAL & INTERPERSONAL RELATIONSHIPS**
Self-concept, self-esteem, self-image and their relationships to personal styles; expression formation; interpersonal effectiveness and self-disclosure including related skills application; human sexuality as a central force in interactional situations; co-dependency, assertion and component skills development; conflict resolution; negotiation and aggression; conflict negotiation and the legal system; suicide; associated issues, skills development and application.
Courses: JS31, JS33 Prerequisite: JSB104
Credit Points: 12 Contact Hours: 3 per week

**JSB107 INTRODUCTION TO CRIMINOLOGY**
Legal and criminological conceptions of crime: nature, scope and objects of criminology. Criminological theory: classical and neo-classical theories; the positivist school; physical and biological factors and theories; psychological and psychiatric explanations; crime as a social phenomenon; radical or critical criminology. Key issues in criminology: juvenile crime; Aborigines in the criminal justice system; Royal Commission into Aboriginal Deaths in Custody; reforming the correctional system; impact of incarceration on offenders; victims of crime; white-collar and corporate crime; privacy.
Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

**JSB108 INTRODUCTION TO PROFESSIONAL STUDIES**
The concepts of professionalism and professional knowledge and its application for a range of professional areas in law enforcement, justice administration and intelligence and protective security. Students study: creative problem solving and goal attainment; inter-professional cooperation in problem situations; basic social science research methodology; and the use of computers in research.
Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

**JSB109 INTRODUCTION TO CRIMINAL LAW & EVIDENCE**
The principles, rules and concepts of criminal law and evidence; the understanding and applications of such principles, concepts and rules as they relate to the operation of the criminal justice system and the role of law enforcement in society.
Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

**JSB201 PRINCIPLES OF CRIMINAL LAW 1**
History and theory of criminal law; the role of criminal law and concepts of justice; comparative criminal law; development and administration of criminal law in Queensland; legal research.
Courses: JS31, JS33 Prerequisite: JSB103
Credit Points: 12 Contact Hours: 3 per week

**JSB202 CONTEMPORARY ISSUES IN AUSTRALIAN SOCIETY 2**
Contemporary social issues affecting various organisational levels of society: the individual, the marital dyad, the family and society as a whole; issues of abuse, equity and security; role of policy development and implementation from a social justice perspective.
Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

**JSB203 HUMAN DYNAMICS: THE JUSTICE SYSTEM**
Human factors and crime evolving personality; inherited factors, morality and moral development, human dynamics and the police focusing on perception, recognition and identification; human dynamics in relation to the courts including the concepts of memory and its effects on evidence, eye witness testimony, juror selection and reliability, and reaching a verdict – the process and consensus; human dynamics and crime prevention; offender rehabilitation and individual and societal reactions to them, changing the environment by reducing opportunities for crime, increasing risks of detection; community education.
Courses: JS31, JS33 Prerequisite: JSB101
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 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  Prerequisite: JSB108
Credit Points: 12  Contact Hours: 3 per week

J S B 2 1 1  PRO C E S S T H E O R Y & A P P L I C A T I O N
Detailed study and application of the intelligence process (cycle); study of intelligence support to operational staffs and organisations; strategic, operational and tactical concepts of intelligence and security; threat and risk assessment relative to protective security - personnel, materials and infrastructure; industrial and commercial espionage and sabotage.
Courses: JS31, JS33  Prerequisite: JSB108
Credit Points: 12  Contact Hours: 3 per week

J S B 2 1 2  I N T E R - P R O F E S S I O N A L C O O P E R A T I O N
The role and function of policing in conjunction with other agencies, particularly emergency service agencies; the cooperation necessary and the awareness of reciprocal roles and functions in given situations.
Courses: JS31, JS33  Prerequisite: JSB108
Credit Points: 12  Contact Hours: 3 per week

This unit deals with protective security in its broadest sense; it examines the threat to security in the public, private and national arenas. The nature of espionage, subversion, sabotage, theft and hostage situations are also studied. The basic areas of protective security are personnel, material, physical and information security. Students will also conduct risk/threat assessments and cover other areas such as inspections, audits, surveys and reviews; policy, procedures and controls; management aspects; legislation; case studies and models of security.
Courses: JS31, JS33  Prerequisite: JSB108, JSB211
Credit Points: 12  Contact Hours: 3 per week

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 "Without Law: States of Violence" states that the way societies settle disputes and their choice of socially acceptable responses to conflict ultimately reveal our most basic values and indicate whether people want to avoid, encourage, suppress or resolve conflict.
Courses: JS31, JS33  Prerequisite: JSB108
Credit Points: 12  Contact Hours: 3 per week

The history of administrative law and the emergence at federal and state levels of statutory administrative and judicial review; legal principles in a social and political context; critical assessments of relevant legal structures and rules.
Courses: JS31, JS33  Prerequisite: JSB108
Credit Points: 12  Contact Hours: 3 per week

Courses: JS31, JS33  Prerequisite: JSB108
Credit Points: 12  Contact Hours: 3 per week

Courses: JS31, JS33  Prerequisite: JSB108
Credit Points: 12  Contact Hours: 3 per week

Examines the relationships and responsibilities of the intelligence professional in society through analysis of intelligence and security practices and conventions from the perspectives of the law, morality and the media. Students examine the nature of intelligence and protective security and their place in contemporary Australian society; laws and other instruments which protect individuals and their activities against unlawful intelligence and security actions and operations; human rights issues (Freedom of Information, Geneva Conventions and Protocols, etc.); the concepts of the right to know and need to know; perspectives on morality relative to personnel vetting processes, intelligence collection activities, research practices, current and archival Intelligence records, investigations, interviewing and interrogation, private security industry, restricted access, and counterintelligence; the impact of investigative and public affairs reporting on security; the media's right to communicate intelligence to the public.
Courses: JS31, JS33
Credit Points: 12
Contact Hours: 3 per week

J S B 2 2 1  I N T E L L I G E N C E & N A T I O N A L S E C U R I T Y
Students examine the concept of national security and develop a basic understanding of the control, functions, roles and responsibilities at the national level in the Australian context. Comparative studies of overseas intelligence and security systems ensure students develop a broader understanding of national security through appreciation of different concepts and contexts. Case studies illustrate: abuses of intelligence and security (e.g. political and ideological); intelligence failures; intelligence successes and changes in concepts of national security over the past fifty years. Issues which constitute actual and potential threats to national security in Australia.
Courses: JS31, JS33
Credit Points: 12
Contact Hours: 3 per week

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; aid to security; professional bodies; and law and practice.

Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

[• JSB223 INTELLIGENCE, ORGANISATIONS, PERSONNEL & OPERATIONS]

Students examine the various types of intelligence and protective security organisations from the perspective of the ‘essentials of an intelligence system’. Using defined characteristics of the intelligence professional and the principles of intelligence and security, students evaluate the selection procedures, selection criteria and management for research analysts, administrative staff, counterintelligence and protective security personnel, technical specialists and generalists for a range of organisational types. Students design systems, establish and resource them, and identify direction required to achieve defined organisational goals; and establish and critically examine assessment criteria for efficiency and effectiveness of the various systems. The concept of an intelligence (and security) operation is examined together with all factors which influence decision-making relative to targets and resources. Ethics, the law and political considerations feature in operational studies.

Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

[• JSB230 PROTECTIVE SECURITY IN AUTOMATED SYSTEMS]

Principles of protective security are applied to automated systems. Intelligence production is examined through existing data collection, collation and analysis programs (including computerised investigation aids). The unit addresses: the threat to automated systems (e.g. espionage, sabotage, coercion, fraud); available security products; studies of hardware and software security; access controls, networks, data transmission security, and maintenance controls; planning of secure sites; case histories and methods by which security can be breached; and future directions in law enforcement technology and computers.

Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

[• JSB301 LAW OF EVIDENCE & INVESTIGATION]

Professionals involved in the fields of law enforcement and justice administration are frequently required to exercise investigative skills. This unit will provide students with a clear understanding of the law relating to the gathering of evidence, interrogation and admissibility of evidence in court. Study will include an examination of the general principles of judicial evidence, witnesses, rules of evidence, admissions and confessions. Issues of evidence of current importance eg issues arising out of enquiries such as ‘Operation Trident’ enquiry will also be explored.

Courses: JS31, JS33
Prerequisites: JSB201, JSB204
Credit Points: 12 Contact Hours: 3 per week

[• JSB302 IDEOLOGY, ETHICS & JUSTICE]

A critical examination of the notions and related concepts of ideology, ethics and justice with regard to their heuristic value and utility in providing a basis for social transformation. The nature of the various ideologies at both political and institutional levels in western society will be explored with specific emphasis on ideology within the legal and police cultures and how such considerations shape and constrain the notion of justice. Generally, the focus will be on integrating ethical reflection with application to various spheres of society in relation to law, policing, health, welfare and the environment.

Courses: JS31, JS33 Prerequisite: JSB102
Credit Points: 12 Contact Hours: 3 per week

[• JSB303 HUMAN DYNAMICS: THE JUSTICE PROFESSIONS]

This unit is designed to acquaint student with the nature of the unique stresses within the justice professions and law enforcement agencies and to equip students with coping skills. Consideration will be given to examination of the phenomenon of stress and its effects on individuals, the nature of conflict and its resolution, personal assertiveness and to negotiation skills. Theories and practical aspects of counselling will also be examined. Students will be required to undertake independent research and present written reports on their findings.

Courses: JS31, JS33
Prerequisite: JSB203
Credit Points: 12 Contact Hours: 3 per week

[• JSB304 CRIMINOLOGY 2]

Contemporary criminological constructs and debate; theories of punishment and sentencing; refining the criminal justice system.

Courses: JS31, JS33
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 so-called drug trade is a major enterprise behind the proliferation of organised crime. Another consequence of organised crime is the development of corruption through the diverse levels of society. Students therefore will gain an understanding of the historical development, social perceptions and consequences and the perceived extent of organised crime. Students will also consider the strategies employed to combat organised crime including the extent of investigations and/or Commission of Inquiry documented to date.

Courses: JS31, JS33
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; ana capa, scan and other analysis tools will be studied.

Courses: JS31, JS33
Prerequisites: JSB108, JSB211, JSB213
Credit Points: 12 Contact Hours: 3 per week

[• JSB312 APPLIED POLICING RESEARCH PROJECT]

This Project Study unit allows students undertaking the Law Enforcement Professional Minor to study a topic of personal academic interest which is not otherwise available as a formal subject in the area of policing. This unit differs from other units within the
professional minor in that there will be a minimum of scheduled lectures and the initiative to choose the topic and to organise the project must come from the student. Students choose a research topic related to contemporary law enforcement issues or activities. Courses: JS31, JS33 Prerequisite: JSB108 Credit Points: 12 Contact Hours: 3 per week

■ JSB313 INTELLIGENCE RESEARCH - ISSUES, PROCEDURES & PRACTICE
Addresses major intelligence issues, intelligence and related security procedures and professional practices. The concept of intelligence in this unit is ‘that which confer an advantage’ in any professional context. Drawing on knowledge and cognitive skills developed in JSB211, JSB213, and JSB311, students apply process methodology: in examining specific societal issues; in recognising different intelligence ‘research’ procedures for specific issues; and in practical analysis of selected issues. They examine issues from the strategic research perspective: terrorism, illegal drugs, fauna smuggling, organised crime (operating in, or having the potential to operate in Australia), corporate crime, community crime and areas of concern, environmental matters, illegal immigration, national defence and foreign intelligence activities. Students demonstrate knowledge of issues and procedures through selecting two areas for in-depth study and presentation as seminar papers.
Courses: JS31, JS33 Prerequisites: JSB108, JSB211, JSB213, JSB311 Credit Points: 12 Contact Hours: 5 per week

■ JSB314 PUBLIC LAW 2: HUMAN RIGHTS
This unit is of central importance in any course about law and the administration of justice. It will provide a basis for the examination of some of the main issues of human rights and how this will effect the operation of law. Its focus will be upon current issues in Australia but set in a wider international context. More particularly it relates these themes to certain disadvantaged groups, including aborigines, women, ethnic minorities and children. Content will include: the nature of human rights; existing Australian legislation on human rights; civil and political rights; economic, social and cultural rights.
Courses: JS31, JS33 Prerequisites: JSB108, JSB214, JSB215 Credit Points: 12 Contact Hours: 3 per week

■ JSB315 CURRENT ISSUES IN ADMINISTRATIVE LAW & JUSTICE
Current issues in the area of administrative law. The unit will raise methodological issues and move students into research action directed at substantive administrative law and justice issues.
Courses: JS31, JS33 Prerequisites: JSB108, JSB215 Credit Points: 12 Contact Hours: 3 per week

■ JSB317 PUNISHMENT SYSTEMS IN ACTION
The working setting: the impact of organisational factors on staff; managerial styles; inmate/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 of self and others. ‘Treatment’ and the correctional institution: organisation of treatment strategies; sentence management; specialist personnel – medical, psychiatry, psychologist, social/welfare workers, educationist; the chaplaincy. Correctional officers: role as change agents.
Courses: JS31, JS33 Prerequisite: JSB108 Credit Points: 12 Contact Hours: 3 per week

■ JSB318 CONTEMPORARY ISSUES & TRENDS IN MODERN PUNISHMENT ADMINISTRATIONS
Courses: JS31, JS33 Prerequisite: JSB108 Credit Points: 12 Contact Hours: 3 per week

■ JSS001 THE LAW & LEGAL INSTITUTIONS
This unit will provide students with a sound knowledge of relevant legal institutions and procedures, as well as assist students to develop an ability to analyse and critique both the strengths and weaknesses inherent in our legal system. In so doing, the unit will trace the development of law in Australia from its early beginnings to the present, as an outcome of meeting the needs of a changing society.
Courses: ED50, JS31 Credit Points: 12 Contact Hours: 3 per week

■ JSS002 LAW OF CONTRACT
The development of the law of contract; law governing the formation of contracts; application of the principles of contract law; matters affecting the validity of contracts; remedies for breach of contract; role of equity in modifying common law rules of contract; rational and objective methods in analysis sociological issues in contracts.
Course: ED50 Credit Points: 12 Contact Hours: 3 per week

■ JSS003 LAW OF TORTS
The theoretical bases of Law of Tort in Australia; different types of tort and remedies; application of Law of Tort to case studies; examination of principles through specific decisions in Tort; Tortion remedies available within the social context.
Course: ED50 Credit Points: 12 Contact Hours: 3 per week

■ JSS004 CRIMINAL LAW & PROCEDURE
The theoretical basis of Criminal Law in Queensland; application of the law to case studies; use of rational and objective methods when examining legal issues; how criminal law operates in practice within a legal and social context; analysis of the balance between the rights of citizens and police powers.
Course: ED50 Prerequisite: JSS001 Credit Points: 12 Contact Hours: 3 per week

■ JSS005 INDIVIDUAL LEGAL RESPONSIBILITIES
Society demands certain responsibilities from persons classed as adult. Rights and duties fall to the adult person in some of the most important aspects in the accepted lifestyle in our society in terms of housing, relationships and employment. These responsibilities
will encompass the majority of adult life. A reasoned analysis of the legal responsibilities involved in housing, marriage and employment is essential.

Courses: ED50, JS31  Pre/Co-requisite: JSS001
Credit Points: 12  Contact Hours: 3 per week

**JSS006 INTRODUCTION TO LAW & SOCIAL JUSTICE**

The tradition of law as it has evolved in a variety of socio-historical settings as well as the evolution of different concepts of law have evolved; the impact of language of childhood experiences and everyday interactions are translated into art forms in novels, plays and poetry. Examination of the role of language in different times and cultures reflects that culture. Students have the opportunity to concentrate on the study of literature, on the development of their own writing.

Courses: ED41, ED51  Prerequisite: LAB260
Credit Points: 12  Contact Hours: 3 per week

**LAB261 LITERATURE & EDUCATION 2**

Continuation of LAB260. Exploring how the language of childhood experiences and everyday interactions are translated into art forms in novels, plays and poetry. Examination of how literature of different times and cultures reflects that culture. Students have the opportunity to concentrate on the study of literature, on the development of their own writing.

Courses: ED41, ED51  Prerequisite: LAB260
Credit Points: 12  Contact Hours: 3 per week

**LAB262 LITERATURE & EDUCATION 3**

This advanced unit requires students to use the work done in previous units in three ways: to engage in an area of specialisation not completely covered in earlier units; to select an aspect of their specialised study for independent reading and research over a range of genre and styles; and to present their work to their peers in a seminar format.

Courses: ED41, ED51  Prerequisite: LAB260
Credit Points: 12  Contact Hours: 3 per week

**LAB270 LOTE EDUCATION**

The development of classroom applications, strategies, resources, evaluation techniques for the teaching of languages other than English, through an application of knowledge from prerequisite units.

Course: ED41  Prerequisite: LAB261
Credit Points: 8  Contact Hours: 3 per week

**LAB320 STUDIES IN LANGUAGE**

The language basis in current approaches to the teaching of English; the nature and function of language; dynamics involved in interactive situations; appropriateness of language forms used in various social contexts; educational implications of linguistic diversity within the community; recognition of the developmental features of adolescent language.

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

**LAB321 WRITING WORKSHOP**

This unit is based on contemporary understanding of writing. The student, as writer, uses all the language modes in social contexts (either genuine or simulated) to lead to writing in a range of situations. Engagement in these writing situations is designed to bring about personal understanding of the following: the nature of the writing process; the influence of audience and purpose on the final written product; the range of genres (or forms) falling within the writing activity.

Courses: ED50, ED51  Prerequisite: LAB320
Credit Points: 12  Contact Hours: 3 per week

**LAB322 LITERATURE IN TEACHING**

Literature teaching in historical perspective: recent developments in theory; poetry in the senior school; teaching drama in the senior school; teaching the novel in the senior school; shorter works (novellas, short stories) and their use in the English curriculum.

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

**LAB323 YOUNG ADULT LITERATURE**

The scope and nature of young adult literature; strategies for evaluation and selection; recent research into adolescents' reading needs, interests and responses; using young adult books in the curriculum.

Course: ED50  Prerequisite: HUB100
Credit Points: 12  Contact Hours: 3 per week

**LAB325 ENGLISH CURRICULUM STUDIES 1**

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

Course: ED50
Prerequisite: Normally the completion of 48 credit points in each relevant discipline area.
Credit Points: 12  Contact Hours: 3 per week

**LAB326 ENGLISH CURRICULUM STUDIES 2**

This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Course: ED50  Prerequisite: LAB325
Credit Points: 12  Contact Hours: 3 per week

**LAB327 FILM & MEDIA CURRICULUM STUDIES 1**

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

Course: ED50
Prerequisite: Normally the completion of 48 credit points in each relevant discipline area.
Credit Points: 12  Contact Hours: 3 per week

**LAB328 FILM & MEDIA CURRICULUM STUDIES 2**

This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Course: ED50  Prerequisite: LAB327
Credit Points: 12  Contact Hours: 3 per week

**LAB329 LOTE CURRICULUM STUDIES 1**

This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the
This unit complements Literature in Teaching by introducing to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

Course: ED50
Prerequisite: Normally the completion of 48 credit points in each relevant discipline area.
Credit Points: 12 Contact Hours: 3 per week

LAB330 LOTE CURRICULUM STUDIES 2
This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies and issues and directions in curriculum development.

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

LAB331 LANGUAGE PROGRAMMING & ASSESSMENT
Develops an understanding and ability to design programs for promoting and monitoring individual language development through the study of: a structured and process for programming; objectives as a framework for programming and assessment; language resources for classroom use; classroom program development; and monitoring effectiveness.

Courses: ED50, ED51
Prerequisite: LAB338
Credit Points: 12 Contact Hours: 3 per week

LAB332 CHILDREN'S LITERATURE IN THE PRIMARY CURRICULUM
Explorations of the role of children's literature in the primary school; criteria for selecting children's literature; exploration of the various literary genres; leading to the use of literature as an integrating device in the development of programs in the primary school.

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

LAB333 LANGUAGE IN KEY LEARNINGS
This unit will extend students knowledge of the relationship between language and learning and explore further the role of language across the curriculum, language in critical literacy and assessment.

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

LAB334 PRIMARY LOTE CURRICULUM STUDIES
This unit introduces concepts and skills in LOTE curriculum and methodology and prepares appropriately qualified students to teach French, German, Indonesian or Japanese in the upper primary school.

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

LAB335 LITERATURE IN TEACHING
Reading, literary response, and literature teaching in historical perspective; redefinitions of literature; reading practices and positions; contemporary approaches to integrating the teaching of reading and writing; issues in the literature classroom eg. criteria for text selection, censorship, and levels of response.

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

LAB336 LINGUISTICS IN TEACHING
This unit complements Literature in Teaching by providing a systematic study of linguistics, and in particular Systemic Functional Linguistics, in a range of language learning settings at home and at school.

Course: ED51
Prerequisite: LAB335
Credit Points: 12 Contact Hours: 3 per week

LAB337 WORKSHOP FOR WRITERS
Develops an understanding an ability to compose a range of texts for presentation in spoken, written, dramatic or audio-visual presentation. Students are involved in: the exploration of relevant personal and social issues; the composition and critical analysis of a range of texts; and reflection upon the language features and processes appropriate for composing and presenting effective texts.

Course: ED51
Prerequisite: LAB336
Credit Points: 12 Contact Hours: 3 per week

LAB338 CLASSROOM LANGUAGE LEARNING
Promotes an understanding and ability to develop language learning activities, process and strategies through the study of: a functional view of language; the concept of genre, the child as a language learner; resources for language learning; strategies for promoting mastery of genre and associated language.

Course: ED51
Prerequisite: EDB324
Credit Points: 12 Contact Hours: 3 per week

LAB410 LANGUAGE CURRICULUM ISSUES
Designed for primary and secondary teachers; involves a critical examination of the issues underpinning language education today and an action research project into classroom innovation or a detailed child study of language development.

Course: ED26
Credit Points: 12 Contact Hours: 3 per week

LAB440 RECENT DEVELOPMENTS IN THE TEACHING OF WRITING
Development of writing in the light of the language in use model, recent research, and classroom practice. It is designed for the teacher P-12. Students are expected to develop their own folio of writing, an understanding of current approaches to writing curriculum, and writing programs for their classrooms.

Course: ED26
Credit Points: 12 Contact Hours: 3 per week

LAB441 CHILDREN'S LITERATURE
Evaluative criteria in children's literature; genres; teaching strategies for promoting the use of children's literature; reader response theories.

Course: ED26
Prerequisite: Language arts and literature studies at Diploma of Teaching level.
Credit Points: 12 Contact Hours: 3 per week

LAB442 TUTORING PARENTS AS LITERACY TUTORS
Parents are the most valuable resource available to teachers in the nineties. Today, with more emphasis on involving parents in all areas of decision making in schools, it is vital that teachers can communicate proficiently with parents of all educational and socioeconomic backgrounds. This provides background knowledge and practice in the skills and knowledge required for successful tutoring of parents as literacy tutors of their children.

Course: ED26
Credit Points: 12 Contact Hours: 3 per week

LAB443 TRENDS IN THE TEACHING OF READING
Provides students with the opportunity to extend their understanding of the reading process; examines cur-
rent views about reading in order to identify key concepts of the theory; implications for classroom practice are drawn; identifies factors which influence readers and texts; the roles these play in the understanding of the meanings made; develops learning situations based on these understandings.

Course: ED26
Prerequisite: Studies in the teaching of reading at Diploma of Teaching level.
Credit Points: 12 Contact Hours: 3 per week

LAB444 LEARNING TO READ THROUGH READING/Writing
Development of the teachers' understanding of the importance of teaching children how to use language to learn; recent research into the topic, a range of strategies for empowering children to use language to learn; the requirement to apply this knowledge in a classroom setting.
Course: ED26
Credit Points: 12 Contact Hours: 3 per week

LAB445 LANGUAGE LEARNING THROUGH FLIP
This unit is designed for students who fulfill guidelines 6.1 and 6.2 of FLIP. As well as presenting a learning log, students develop an action research project in language/literacy and report on that project (preferably in a symposium). In their report, students are expected to display a critical understanding of the issues in language curriculum relevant to their research.
Course: ED26
Credit Points: 12 Contact Hours: 3 per week

LAB446 GRAMMAR FOR WRITERS
Designed to help teachers develop some systematic knowledge about language and grammar in particular. It looks at the questions: What is grammar?; What grammars are available to us? It then focuses in some detail on systemic functional grammar.
Course: ED26
Credit Points: 12 Contact Hours: 3 per week

LAB490 RECENT DEVELOPMENTS IN LANGUAGE/READING
The nature of language; functions of language; language development; oracy and literacy and their interrelationships; planning and implementation of a language arts unit or program.
Course: ED26 (Upgrading)
Credit Points: 12 Contact Hours: 3 per week

LAN601 FOUNDATIONS OF ENGLISH/LANGUAGE ARTS EDUCATION
Theoretical and historical perspectives on the development of English/language arts curricula; current debates; theory and research in the teaching of reading, writing, listening, speaking and viewing in the context of the primary and secondary classrooms; programming and assessment; continuity.
Courses: ED11, ED13
Credit Points: 12 Contact Hours: 3 per week

LAN602 LITERACY & SCHOOLING
Theoretical, historical and cultural models of literacy; literacy as a contemporary social and educational problem; literacy, gender and class; literacy and minority groups; literacy and changing theories of reading and writing; literacy and the curriculum; unit-specific literacies and whole-school literacy policies.
Courses: ED11, ED13
Credit Points: 12 Contact Hours: 3 per week

LAN604 CONTEMPORARY APPROACHES IN WRITING
Explores the role of writing in achieving the goal of 'effective literacy' in schools and in post-compulsory education; examines the evolution of approaches to writing, writing development of individuals, and writing across the curriculum areas with a special focus on grammar, especially Systemic Functional grammar; appropriate classroom applications.
Courses: ED11, ED13
Credit Points: 12 Contact Hours: 3 per week

LAN608 SECOND LANGUAGE ACQUISITION
Exploration of the major theories and research in the area with particular reference to instructed second language acquisition; individual differences in SLA and the linguistic environment for language acquisition/learning.
Courses: ED11, ED13
Credit Points: 12 Contact Hours: 3 per week

LAP401 ENGLISH CURRICULUM STUDIES 1
Introduction to English curriculum and its role in secondary education; examination of relevant English syllabuses and demonstration of ways to translate language learning principles into lesson plans and curriculum units.
Course: ED37
Credit Points: 12 Contact Hours: 3 per week

LAP402 ENGLISH CURRICULUM STUDIES 2
Continuation of LAP401. Content, processes and materials appropriate to the planning and implementation of English programs; methods of assessment; current professional issues in English teaching.
Course: ED37
Prerequisite: LAP401
Credit Points: 12 Contact Hours: 3 per week

LAP403 LOTE CURRICULUM STUDIES 1
Current theories and practice in LOTE teaching/learning with particular reference to the Queensland context.
Course: ED37
Credit Points: 12 Contact Hours: 3 per week

LAP404 LOTE CURRICULUM STUDIES 2
Continuation of LAP403. Development of a practical theory of teaching based on an understanding of the LOTE context in Queensland; development of language programs and teaching resources which are responsive to the diverse needs of learners.
Course: ED37
Prerequisite: LAP403
Credit Points: 12 Contact Hours: 3 per week

LAP405 FILM & MEDIA CURRICULUM STUDIES 1
Introduction to the Film and Media curriculum and its role in secondary education; examination of relevant media syllabuses and demonstration of ways to translate concepts in media education into lesson plans and curriculum units.
Course: ED37
Credit Points: 12 Contact Hours: 3 per week

LAP406 FILM & MEDIA CURRICULUM STUDIES 2
Continuation of LAP405. Content, processes and materials appropriate to the planning and implementation of Media Studies programs; methods of assessment; current professional issues in media teaching.
Course: ED37
Prerequisite: LAP405
Credit Points: 12 Contact Hours: 3 per week
LAP407 ENGLISH AS A SECOND LANGUAGE CURRICULUM STUDIES 1
This unit introduces students to the design and development of curriculum, materials and resources to meet the general and specific needs of learners who are non-native English speakers and who require higher English language proficiency levels for study purposes.
Course: ED25
Credit Points: 12 Contact Hours: 3 per week

LAP408 ENGLISH AS A SECOND LANGUAGE CURRICULUM STUDIES 2
This unit builds on the content of LAP407 showing students how curriculum, materials and resources are implemented through appropriate approaches, methodologies and techniques for individuals, groups or whole classes of learners who are non-native speakers of English.
Course: ED37 Prerequisite: LAP407
Credit Points: 12 Contact Hours: 3 per week

LAP440 LANGUAGE & LITERACY 1
The role of language in society; how language changes according to the purpose for which it is used as well as the social and cultural contexts; the functions and structure of a range of genres; the contribution of the home to children’s language development.
Course: ED36
Credit Points: 12 Contact Hours: 3 per week

LAP441 LANGUAGE & LITERACY 2
Development of a range of strategies/activities which promote language learning in a classroom; techniques/instruments for observing and monitoring language growth. Preparation and development of a unit of language experiences for a class.
Course: ED36 Prerequisite: LAP440
Credit Points: 12 Contact Hours: 3 per week

LAP501 FOUNDATIONS OF TEACHER-LIBRARIANSHIP
Philosophy and theories of teacher-librarianship and interpersonal communication necessary to be responsive to the needs of school communities and emerging educational trends.
Course: ED25
Credit Points: 12 Contact Hours: 3 per week

LAP502 CURRICULUM & RELATED RESOURCES
Current curricula P-12: content and processes; evaluative criteria for the selection of materials across the curriculum; basic reference and information sources; collection development.
Course: ED25
Credit Points: 12 Contact Hours: 3 per week

LAP503 LITERATURE & LITERACY: RESOURCES & STRATEGIES
Resources and strategies for teacher-librarians to enable them to work with teachers in language across the curriculum; developmental approach to reading and the selection of materials; genre studies; reader response theories; promotion strategies.
Course: ED25
Credit Points: 12 Contact Hours: 3 per week

LAP504 SCHOOL LIBRARY RESOURCES: ORGANISATION & ACCESS
School library administration and organisation systems, including computer applications; bibliographic organisation and implications for self-directed learning; organisation and maintenance of, and access to, resources including equipment; field program, including school experience (3 weeks).
Course: ED25
Credit Points: 12 Contact Hours: 3 per week

LAP505 COMMUNICATION & MANAGEMENT IN SCHOOL LIBRARY RESOURCE CENTRES
Studies in management of school library resource centres; goal setting; time management; communication models; interpersonal and organisational communication patterns; problem solving and conflict management; innovation, intervention and change; advocacy and promotion; writing for a purpose.
Course: ED25
Credit Points: 12 Contact Hours: 3 per week

LAP506 INFORMATION SERVICES FOR SCHOOLS
Implications of the information age; advanced reference skills; computer-based information services with in-depth study of two, selected by the student.
Course: ED25
Credit Points: 12 Contact Hours: 3 per week

LAP507 AUSTRALIAN LITERATURE FOR YOUNG PEOPLE
Course: ED25
Credit Points: 12

LAP509 DIRECTED STUDY
An individually designed unit which allows students, under the staff supervision, to increase their knowledge relevant to teacher-librarianship.
Course: ED25
Credit Points: 12

LAP510 INTERACTIVE TECHNOLOGIES IN INSTRUCTION
Interactive communications and resources; videodisk; teleconferencing; computer conferencing; electronic mail; planning an instructional program.
Course: ED25
Credit Points: 12

LAP511 LITERACY EDUCATION & LIBRARIES
Educational role of libraries; literacy and basic education programs; literacy resource collections; multicultural library services; international developments.
Course: ED25
Credit Points: 12

LAP512 LITERATURE FOR YOUNG PEOPLE
Historical development of imaginative literature; evolution of books for young people in present social and cultural contexts; writers and illustrators from European, Commonwealth and American countries; teaching strategies for eliciting reader responses.
Course: ED25
Credit Points: 12

LAP513 MEDIA LITERACY & THE SCHOOL
Mass media communication processes and their implications for teaching and learning; semiotics; influences of media on people; advertising and mass media research techniques; media ownership issues; future trends in mass media technologies.
Course: ED25
Credit Points: 12
LAP514 REFERENCE SERVICES & MATERIALS
Extension of studies in reference and information services relevant to schools; reference interview; using an existing school's resource collection; knowledge and use of information agencies and services external to the school. External with 3-day study school or six 2-hour evening sessions.
Course: ED25
Credit Points: 12

LAP515 RESOURCE SERVICES FOR SPECIAL NEEDS
Resource services designed for students with special needs relating to physical or intellectual impairments, socio-economic or cultural circumstances; the theory and practice of mainstreaming; the inclusive School Resource Centre.
Course: ED25
Credit Points: 12

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

LAP518 VISUAL LITERACY & RESOURCE DESIGN
Visual literacy; learning styles; interpretation; design and evaluation of visually-based resources.
Course: ED25
Credit Points: 12

LAP521 PROGRAM DEVELOPMENT, IMPLEMENTATION & EVALUATION IN ADULT LITERACY
Existing adult literacy programs and resources; the language and communication principles underlying effective literacy programs and specific programs for defined adult literacy needs.
Courses: ED22, ED66
Credit Points: 12

LAP522 SPECIFIC GROUPS OF ADULT LITERACY LEARNERS
The characteristics of the literacy problems, needs and applications and the different learning styles of specific adult groups defined as having limited literacy: non-native English speakers; physically disabled; intellectually disabled; emotionally disabled.
Courses: ED22, ED66
Credit Points: 12

LAP523 UNDERSTANDING LITERACY – UNDERSTANDING ADULT LITERACY
The extent, manifestations, complex causes and personal and social effects of adult literacy problems in Australia; tracing those problems within a framework of changing definitions of literacy and current policies and provisions for adult literacy.
Courses: ED22, ED66
Credit Points: 12

LAP524 TEACHING & LEARNING IN ADULT LITERACY
The diversity of adult learning styles, the relationships between oral language, reading, writing and visual literacy, the uses of literacies as social practices, the role of libraries in adult literacy, and methods of assessing both adult literacy development and resources for adult literacy teaching.
Courses: ED22, ED66
Credit Points: 12

LAP525 ISSUES IN LANGUAGE TEACHING
The teaching implications of a number of literacy issues, such as: intergenerational literacy; discourse structures; language and power; the political nature of literacy; critical literacy; plain English; workplace literacies; the needs of NESB students.
Course: ED22
Credit Points: 12

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

LAP601 LANGUAGE IN USE
Formal systems of language: the sentence, including phonology, morphology, syntax and semantics; formal systems of language beyond the sentence, including discourse, cohesive pragmatics and paralinguistic. Language in social-cultural contexts; standard and non-standard varieties of language, including dialects, sociolects and language in contact.
Course: ED60
Credit Points: 12

LAP602 LANGUAGE TEACHING IN PRACTICE
Strategies for observation of second language lessons; analysis of the linguistic content of a variety of lessons; application of these principles.
Course: ED60
Credit Points: 12

LAP603 THE NATURE OF LANGUAGE LEARNING
Behaviouristic, cognitive and psychosocial explanations of second language acquisition/learning; the effect of age; interlanguage and fossilisation; errors and error analysis; personality factors, cultural differences and environmental factors and language acquisition/learning; language proficiency: assessment.
Course: ED60
Credit Points: 12

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

LEB270 HUMAN RELATIONSHIPS EDUCATION
This elective has a dual focus: effective interpersonal communication by teachers as members of the school community; and the curriculum and pedagogical process for teaching children. These curriculum programs focus on care, personal development, work
experience and community-based learning. Students undertaking this elective are introduced to these processes through lectures, seminars and workshops and appropriate field study experiences.

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

LEB280 DEVELOPMENT & LEARNING ELECTIVE

Development and learning perspectives. A more in-depth understanding of specific psychological issues in education and their application to teaching.

Course: ED41 Prerequisites: LEB240, LEB241 Credit Points: 8 Contact Hours: 3 per week

LEB304 CHILDREN WITH SOCIAL & EMOTIONAL DIFFICULTIES

In this unit students will consider: the overview of social and emotional development, theories of social and emotional development, adult-child relationships and issues of authority and discipline; the socialisation of emotions, expression of emotions, emotional disturbances; self concept and self-esteem.

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

LEB305 UNDERSTANDING CHILDREN WITH INTELLECTUAL DISABILITIES

Introduction to intellectual impairment, cognitive development delay, slow learners and the most prevalent conditions which include a degree of cognitive handicap; theory and practice relating to classroom responses in regular settings; assessment of functional attainments and planning learning in basic curriculum areas; second of four subjects which offer enhanced background in the mainstream integration of children with disabilities.

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

LEB331 MAINSTREAMING CHILDREN WITH LOW INCIDENCE DISABILITIES

Students will be introduced to a wide range of low incidence exceptionalities (eg, sensory impairments, developmental delay and health impairments such as Epilepsy, Asthma and Hepatitis etc); methods of managing associated disabling conditions; implementation and evaluation of programming; support and referral services.

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

LEB332 TEACHING EXCEPTIONAL STUDENTS

Integrates a basic understanding and application of learning theory as it applies to exceptional populations. Focuses on specialised approaches to teaching particular exceptional groups. Provides an opportunity for development of specialist skills and resources in one of the following areas: (a) students with learning difficulties; (b) gifted students; (c) students with low incidence disabilities eg, hearing impaired, visually impaired or physically handicapped; (d) behaviourally or emotionally disturbed students.

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

LEB420 INTERPERSONAL PSYCHOLOGY IN EDUCATION

Historical development and major principles of interpersonal psychology; concepts related to the formation and development of interpersonal relationships; particular concepts and their application to education; interpersonal relationships with exceptional students; emotionality; models of effective teaching; self-concept; small group development; applications of interpersonal psychology. Study school for external students strongly recommended.

Course: ED26
Credit Points: 12 Contact Hours: 3 per week

LEB421 APPLIED STRATEGIES IN CLASSROOM LEARNING

Contemporary theoretical approaches to human development and learning; dimensions and correlates of learning; developing teaching/learning strategies; gathering and interpreting information; consideration of a range of advanced teaching/learning strategies.

Course: ED26
Credit Points: 12 Contact Hours: 3 per week

LEB422 ADULT LEARNING

Contemporary theoretical perspectives and research in adult learning. Factors which influence learning. Application of theoretical perspectives to facilitate learning in adult educational environments.

Course: ED26
Credit Points: 12 Contact Hours: 3 per week

LEB430 CREATIVITY IN PROBLEM SOLVING

Creativity is an often advocated, loosely discussed, presumed phenomenon much sought after as an educational objective both in general and as curriculum specific. This unit aims to familiarise students with the history of this concept's emergence, its definitional problems, current theories and models, and to ensure that their presentation promotes the concept as an aspect of problem solving in personal development and pedagogical applications.

Course: ED26
Credit Points: 12 Contact Hours: 3 per week

LEB431 INNOVATIVE TEACHING STRATEGIES

Classroom strategies for all grade levels (preschool through TAFE/university) and subject areas, based on the principles of cooperative learning and offered as alternatives to 'chalk and talk'. Access to classroom or other structured learning group essential.

Course: ED26
Credit Points: 12 Contact Hours: 3 per week

LEB441 EDUCATIONAL COUNSELLING

The nature of counselling/helping in educational contexts; the educator as counsellor; characteristics of effective helpers, practical development of communications skills, building an empathic relationship; structuring the counselling process; application of some counselling theories to the educational contexts; practical sessions using educationally-based role plays to demonstrate effective use of the skills learned. Compulsory study school for external students. Incompatible with Studies in Counselling or equivalent at Diploma of Teaching level.

Courses: ED26, ED37, ED50, ED51, ED52 Credit Points: 12 Contact Hours: 3 per week

LEB442 ADVANCED EDUCATIONAL COUNSELLING

The major theoretical approaches to counselling are applied to problems and concerns arising in the educational context. Theories include: psychoanalytic, Adlerian, existential, person-centered, Gestalt, transactional analysis, behaviour, rational-emotive, and reality. Skills and techniques associated with each major theory are presented and related to education.
ally-based problems and concerns. The effects and outcomes of counselling interventions.

Course: ED26 Credit Points: 12 Contact Hours: 3 per week

■ LEB443 HUMAN SEXUALITY & LEARNING
Physical and psychological development; attitudes and beliefs about sex; sexuality and sex education in childhood and adolescence; sex roles; contraception; sexually transmitted diseases; sexuality, disability and illness; sexual abuse of children; sexual dysfunction; pregnancy; abortion; sex education in schools. Compulsory study school for external students.

Course: ED26 Credit Points: 12 Contact Hours: 3 per week

■ LEB444 HUMAN SEXUALITY & DEVELOPMENT
Examines social and legal issues of human sexual behaviour; their impact on adult development and identity. Behaviours investigated are pregnancy, abortion, infertility, child sexual abuse, rape, pornography, prostitution and transsexuality.

Course: ED26, ED61 Credit Points: 12 Contact Hours: 3 per week

■ LEB445 STUDIES IN ALCOHOL & OTHER DRUGS
Drug use, misuse and abuse covers a very wide range of substances and situations. This unit, rather than focus on lurid details of the street drug scene, aims at developing an awareness that supportive elements contributing to an overall drug education strategy need to be found in every part of the curriculum. While a range of strategies is encountered, some may not even mention drugs while others may help young people handle specific situations.

Course: ED26 Credit Points: 12 Contact Hours: 3 per week

■ LEB446 PSYCHOEDUCATIONAL ASSESSMENT
Assessment techniques and strategies in the educational context; examination of presentation, academic skills, aptitude, personality; reliability, validity, test construction and standardisation procedures; the process of administering assessment instruments in schools; interpretation of test results and assessment data; using assessment data in programming and placement in educational institutions.

Course: ED26 Credit Points: 12 Contact Hours: 3 per week

■ LEB448 WORKING IN TEAMS
Teachers, administrators, students, parents and other professionals in education, health, welfare, and law often work together in different team situations. Individual and group processes that lead to effective team building and teamwork within schools or between agencies are studied, along with practical applications relevant to professionals taking this unit.

Course: ED26 Credit Points: 12 Contact Hours: 3 per week

■ LEB449 NEW PERSPECTIVES ON TEACHING & LEARNING
Contemporary theoretical perspectives and research in learning; factors which influence learning; applications of theoretical perspectives to facilitate learning in a range of educational environments.

Course: ED26 Credit Points: 12 Contact Hours: 3 per week

■ LEN601 LEARNING & COGNITIVE DEVELOPMENT
Theories of cognitive development; the human information processing system; knowledge of the learning process and individual needs; a critical analysis and synthesis of major recent theories of cognition and learning as they apply to learning and teaching in an area of interest.

Courses: ED11, ED13 Credit Points: 12 Contact Hours: 3 per week

■ LEN602 ADVANCED EDUCATIONAL COUNSELLING
The major theoretical approaches to counselling will be applied to problems and concerns arising in the educational context. Theories outlined include Psychoanalytic, Adlerian, Existential, Person-Centred, Gestalt, Transactional Analysis, Behaviour, Rational-Emotive, and Reality. Skills and techniques associated with each major theory will be presented and related to educationally based problems and concerns. The effects and outcomes of counselling inventions are investigated; ethical issues.

Courses: ED11, ED13 Prerequisite: LEB441 Credit Points: 12 Contact Hours: 3 per week

■ LEN603 EDUCATIONAL COUNSELLING PROFESSIONAL PRACTICE
Explores the professional practices of educational counsellors working in the P-12 context; prevention, affective, and developmental programs; adolescent issues and career counselling; consultation: models, theories and practices; highlights self-management skills; discusses time management, program evaluation, accountability and decision-making.

Courses: ED11, ED13 Credit Points: 12 Contact Hours: 3 per week

■ LEN604 PSYCHOEDUCATIONAL ASSESSMENT
Assessment techniques and strategies; assessment of intelligence, academic skills, aptitude, personality; reliability, validity, test construction and standardisation procedures; the process of administering assessment instruments in schools; interpretation of test results and assessment data; using assessment data in programming and placement.

Courses: ED11, ED13 Credit Points: 12 Contact hours: 3 per week

■ LEN605 LEARNERS WITH SPECIAL NEEDS
Special educational needs of school (P-12) and TAFE college learners arising from cognitive, behavioural and socio-cultural differences; diagnosing student functioning in cognitive, social-emotional, self-help and motor skill areas; developing teaching strategies suited to student learning styles; techniques of formative and summative assessment adequate to student learning needs; mixed 'ability' teaching and learning.

Courses: ED11, ED13 Incompatible with: LEP523 Credit Points: 12 Contact Hours: 3 per week

■ LEN606 REMEDIATING LEARNING DIFFICULTIES
Review of the research pertaining to significant learning difficulties among learners in schools (Years 1-12) and post secondary education; studies in language and learning; assessment and monitoring of curriculum tasks; test interpretation and development; related approaches to teaching, informed by principles derived from research in psycholinguistics, metacognition and approaches to learning.

Courses: ED11, ED13 Credit Points: 12 Contact Hours: 3 per week
LEP515 HUMAN SEXUALITY & LEARNING
Physical and psychological development; attitudes and beliefs about sex; sexuality and sex education in childhood and adolescence; sex roles; contraception; sexually transmitted diseases; sexuality, disability and illness; sexual abuse of children; sexual dysfunction; pregnancy, abortion; sex education in schools; focuses on issues related to teaching human sexuality.
Courses: ED22, ED67
Credit Points: 12  Contact Hours: 3 per week

LEP516 HUMAN SEXUALITY & DEVELOPMENT
An examination of social and legal issues associated with human sexual behaviour and their impact on adult development and identity. Behaviours investigated are pregnancy, abortion, infertility, child sexual abuse, rape, pornography, prostitution and transsexualism. Focuses on issues related to teaching.
Course: ED67
Credit Points: 12  Contact Hours: 3 per week

LEP517 ETHICS & HUMAN RELATIONSHIPS EDUCATION
Philosophical approaches to human relationships; moral philosophy and education; development of an integrated and clearly articulated argument for a philosophy of human relationships education.
Courses: ED22, ED67  Prerequisite: LEP515
Credit Points: 12  Contact Hours: 3 per week

LEP518 HUMAN RELATIONSHIPS ACROSS THE LIFESPAN
The developmental processes; human development across the lifespan; development theory and research; development of human relations; the sociocultural context of development and relationships.
Courses: ED22, ED67
Credit Points: 12  Contact Hours: 3 per week

LEP519 INTERPERSONAL & PROFESSIONAL RELATIONSHIPS I
An examination of the major concepts and models used to explain interpersonal relationship development, social influence and attitude change; the development of communication and counselling skills and theoretical understandings.
Courses: ED22, ED67
Credit Points: 12  Contact Hours: 3 per week

LEP522 INTERPERSONAL & SMALL GROUP TEACHING STRATEGIES
This unit is designed to provide human relationships educators with insight into the effects and usefulness of interactive and cooperative teaching strategies, and experience with their implementation.
Courses: ED22, ED67
Credit Points: 12  Contact Hours: 3 per week

LEP523 LEARNERS WITH SPECIAL NEEDS
Special educational needs of school (P-12) and TAFE college learners arising from cognitive, behavioural, sociocultural and physical disabilities and differences; learners with special educational needs; developing teaching/learning strategies suited to learners' needs. Participation in fieldwork experiences involves the investigation of the resource/support teacher's role in assisting students with special learning needs and collaborating with teachers and administrators.
Courses: ED24, ED75
Credit Points: 12  Contact Hours: 3 per week

LEP524 DEVELOPING RELATIONSHIPS & GROUPS
Overview of concepts relating to a model of interpersonal relationships; study of some human relationships concepts such as verbal and non-verbal interpersonal communication, power, influence, authority/control, trust/mistrust, confrontation and constructive resolution of conflict; interviewing and consulting skills; self concept studies; collaborative teaching and team building; students and teacher stress; assertive-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 will have an applied law orientation. Examples of topics are: law and practice difficulties in staged resort development; analysis of judgement by default procedures and practices in the courts; jurisdictional issues and procedural difficulties in obtaining injunctive relief in the courts. Unit may be undertaken in various loads:
LPN300 = 24 credit points per semester
LPN301 = 48 credit points per semester
LPN302 = second 24 credit points per semester
LPN303 = 12 credit points per semester
LPN304 = second 12 credit points per semester

LSB001 INTRODUCTORY BIOLOGY
Designed for students who have not studied Senior Biology. It presents an overview of organisms with emphasis on the relationship between structure and basic biological function, including nutrition, excretion, reproduction and inheritance.
Course: SC30
Credit Points: 6  Contact Hours: 3 per week

LSB100 MICROBIOLOGY I
As an introduction to the study of microbiology and biochemistry. The diversity of microbes is presented together with the various forms of microscopy used to study them. Important biological molecules, both inorganic and organic, are discussed with emphasis
on the mode of action of enzymes and their role in energy production. Detailed study of the morphology of eukaryotic cells, prokaryotic cells and viruses.

Course: LS36
Credit Points: 8 Contact Hours: 3 per week

**LSB122 BIOLOGY 1**

The structure, function and reproduction of living organisms at the molecular, cellular and whole organism levels; the interaction of organisms in communities, ecosystems and globally.

Courses: ED50, PU42, SC30
Co-requisite: LSB100 or Senior Biology
Credit Points: 12 Contact Hours: 5 per week

**LSB130 ANATOMY 1**

Structure of the generalised cell, epithelium, connective tissue, bone and cartilage, muscle tissue, nervous tissue, and cardiovascular system; the gross anatomical study of the skeletal, articcular, and cardiovascular systems.

Course: LS36
Credit Points: 8 Contact Hours: 3 per week

**LSB131 ANATOMY**

Basic concepts of anatomy; overview of the structure of cells, body tissues, and body systems as well as aspects of surface anatomy which are relevant to human movement; musculoskeletal systems.

Courses: HM42, ME46
Credit Points: 12 Contact Hours: 6 per week

**LSB132 CELL BIOLOGY**

Cells viewed at the molecular level (membranes, proteins and nucleic acids); cells viewed at the microscopic level (membranes, organelles); cellular metabolism; cellular biology; cells in division (DNA, genes, chromatids, protein biosynthesis); cells diversity.

Course: ME46 Prerequisites: LSB131, LSB231
Credit Points: 8 Contact Hours: 3 per week

**LSB141 ANATOMY**

A study of human anatomy of the body as a whole, including a detailed study of the skeletal system.

Course: PH38
Credit Points: 10 Contact Hours: 4 per week

**LSB142 HUMAN ANATOMY & PHYSIOLOGY**

A grounding in the principles of human anatomy and physiology for students not intending to continue with further study in this area. An introduction to the structure of the cell; organisation of tissues; chemistry of life; major systems that constitute the human body.

Courses: ED50, PU42, PU44, PU49, PH180
Credit Points: 12 Contact Hours: 5 per week

**LSB151 HUMAN ANATOMY 1**

See LSB130.

Courses: OP42, PU45
Credit Points: 8 Contact Hours: 3 per week

**LSB161 BIOLOGY**

An introduction to biology for students with no previous experience in the discipline. An overview of form and function in animal and plant systems; patterns and mechanisms of inheritance; fundamental ecological principles.

Course: OP42
Credit Points: 8 Contact Hours: 3 per week

**LSB171 ANATOMY & PHYSIOLOGY 1**

An integrated study of anatomy and physiology at the degree level. Emphasis is placed on gaining an 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.

Courses: NS40, NS48 Prerequisite: LSB281
Incompatible with: PNB116, or PNB758, or PNB340 + PNB540 + PNB640, or PNB350 + PNB450 + PNB650.

Credit Points: 9 Contact Hours: 3 per week

**LSB210 QUANTITATIVE LABORATORY TECHNIQUES 2**

The theoretical and practical aspects of instrumental analysis in the clinical laboratory. Topics include: glassware, plastics, balances, spectrophotometers, flamephoto-meters, auto-titrators, pH meters, specific ion meters, calculators and computers. Emphasis is throughout on the effective use of the instruments. Mathematical topics relevant to data analysis.

Course: LS36 Prerequisites: CTB142, PHP150
Credit Points: 12 Contact Hours: 5 per week

**LSB221 INTRODUCTION TO PATHOLOGY**

Application of scientific methods to the study of disease processes. Correct understanding and use of pathological terms and concepts.

Course: PH38 Prerequisite: LSB141
Credit Points: 6 Contact Hours: 3 per week

**LSB222 BIOLOGY 2**

Microbiology; populations of organisms, their interactions and association into communities, ecosystems, biomes and the global biosphere are studied in both qualitative and quantitative terms. The flow of energy and matter through the biosphere; the impact of humanity on this process; introduction to simple computer-based models of community ecology and ecosystem processes through practical sessions.

Courses: ED50, SC30
Credit Points: 12 Contact Hours: 5 per week

**LSB230 ANATOMY 2**

An extension of LSB130. An integrated course of lectures and practicals dealing with the microscopic and macroscopic anatomy of the nervous, digestive, lymphatic, integumentary, respiratory, renal, haemopoietic, endocrine and reproductive systems.

Course: LS36 Prerequisite: LSB130
Credit Points: 8 Contact Hours: 3 per week

**LSB231 PHYSIOLOGY**

Introduces students to the basic concepts of physiology and pharmacology. It will provide an overview of the functions of body systems so that students can...
understand biological disorders and pharmacological strategies which may be used in their treatment.

Courses: HM42, MB46
Credit Points: 12 Contact Hours: 6 per week

■ LSB232 CELL BIOLOGY
Introduction to cell structure and function in both eukaryote and prokaryote organisms; cell biology in relation to structure, function, systems, metabolism and differentiation in addition to basic molecular biology and genetic organisation; the molecular basis for genetic manipulation and other current advances based on molecular genetics.

Courses: ED50, SC30 Prerequisite: LSB122
Credit Points: 12 Contact Hours: 5 per week

■ LSB240 PHYSIOLOGY 2
Basic mechanisms: cells, fluids, electrolytes; energy metabolism; nutrients; transport mechanisms; communication and control; excitable tissues. Control systems: nervous and endocrine.

Course: LS36 Prerequisite: LSB130
Credit Points: 8 Contact Hours: 4 per week

■ LSB241 ANATOMY
A course of lectures and practical exercises involving a basic, yet comprehensive, study of the anatomy and physiology of the various body systems.

Course: PH38 Prerequisite: LSB141
Credit Points: 10 Contact Hours: 4 per week

■ LSB251 MICROBIOLOGY
Basic microbiology with special emphasis on clinical microbiology; the characteristics of medically-important organisms, sterilisation and disinfection, host-parasite relationships, resistance and immunity, infectious diseases, diagnosis, selected microbial infections, chemotherapy and development of resistance by microorganisms.

Courses: NS40, NS48
Credit Points: 8 Contact Hours: 3 per week

■ LSB258 HUMAN ANATOMY & PHYSIOLOGY
An introduction to the principles of human biology for students intending to continue with further study of physiology. Each of the major systems that constitute the human body are examined as we develop an integrated study of both their anatomy and physiology.

Course: SC30
Credit Points: 12 Contact Hours: 5 per week

■ LSB261 SYSTEMATIC ANATOMY
An extension of LSB151. A unit dealing with the microscopic and macroscopic anatomy of the nervous, digestive, lymphatic, integumentary, respiratory, renal, endocrine, muscular and reproductive systems and the basic macroscopic anatomy of the lower limb.

Course: PU45 Prerequisite: LSB161
Credit Points: 8 Contact Hours: 3 per week

■ LSB281 PHYSIOLOGY & PHARMACOLOGY
The basic principles of normal body function; an introduction to pharmacology.

Courses: NS40, NS48
Incompatible with: PNB115, or PNB240 or PND241
Credit Points: 8 Contact Hours: 3 per week

■ LSB300 MICROBIOLOGY 3
An introductory core unit in microbiology dealing with cytology, nutrition, genetics control of microbial populations and principles of taxonomy.

Course: LS36
Prerequisite: LSB100 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 Contact Hours: 3 per week

■ LSB302 ANIMAL BIOLOGY 1
Together with LSB402, this unit provides the foundation in animal biology that is essential for later specialist units in population studies and aquaculture. It deals with non-chordates and covers the following topics: taxonomy, systematics, nomenclature, classification, ultrastructure, life histories, structure and physiology, and evolutionary trends.

Courses: ED50, SC30 Prerequisite: LSB122
Credit Points: 12 Contact Hours: 5 per week

■ LSB305 BIOCHEMISTRY
The structures and functions of proteins, carbohydrates, lipids and nucleic acids; basic biochemistry, mechanisms of cellular energy production and the role of ATP; the metabolism of carbohydrates, lipids and amino acids and the fundamentals of protein biosynthesis and molecular biology.

Course: PU49 Prerequisite: CHB259
Credit Points: 12 Contact Hours: 5 per week

■ LSB306 BIOCHEMISTRY 3
The structure and function of organic macro-molecules. Topics include: the chemistry and function of proteins; enzymology; thermodynamics; bioenergetics; the structure and chemistry of carbohydrates and lipids.

Courses: ED30, LS36, SC30
Prerequisites: LSB232, CHB282 or CHB242
Credit Points: 12 Contact Hours: 5 per week

■ LSB310 QUANTITATIVE LABORATORY TECHNOLOGY 3
The unit deals with techniques encountered in the clinical laboratory. Topics include: immunoassay, enzymic analysis, electrophoresis, isoelectric focusing, gel filtration, ion exchange, and affinity chromatography. Emphasis is placed on the maintenance of accuracy, precision and quality control including statistical control in the clinical laboratory.

Course: LS36 Prerequisite: LSB210
Credit Points: 8 Contact Hours: 4 per week

■ LSB318 BIOCHEMICAL METHODOLOGY 3
A companion to LSB308 emphasising biochemical laboratory methods and practice and dealing with pH measurement and buffers, UV and visible spectrophotometry, chromatography, electrophoresis and isotope techniques.

Course: SC30 Prerequisites: CHB282, MAB237
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, and identification in the plant kingdom; includes a small practical project; emphasis on species of economic value; a basis for further study in plant tissue culture, physiology, and ecology.
Courses: ED50, SC30
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: LSB122
Credit Points: 12
Contact Hours: 5 per week

■ LSB329 PLANT PHYSIOLOGY 1
Whole plant physiology and the functional systems of plants; an important unit for students continuing their studies in the plant, microbiology, and ecology areas.
Courses: ED50, SC30
Prerequisite: LSB232
Credit Points: 12
Contact Hours: 5 per week

■ LSB330 PHYSIOLOGY 1
Maintenance systems: gastrointestinal; cardiovascular; respiratory; and renal systems. Integrated mechanisms: gut motility; development; pregnancy; parturition; lactation; control of growth, energy intake, 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: OP42
Prerequisite: LSB241
Credit Points: 8
Contact Hours: 4 per week

■ LSB351 HUMAN ANATOMY 3
An extension of LSB151. Lectures and practicals on basic embryology, structure and development of the eye, and gross and microscopic anatomy of the major organ systems of the human body.
Course: OP42
Prerequisite: LSB151
Credit Points: 10
Contact Hours: 5 per week

■ LSB352 POPULATION ECOLOGY
A broad theoretical background in the major concepts of plant and animal ecology; introduction to basic ecological models and modelling techniques. Topics include: ecology of single populations, life history and demography, interactions within and between populations, population regulation, management, behavioural ecology, energetics and biogeography.
Courses: ED50, SC30
Prerequisite: LSB222
Co-requisite: LSB362
Credit Points: 12
Contact Hours: 5 per week

■ LSB358 PHYSIOLOGY 2S
A course of lectures and practicals reviewing basic mechanisms: cells, fluids, electrolytes; energy metabolism; essential nutrients; transport mechanisms; blood; communication and control: excitable tissues; control systems: nervous and endocrine.
Course: SC30
Prerequisite: LSB242
Credit Points: 12
Contact Hours: 5 per week

■ LSB361 FUNDAMENTALS OF MEDICINE 1
Provides students with the theoretical basis for an understanding of the process of medical care. Students must understand the nature of disease processes and the clinician's response to them in order to design appropriate and efficient health information services for all types of health care facilities; communicate effectively with other health professionals involved in the care of patients; assist in research and quality assurance programs in the health services. A review of the important and frequently encountered diseases and disorders of the major body systems.
Course: PU48
Prerequisite: LSB271
Credit Points: 12
Contact Hours: 3 per week

■ LSB362 QUANTITATIVE METHODS IN LIFE SCIENCE
Emphasizes practical considerations of field and laboratory-based experimentation in life science, and provides experience in problem assessment, definition and formulation of testable hypotheses.
Courses: ED50, SC30
Prerequisite: MAB237 or MAB447
Credit Points: 12
Contact Hours: 5 per week

■ LSB370 DISEASE PROCESSES
Principles of the study of disease and dealing with the causes and nature of circulation disorders, degenerative processes, metabolic and nutritional disorders, disturbances of development and growth, inflammation, infections and infestations, regeneration and repair, and neoplasia. Includes: the applications of general pathology to the study of diseases of the heart and circulatory system, digestive system, respiratory system, urogenital system, endocrine system, nervous system, haematologic system and skin.
Courses: LS36, OP42
Prerequisite: LSB306
Credit Points: 4
Contact Hours: 2 per week

■ LSB371 BIOCHEMISTRY 4
The structures and functions of proteins, carbohydrates, lipids and nucleic acids, basic enzymology, mechanisms of cellular energy production and the role of ATP; the metabolism of carbohydrates, lipids and amino acids and the fundamentals of protein biosynthesis and molecular biology.
Courses: OP42, PU45
Prerequisite: CHB242
Credit Points: 8
Contact Hours: 4 per week

■ LSB400 MICROBIOLOGY 4
An extension of the core unit in Microbiology (LSB300), including aspects of microbial taxonomy, food and water microbiology, microbial ecology, industrial and agricultural microbiology, and the role of microorganisms as infectious agents.
Course: LS36
Prerequisite: LSB300
Co-requisite: LSB408
Credit Points: 8
Contact Hours: 4 per week

■ LSB401 MICROBIOLOGY
An introductory core unit of lectures and practical exercises in microbiology dealing with cytology,
nutrition, genetics, control of microbial populations, and principles of taxonomy.
Course: PU45
Credit Points: 8  Contact Hours: 3 per week

**LSB402 ANIMAL BIOLOGY 2**
This unit, together with LSB302, provides the foundation of animal biology essential for later specialist units in population studies and aquaculture. The unit deals with chordates and covers the following topics: embryology, development, structure, physiology, classification and major evolutionary trends.
Courses: ED50, SC30  Prerequisite: LSB302
Credit Points: 12  Contact Hours: 5 per week

**LSB405 MICROBIOLOGY**
Introduction to different classes of microorganisms; basic characteristics of bacteria and viral nutrition; water microbiology; food preservation; food spoilage; food borne disease; food hygiene; microbial fermentation of foods.
Course: PU49
Prerequisite: CHB2001  Co-requisite: CHB259
Credit Points: 12  Contact Hours: 5 per week

**LSB408 BIOCHEMISTRY 4**
Aspects of carbohydrate metabolism in mammals, the chemistry and metabolism of lipids, amino acids, the chemistry and function of porphyrins, metabolic integration.
Courses: LS36, SC30  Prerequisite: LSB308
Credit Points: 12  Contact Hours: 5 per week

**LSB412 APPLIED ECOLOGY A**
The theory and practice of methods used to determine and measure important population parameters and characteristics. The methods are an essential tool for the study of biological populations. Content includes estimation of population size, determination of dispersion patterns and detecting competition. Applications of methods are demonstrated using laboratory and field exercises.
Courses: ED50, SC30
Prerequisites: LSB352, LSB362
Credit Points: 12  Contact Hours: 5 per week

**LSB418 BIOCHEMICAL METHODOLOGY 4**
Extended studies of chromatographic and electrophoretic methods, protein binding techniques and the methodology of biochemical analysis.
Course: SC30
Prerequisite: LSB318  Co-requisite: LSB408
Credit Points: 12  Contact Hours: 5 per week

**LSB421 IMAGING PATHOLOGY**
The appearances of pathology on medical images with particular emphasis on the radiographic image.
Course: PH38  Prerequisite: LSB321
Credit Points: 4  Contact Hours: 2 per week

**LSB422 APPLIED ECOLOGY B**
The principle and concepts of plant community ecology and ecosystem structure; biogeochemical cycles, soils, nutrient cycling, vegetation classification and mapping, and techniques for characterising the physical environment. Field work is incorporated.
Course: ED50, SC30  Prerequisite: LSB352
Credit Points: 12  Contact Hours: 5 per week

**LSB428 MICROBIOLOGY 4**
An extension of LSB328; aspects of microbial taxonomy, food and water microbiology, microbial ecology, industrial and agricultural microbiology; micro-organisms as infectious agents.
Course: SC30  Prerequisite: LSB328  Co-requisite: LSB408
Credit Points: 12  Contact Hours: 5 per week
screening of blood samples. Basic haematologic tests: preparation, staining and examination of blood films, determination of the red cell indices, supravalvular staining, erythocyte sedimentation rate, screening tests used in the investigation of a bleeding disorder. Course: LS36 Co-requisite: LSB408 Prerequisites: LSB230, LSB308, LSB310, LSB340 Credit Points: 8 Contact Hours: 4 per week

**LSB451 HUMAN PHYSIOLOGY**
A course of lectures and practicals. The lectures are the same as LSB240 and LSB340. Presented as a one-semester program. Courses: OP42, PU45 Prerequisite: LSB351 or LSB261 Credit Points: 12 Contact Hours: 7 per week

**LSB452 MARINE STUDIES**
Marine ecosystems, their importance to all life along the coastal areas and to people’s livelihood; management and conservation of the sea; appreciation of its infinite value to humanity’s changing lifestyle. Courses: ED50, SC30 Prerequisite: LSB122 Credit Points: 12 Contact Hours: 5 per week

**LSB458 PHYSIOLOGY 3S**
A continuation of LSB358. Course: SC30 Prerequisite: LSB358 Credit Points: 12 Contact Hours: 5 per week

**LSB460 HISTOPATHOLOGY 4**
An introductory unit presenting methods of preparing tissue samples for examination by the various methods of light and electron microscopy. Topics include: fixation, embedding, microscopy and an introduction to staining and microscopy techniques. Course: LS36 Prerequisites: LSB230, CHB242 Credit Points: 8 Contact Hours: 4 per week

**LSB461 FUNDAMENTALS OF MEDICINE 2**
Continues the study of the process of medical care begun in LSB361. The roles and functions of allied health professions, and of technological services in the diagnosis and treatment of disease. Course: PU48 Prerequisite: LSB361 Credit Points: 12 Contact Hours: 3 per week

**LSB468 MOLECULAR BIOLOGY**
An introduction to the structure and biochemistry of the nucleic acids and methodologies for their analysis. Topics include: genome organization and replication in bacteriophages, plasmids, bacteria and eukaryotes; the enzymes involved in replication of DNA and RNA; nucleic acid isolation and purification; transcription and translation of the genetic code in vivo. Courses: LS70, SC30 Prerequisite: LSB308 Co-requisite: LSB408 Credit Points: 12 Contact Hours: 5 per week

**LSB470 DISEASE PROCESSES 4**
See LSB370. Course: PU45 Credit Points: 8 Contact Hours: 4 per week

**LSB480 PROFESSIONAL PRACTICE**
Students (both full-time and part-time) undertake a 2-4 week work experience program. Course: LS36

**LSB485 AUSTRALIAN BIOLOGY**
The geological and climatic history of the Australian continent, Australian ecosystems and the evolution of the Australian flora and fauna. Major groups of extant plants and animals are examined in some detail. While emphasis is placed on vertebrate animals, 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. Course: ED26 Incompatible with: LSB322 Credit Points: 12 Contact Hours: 3 per week

**LSB491 MICROBIOLOGY 3**
An introductory core unit of microbiology for students of optometry: with cytology, nutrition, genetics, control of microbial populations and principles of taxonomy in relation to optometry. Course: OP42 Credit Points: 6 Contact Hours: 3 per week

**LSB500 MICROBIOLOGY 5**

**LSB502 PROJECTS 1**
Develops the student’s capacity for managing their own work. Projects emphasise specific investigatory skills in reviewing, collating, interpreting and presenting data; contribution to a seminar is usually required. Projects, supervised by staff members, are graded individually. The Head of School coordinates assessment, and may request external assessment. Projects are to be selected by the 12th week of the fourth semester of the course. There are a number of compulsory field trips. This unit leads into LSB602. Course: SC30 Credit Points: 12 Contact Hours: 5 per week

**LSB508 BIOCHEMISTRY**
The catabolic and anabolic pathways for the major macromolecules in mammalian systems; non-mammalian metabolism; concepts in bioenergetics and thermodynamics in the context of cellular metabolism; integration of metabolism including production of mixed conjugates of biological significance such as amino-sugars and lipopolysaccharides, hormone action and regulation. Course: SC30 Prerequisite: LSB408 Credit Points: 12 Contact Hours: 5 per week

**LSB520 CLINICAL BIOCHEMISTRY 5**
Introduces the study of chemical aspects of human life in health and illness and discusses the application of chemical laboratory methods to diagnosis, control of treatment and prevention of disease. Topics include: kidney, pancreas, liver and gastric functions, the metabolism of lipids, carbohydrates and proteins. Courses: LS36, SC30 Prerequisite: LSB408, LSB310, LSB340 Credit Points: 8 Contact Hours: 4 per week

**LSB522 POPULATION MANAGEMENT**
The principles of biological population management; natural populations and three forms of management; pest control, harvesting and conservation. Field trips and computer simulations are used to investigate management methods. Course: SC30 Credit Points: 12 Contact Hours: 5 per week
■ LSB528 MICROBIAL PHYSIOLOGY & METABOLISM
The composition, organisation, structure, activity of the microbial cell: bacteria, yeasts and moulds. Topics include: light microscopy and staining methods; cell structure; enrichment, isolation and growth of cultures; the kinetics of growth; biosynthesis of cellular materials; regulation of metabolism; microbial genetics; sporogenesis and germination.
Course: SC30  Prerequisite: LSB428  Credit Points: 12  Contact Hours: 5 per week

■ LSB530 IMMUNOLOGY 5
This unit builds on the basic understanding provided in LSB430 to provide an understanding of the genetic control of antibody diversity, the function of antibody and complement at a molecular level, cell interactions in the immune response and immunological process in resistance to and recovery from infection. Practical classes place emphasis on the competent performance of immunological procedures rather than just a demonstration of immunological principles.
Course: LS36  Prerequisites: LSB430, LSB408, LSB400  Credit Points: 8  Contact Hours: 4 per week

■ LSB532 POPULATION GENETICS
An extension of Introductory Genetics. Topics include: the genetic structure of populations and processes of evolutionary change; natural selection, inbreeding and co-adaptation; species and speciation theory; ecological genetics and the genetics of behaviour. Students may be required to undertake semester-long project topics on practical or theoretical problems.
Course: SC30  Prerequisite: LSB432  Credit Points: 12  Contact Hours: 5 per week

■ LSB537 GENETIC ENGINEERING
The development of concepts and skills in the recombinant DNA technologies used in genetic engineering. Topics include: the enzymes, vectors and host cells for gene isolation and cloning; strategies and procedures for cellular transformation and gene library construction; nucleic acid hybridisation techniques; methods for the screening of 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 cytogenerics, protoplast isolation, and the unusual carbohydrate metabolism of plants in tissue culture.
Course: SC30  Prerequisite: LSB442  Credit Points: 12  Contact Hours: 5 per week

■ LSB548 BIOCHEMICAL SEPARATIONS
An advanced course of lectures and a comprehensive project designed to integrate a number of specialist biochemical procedures including centrifugation, chromatography, electrophoresis and spectrophotometry. Students are required to design and execute an experimental protocol for the separation of selected macromolecules.
Course: SC30  Prerequisite: LSB318  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, haemolytic anaemias, and 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 aqua farms. Topics include: water quality measurement and management; intensive production of food organisms; induction of maturation and spawning; nursing and rearing larvae and fry; feeding; diagnosis and treatment of health problems; handling and husbandry.
Course: SC30  Prerequisite: LSB302  Credit Points: 12  Contact Hours: 5 per week

■ LSB558 ADVANCED PHYSIOLOGY
An extension of prior knowledge of physiological processes which occur in a specific range of cardiovascular, renal, and neurological functions; basic nutritional concepts and factors affecting nutrient requirements.
Courses: PU62, SC30, SC60  Prerequisite: LSB438  Credit Points: 12  Contact Hours: 5 per week

■ LSB560 HISTOPATHOLOGY 5
A detailed study of techniques used in routine histopathology including methods for immunohistochemistry and transmission electron microscopy. Emphasis is placed on the application and relevance of methods to particular diagnostic areas.
Course: LS36  Prerequisites: LSB408, LSB460  Credit Points: 8  Contact Hours: 4 per week

■ LSB568 ELECTRON MICROSCOPY
A theoretical and practical background to the operation and use of scanning and transmission electron microscopes in biological, materials and forensic science; basic principles of specimen preparation are included with emphasis on methods complimentary to biology, microbiology and molecular biology. Analytical capabilities of electron beam instruments.
Courses: EDS0, SC30  Credit Points: 12  Contact Hours: 5 per week

■ LSB578 VIROLOGY
Lectures and practical classes designed to introduce students to the basic concepts of virology. A range of viruses and virus diseases will be examined and topics include: virus morphology and composition, taxonomy and classification, replication, purification, diagnosis and assay, transmission and control.
Course: SC30  Prerequisite: LSB428  Credit Points: 12  Contact Hours: 5 per week

■ LSB582 SELECTED TOPICS 1
Students complete a study on a specific topic. Such study involves selected reference material and may also include a lecture program or project work.
Course: SC30  Prerequisite: LSB362  Credit Points: 12  Contact Hours: 5 per week
Studies structure, analysis and evolution of proteins, species; reproduction and its control; nutrition, search problem in biology. 

Course: LS36  Prerequisite: LSB400  Credit Points: 12  Contact Hours: 5 per week

LSB600 CLINICAL BACTERIOLOGY 6
A study of clinical bacteriology, dealing with the characteristics, isolation and identification of bacteria implicated in human disease, the collection and examination of clinical specimens, the initial use of computerised data bases in bacterial identification and antibiotic sensitivity tests on laboratory isolates, the interpretation and clear reporting of results.

Course: LS36  Prerequisite: LSB400  Credit Points: 16  Contact Hours: 7 per week

LSB602 PROJECTS 2
This elective unit may be undertaken by students who have taken LSB984 and who have the strand coordinator's permission to continue project work. The student either: continues a project undertaken in LSB502, or involves one or more additional projects aimed at developing to a greater depth aspects of the unit matter of experimental units previously completed, such projects being established for either individuals or groups. Assessment is conducted as for LSB502. There are a number of excursions.

Course: SC30  Credit Points: 12  Contact Hours: 5 per week

LSB608 BIOCHEMISTRY 6
Advanced studies in protein biochemistry, including structure, analysis and evolution of proteins, sequencing, synthesis, structure predictions; applications in the areas of enzymology and active site chemistry; macromolecular assemblies such as muscle.

Course: SC30  Prerequisites: LSB418, LSB308  Credit Points: 12  Contact Hours: 5 per week

LSB612 AQUACULTURE 2
The theoretical and applied aspects of warm-water aquaculture. Topics include: design and operation of production facilities; water quality requirements and management; biology of commercially important species; reproduction and its control; nutrition, feeding and growth; diseases and their control; production improvement; polyculture; case studies.

Course: SC30  Prerequisite: LSB372  Credit Points: 12  Contact Hours: 5 per week

LSB618 ANALYTICAL BIOCHEMISTRY 6
A companion to unit LSB608 extending the material of LSB418 into biochemical analysis: enzyme-based analyses, advanced analysis using isotopes, immunoassays and the major biomolecules.

Course: SC30  Prerequisite: LSB418  Co-requirement: 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, autoanaylses, 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  Prerequisite: LSB428  Credit Points: 12  Contact Hours: 5 per week

LSB630 IMMUNOHAEMATOLOGY 6
Designed to supply the competence in theoretical and practical blood transfusion required of a scientist working in a hospital blood bank. The understanding of immunology gained in LSB430 and LSB530 is applied to the area of blood banking. Topics include: blood group systems, compatibility testing, antibody identification, antenatal serology, clinical use of blood and blood products and quality control.

Course: LS36  Prerequisite: LSB530  Credit Points: 8  Contact Hours: 4 per week

LSB632 PLANT PHYSIOLOGY 2
The sequence of biochemical and physiological events during the life history of a plant. Topics include: starch and oil mobilisation during seed germination, biosynthesis of cell membranes, cell pigments (carotenoids, chlorophylls), and plant cell walls; photosynthetic assimilation of nitrogen and sulphur (overview of biosynthesis of all amino acids); biosynthesis of so-called secondary plant products, eg. terpenoids, flavonoids, and the lignin component of wood; biosynthesis of starch and oils in new seeds. Laboratory classes emphasise techniques of value to plant biochemical research.

Course: SC30  Credit Points: 12  Contact Hours: 5 per week

LSB637 MOLECULAR GENETICS
Polymerase Chain Reaction and associated technologies; chromosome separation; walking and jumping; genetic recombination, mutagenesis and evolution; advanced techniques including DNA footprinting; nucleic acid sequencing and reverse genetics.

Courses: LS70, LSB5, 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.

Courses: LS36  Prerequisite: LSB550  Credit Points: 8  Contact Hours: 4 per week
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

- **LSB652 BIOLOGICAL RESOURCES**
- **LSB658 CLINICAL PHYSIOLOGY**
- **LSB660 HISTOPATHOLOGY**
- **LSB682 SELECTED TOPICS 2**
- **LSB722 RESEARCH STRATEGIES**
- **LSB723 READINGS IN LIFE SCIENCE 1**
- **LSB725 PROJECT**
- **LSB726 PROJECT**
- **LSB734 ANALYTICAL ELECTRON MICROSCOPY**
- **LSB801 ADVANCED PLANT PHYSIOLOGY & BIOCHEMISTRY**
- **LSB804 ADVANCED POPULATION BIOLOGY**
- **LSB825 PROJECT**
- **LSN009 READINGS IN LIFE SCIENCE 4**
- **LSN010 READINGS IN LIFE SCIENCE 5**
- **LSN011 RESEARCH SEMINARS IN LIFE SCIENCE 1**
and outlining the proposed directions of the research program. The seminar should normally be presented within 12 months (full-time) or 24 months (part-time) of commencement of the postgraduate program.

Courses: IF49, SC80
Credit Points: 6 Contact Hours: 1 per week

LSN102 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

LSN103 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.

Course: IF49, SC80
Credit Points: 24 Contact Hours: 1 per week

LSN104 CELLULAR BASIS OF DISEASE

Course: LS85
Prerequisite: 24 credit points in LS85
Credit Points: 12 Contact Hours: 1 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.

Prerequisites: Gene structure and function, proteins – structure and molecular dysfunction, and enzymes – properties and alterations in diseases; metabolic integration and hormone action, hormones and organ disease, disorders of carbohydrate and lipid metabolism and chemotherapy.

Course: LS85
Prerequisite: 24 credit points in LS85
Credit Points: 12 Contact Hours: 3 per week

LSN150 EPIDEMIOLOGY & RESEARCH STRATEGIES
The principles and applications of epidemiology, its scope and value in establishing disease aetiology. Topics include: epidemiological methods (descriptive, analytical and experimental), epidemiological concepts, causal relationships, measurement of morbidity and mortality, statistical overview of the health of the Australian population, and the investigation of an epidemic.

Courses: LS85, NS85
Credit Points: 12 Contact Hours: 3 per week

LSN158 ULTRASONIC PATHOLOGY
Pathology as applicable to diagnostic ultrasound; basic embryology and genetics.

Course: PH80
Credit Points: 6 Contact Hours: 2 per week

LSN159 ADVANCED PATHOLOGY
The fundamentals of anatomy, physiology and pathology; emphasis on applied cross-sectional anatomy and integration of knowledge of pathological processes.

Course: PH80
Credit Points: 12 Contact Hours: 4 per week

LSN306 PATHOPHYSIOLOGY
A study of selected pathophysiological states which represent major alteration in physiological functioning, occurring in each developmental phase.

Courses: LS85, PH80
Prerequisite: 72 credit points in LS85
Credit Points: 12 Contact Hours: 3 per week

LSN401 ADVANCES IN MEDICAL LABORATORY SCIENCE
A series of lectures to provide current and topical information across the general field of medical laboratory science. In addition, topics which have significant implications on the advancement of the profession are presented, eg, computers, laboratory automation, biotechnology, self-diagnosis. The lecture program is flexible to allow for the incorporation of visiting speakers or for the introduction of a current interest topic. In addition to formal lectures the unit offers tutorial and student seminar sessions.

Course: LS85
Prerequisite: 72 credit points in LS85
Credit Points: 12 Contact Hours: 3 per week

LSN510 CLINICAL BIOCHEMISTRY I
The use of clinical biochemistry in the diagnosis of diseases. Disorders of fluid and electrolyte balance systems, disorders of the gastrointestinal, pancreatic and hepato-biliary systems, and disorders of the cardiovascular system and hypertension are studied, concentrating on diagnosis and the interpretation of biochemical results. In addition, aspects of instrumentation and laboratory methods are reviewed.

Course: LS85
Prerequisite: 96 credit points in LS85
Credit Points: 12 Contact Hours: 3 per week

LSN511 HAEMATOLOGY I
Haematologic diseases; their aetiology, laboratory investigation, pathogenesis, principles of treatment and laboratory monitoring. The study program includes seminars, oral presentations and assignments selected from: haemopoietic kinetics, haemolytic disease, haemostasis and the haematologic implications of systemic disease. Assessment is by formal examination, assignments and seminar participation.

Course: LS85
Prerequisite: 96 credit points in LS85
Credit Points: 12 Contact Hours: 3 per week

LSN512 HISTOPATHOLOGY I
Recent advances and modern methods in diagnostic histopathology. Topics include: immunohistochemistry, enzyme histochemistry and transmission electron microscopy methods.

Course: LS85
Prerequisite: 96 credit points in LS85
Credit Points: 12 Contact Hours: 3 per week
LSN515 MICROBIOLOGY 1
Bacteriology, virology, mycology and parasitology. Topics are chosen to increase the knowledge and understanding of microorganisms associated with human infection. Recent trends and developments in diagnostic microbiology are studied. A critical approach to the assessment of laboratory practices and interpretation of data will be developed.
Course: LSS5
Prerequisite: 96 credit points in LSS5
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: LSS5
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: LSS5
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: LSS5
Prerequisite: 96 credit points in LSS5
Credit Points: 12  Contact Hours: 3 per week

LSN531 DISSERTATION 2
See LSN530.
Course: LSS5
Prerequisite: 96 credit points in LSS5
Credit Points: 12  Contact Hours: 3 per week

LSN610 CLINICAL BIOCHEMISTRY 2
Clinical biochemistry in the diagnosis of diseases. Endocrinology, disorders of the muscular and skeletal systems, disorders of special groups, nutrition and drugs, neurochemistry and neural disorders, cancer and biochemical abnormalities, and the seriously ill patients are studied, concentrating on diagnosis and the interpretation of results.
Course: LSS5
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 haemostasis in the elderly, nutrition anaemias, non-malignant and malignant leucocyte disorders, transplantation, automation and quality control. Since outside lecturers participate in these specialist electives some interchange of topics between this unit and LSN511 may be necessary.
Course: LSS5
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: LSS5
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 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: LSS5
Prerequisite: LSN515
Credit Points: 12  Contact Hours: 3 per week

LSN617 IMMUNOLOGY 2
Assist with the preparation of scientific publications and the presentation of data orally. Students are expected to prepare a short scientific paper based on raw data provided. They also prepare and present a short seminar based on the scientific paper.
Course: LSS5
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: LSS5
Prerequisite: LSN518
Credit Points: 12  Contact Hours: 3 per week

LSP120 ADVANCED GENETIC ENGINEERING
The isolation of mRNA and ds viral RNA; DNA analysis using Restriction Fragment Length Polymorphisms (RFLPs) and nucleotide sequence determination in plasmids and bacteriophage M13; separation of chromosomes using Pulsed Field Gel Electrophoresis (PFGE); oligonucleotide synthesis and the application of gene probes in diagnosis; electrophoresis and chemical transformation of cells; and DNA amplification using the Polymerase Chain Reaction (PCR).
Course: LSS5, SC60
Credit Points: 12  Contact Hours: 5 per week

LSP127 TOPICS IN BIOTECHNOLOGY
Commercial perspectives of a biotechnology company; funding for commercial research; research patents and intellectual property; strategies in biotechnology; methods of reviewing the biotechnology literature. Students present a seminar on some aspect of biotechnology research.
Course: LSS5
Credit Points: 12  Contact Hours: 3 per week

LSPI45 PROJECT
Students in the Graduate Diploma in Biotechnology may be required to select, in consultation with their employer and an academic supervisor, a research project. The aims of the project are that students, under supervision, should participate in the selection of a suitable topic for investigation; conduct a literature search in the unit area; plan an experimental program which includes scheduling laboratory space, equipment and consumables; undertake research at the bench; record, assess and interpret the results; write a concise thesis in a standard form of presentation.
Course: LSS5
Credit Points: 12  Contact Hours: 3 per week
LSX310 HUMAN MOLECULAR BIOLOGY
A course of specialist lectures and research assignments for postgraduate students relating to the organisation and regulation of expression of information stored in the human genome. Additional subject areas include the molecular basis of genetic disorders, cancer, oncogenes and infectious disease; and clinical applications of nucleic acid diagnostic procedures eg. linkage analysis, DNA profiling, genetic screening.
Courses: LS70, LS85, SC60
Prerequisite: LSB637
Credit Points: 12 Contact Hours: 5 per week

LSX311 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

LSX312 CLINICAL MOLECULAR BIOLOGY
The theory behind the use of restriction endonucleases; radioisotopes and nucleic acid hybridisation procedures and their applications in the Polymerase Chain Reaction; linkage analysis, DNA profiling and genetic screening using oligonucleotides and gene probes.
Courses: LS85, SC60
Prerequisite: LSB437
Credit Points: 8 Contact Hours: 3 per week

LSX313 EXTERNAL PROJECT 1
This unit can only be completed by students who are involved in an approved research program as part of employment duties. Before enrolling it is necessary for the student to present to the course coordinator a proposal outlining the aims of the project together with the name of the supervising scientist at the place of employment.
Course: SC10
Credit Points: 8 Contact Hours: 3 per week

LSX314 CONTINUATION OF LSX310.
Continuation of LSX310.
Course: SC10
Prerequisite: LSX310
Credit Points: 8 Contact Hours: 3 per week

LSX315 MICROBIOLOGY 1
An introduction to the biology of bacteria, fungi, algae, protozoa and viruses, with consideration of structure, nutrition, reproduction, genetics, and classification systems. The practical course is aimed at developing the manipulative skills necessary for laboratory identification of microbial forms.
Course: LS15
Credit Points: 8 Contact Hours: 3 per week

LSX316 MICROBIOLOGY 2
Microbial populations and methods of controlling growth; sterilisation and disinfection methods; enzymic activity of microorganisms; the identification of the micro-organisms relevant to public health; host-parasite relationships and immunity.
Course: LS15
Prerequisite: LSX123
Credit Points: 8 Contact Hours: 3 per week

LSX317 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. This unit provides the theoretical basis for students undertaking electives in aquaculture techniques and/or plant tissue culture.
Course: SC10
Credit Points: 8 Contact Hours: 3 per week

LSX318 COMPOSITIONAL ANALYSIS OF ACTIVE PLANTS
A study of the basic chemical procedures used in biochemical laboratories with emphasis on technique and accuracy. Topics include: tests of renal, pancreatic and hepatic functions; the estimation of serum proteins, lipids and carbohydrates.
Course: SC10
Prerequisites: LSX221, LSX225, LSX222
Credit Points: 8 Contact Hours: 4 per week

LSX319 CLINICAL MICROBIOLOGICAL TECHNIQUES 1
The techniques used in isolation and identification of bacteria important in human and animal infections;
the use of computerised data bases to assist in bacterial identification; tests for the sensitivity of bacteria to antibiotics; preparation, sterilisation, quality control and use of bacteriological media.

Course: LS15  Prerequisite: LSX223  Credit Points: 8  Contact Hours: 4 per week

**LSX322 HAEMATOLOGICAL TECHNIQUES 3**

Lectures and practical work in haematological techniques. Topics include: the counting of blood cells; the preparation, staining and examination of blood films; the determination of the red cell indices; supravital staining techniques; erythrocyte sedimentation rate and origin and maturation of blood cells.

Course: LS15  Prerequisites: LSX122, LSX221, LSX225  Credit Points: 8  Contact Hours: 4 per week

**LSX323 HISTOLOGICAL TECHNIQUES 3**

Preparation of tissue samples for examination by the various forms of light microscopy. Topics include: fixation, tissue processing, microscopy and an introduction to staining and light microscope techniques.

Course: LS15  Prerequisites: LSX122, LSX221, LSX225  Credit Points: 8  Contact Hours: 4 per week

**LSX324 IMMUNOLOGICAL TECHNIQUES 3**

Introduction to immunology with particular emphasis on the principle and performance of immunological techniques including blood grouping. Topics include: antigens, antibodies and the immune system.

Course: LS15  Prerequisites: LSX125, LSX225  Credit Points: 8  Contact Hours: 4 per week

**LSX325 CYTOLOGICAL TECHNIQUES 3**

Lectures and associated practical sessions in cytological methods and normal gynaecological cytology. Basis for clinical cytology offered in LSX425.

Course: LS15  Prerequisites: LSX221, LSX225  Credit Points: 8  Contact Hours: 4 per week

**LSX331 FOUNDATIONS OF ANAESTHETIC TECHNIQUES**

Introduction to the ethical, moral and legal responsibilities of anaesthetic technicians; the standard equipment used in the operating rooms.

Course: LS15  Credit Points: 12  Contact Hours: 5 per week

**LSX332 PHYSIOLOGY & PHARMACOLOGY**

A study of the anatomy and physiology of the main systems, with emphasis on the major pathological disturbances. Also an introduction to the pharmacology of drugs used in anaesthesia.

Course: LS15  Prerequisites: LSX225  Credit Points: 12  Contact Hours: 5 per week

**LSX333 ELECTRONICS & COMPUTING**

An understanding of the basic principles of electronics, enabling an understanding of the complex equipment used for the dispensing of anaesthesia; the basic hardware and software of computers; word processing, databases and spreadsheet.

Course: LS15  Credit Points: 12  Contact Hours: 5 per week

**LSX334 OPERATING ROOM EQUIPMENT**

Introduction to the ancillary equipment used in operating rooms; the methods in use in the operating rooms; team roles in the operating room.

Course: LS15  Credit Points: 12  Contact Hours: 5 per week

**LSX410 ENVIRONMENTAL BIOLOGY**

Ecosystems and energy flow. Productivity, decomposition and nutrient cycling. Niche, species packing, diversity, colonisation and community structure. Short compulsory field trips.

Course: SC10  Credit Points: 8  Contact Hours: 3 per week

**LSX411 POPULATION BIOLOGY**

Population biology: structure and dynamics, evolution and differentiation; the relationships between the genetics, energetics and dynamics of populations leading to particular life-history strategies. Field excursions are compulsory.

Course: SC10  Co-requisite: LSX412  Credit Points: 8  Contact Hours: 3 per week

**LSX412 FIELD TECHNIQUES**

Activities include surveying, soil and climatic measurements, assessment and sampling of animal and plant populations, evaluation of spatial changes in plant and animal communities in relation to environmental gradients. Skills are gained not only in sampling and analytical techniques, but also in the establishment and running of a field camp. An extended field excursion is a compulsory part of the unit.

Course: SC10  Credit Points: 8  Contact Hours: 3 per week

**LSX413 APPLICATIONS IN ELECTRON MICROSCOPY**

The roles played by various forms of electron microscopy in the biological sciences and an introduction to the basic techniques and their limitations.

Course: SC10  Prerequisites: BEA108, BEA198  Credit Points: 8  Contact Hours: 3 per week

**LSX414 ANIMAL PHYSIOLOGY**

The general physiological processes which sustain life; animal-environment interactions.

Course: SC10  Credit Points: 8  Contact Hours: 3 per week

**LSX415 PLANT CELL & TISSUE CULTURE**

Topics include: techniques, equipment and media used in plant tissue culture, the role of plant growth regulators, and micropropagation. The significance of organogenesis, somatic embryogenesis and genetic variability in plant tissue culture are discussed. Appropriate laboratory exercises.

Course: SC10  Credit Points: 8  Contact Hours: 3 per week

**LSX420 CLINICAL BIOCHEMICAL TECHNIQUES 4**

A study of more complex techniques used in clinical biochemical laboratories, including enzyme assays, estimations of electrolytes, blood gases, drugs, vitamins and hormones. Auto-analytical techniques and quality control are also treated.

Course: LS15  Prerequisite: LSX320  Credit Points: 8  Contact Hours: 4 per week

**LSX421 CLINICAL MICROBIOLOGICAL TECHNIQUES 4**

Basic microbiological techniques in the following disciplines: virology, mycology and parasitology (enteric parasites). The practical periods are used to reinforce the theoretical aspects of the unit.

Course: LS15  Prerequisite: LSX223  Credit Points: 8  Contact Hours: 4 per week
**LSX422 HAEMATOLOGICAL TECHNIQUES 4**

An extension of LSX322. The student is introduced to the common blood disorders. A brief outline of their aetiology and laboratory investigation is given. The main emphasis is the use of basic haematological techniques and some specialised laboratory procedures used in the investigation of commonly encountered blood diseases. The basic theory of haematopoiesis and the screening tests used in the investigation of the bleeding disorders are discussed.

**Course:** LS15  
**Prerequisite:** LSX322  
**Credit Points:** 8  
**Contact Hours:** 4 per week

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**LSX423 HISTOLOGICAL TECHNIQUES 4**

An advanced course dealing with specialised methods for identifying tissue components. Topics include: electron microscopy, histochemistry, immunohistochemistry. Emphasis is placed on the practical application of these methods in histopathology.

**Course:** LS15  
**Prerequisite:** LSX323  
**Credit Points:** 8  
**Contact Hours:** 4 per week

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**LSX424 TRANSFUSION TECHNIQUES 4**

The basic knowledge of immunology gained in LSX324 applied to the study of human blood group systems. Topics include: principles of immunohaematology, ABO blood group, Rh blood group system, compatibility testing, antibody identification, transfusion reactions, antenatal testing, quality control, intravenous fluids, blood products.

**Course:** LS15  
**Prerequisite:** LSX324  
**Credit Points:** 8  
**Contact Hours:** 4 per week

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**LSX425 CYTOLOGICAL TECHNIQUES 4**

A course of lectures and associated practical work presenting specialised preparative methods for nonsurgical pathological cytology and demonstrating the evaluation of specimens commonly encountered in routine diagnostic cytology.

**Course:** LS15  
**Prerequisite:** LSX325  
**Credit Points:** 8  
**Contact Hours:** 4 per week

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**LSX431 CARDIAC CARE & RESUSCITATION**

In the operating room and intensive care units, the cardiac status of patients is monitored by several devices. Students are introduced to these devices as well as to the resuscitation equipment and special equipment used in lung and cardiac surgery.

**Course:** LS15  
**Prerequisite:** LSX332  
**Credit Points:** 12  
**Contact Hours:** 5 per week

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**LSX432 CARE OF RESPIRATORY AIRWAYS & INTENSIVE CARE**

The care and maintenance of equipment used for the respiratory airways and in intensive care; acid-base balance, blood gases, and the equipment needed for the monitoring of those parameters.

**Course:** LS15  
**Prerequisite:** LSX332  
**Credit Points:** 12  
**Contact Hours:** 5 per week

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**LSX433 ANAESTHESIA FOR SPECIALISED SURGERY**

Surgical interventions requiring anaesthesia; the techniques used and their effects on the vital parameters of patients in these special circumstances.

**Course:** LS15  
**Prerequisite:** LSX332  
**Credit Points:** 12  
**Contact Hours:** 5 per week

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**LSX434 PROFESSIONAL PRACTICE**

The practical skills needed for the proper delivery of anaesthetics. This is essentially a practical unit, which can only be taken towards the end of the course. The aim is for students to become proficient and confident in assisting with the delivery of anaesthesia.

**Course:** LS15  
**Prerequisite:** LSX334

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**LWB101 INTRODUCTION TO LAW**

The institutions of the law: the courts, Parliament, the judiciary, the legal profession, the doctrines and methodology of the Law, the doctrine of precedent, the principles of statutory interpretation.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31  
**Contact Hours:** 3 per week  
**Credit Points:** 12 per semester

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**LWB102 LAW OF CONTRACT**

Contract law: definition of the Law of Contract, outline of remedies; formation of contracts; equitable estoppel; express and implied terms; factors vitiating contracts; capacity to contract; privity of contract; discharge of contract; breach of contract.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31  
**Contact Hours:** 3 per week  
**Credit Points:** 12 per semester

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**LWB103 TORTS**

At its most general level this branch of the law is concerned with the question of compensation to be given by a person causing a loss to a person suffering a loss. Areas of everyday conflict which may be resolved by principles of tort liability include damage sustained as a result of a motor-vehicle collision, and injury to a person's reputation from publication of defamatory material. The rules are examined to ascertain whether they satisfy the critical test: functional adequacy in terms of contemporary values.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31  
**Contact Hours:** 3 per week  
**Credit Points:** 12 per semester

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**LWB104 LEGAL RESEARCH & WRITING I**

Basic legal research skills and methodology, and how to write assignments and solve legal problems. The hierarchy of the courts and the doctrine of precedent; how to use a law library effectively; practice in handling the most important research materials. An introduction to the use of computerised legal research.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31  
**Contact Hours:** 1 per week  
**Credit Points:** 4 per semester

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**LWB130 INTRODUCTION TO THE STUDY OF LAW**

The fundamental aspects of law and the legal system; an introduction to the learning environment at QUT including different learning styles, the objectives and structure of the course, the skills and knowledge required and the learning environment in which they will be acquired; an orientation or guidance map at the point of entry to the LLB learning environment.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

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**LWB131 LAW IN CONTEXT**

The varied contexts of law; some of the sources and traditional doctrinal approaches supplemented by contextual material describing other ways of seeing law from a number of perspectives including ideological, historical, political, social, economic and comparative.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33  
**Incompatible with:** LWB101  
**Credit Points:** 24  
**Contact Hours:** 3 per week
LWB132 CONTRACTS
Contract law: definition of the Law of Contract, outline of remedies; formation of contracts; equitable estoppel; express and implied terms; factors vitiating contracts; capacity to contract; privity of contract; discharge of contract; breach of contract.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Incompatible with: LWB102
Credit Points: 24 Contact Hours: 3 per week

LWB133 TORTS
At its most general level this branch of the law is concerned with the question of compensation to be given to a person causing a loss to a person suffering a loss. Areas of everyday conflict which may be resolved by principles of tort liability include damage sustained as a result of a motor-vehicle collision, and injury to a person’s reputation from publication of defamatory material. The rules are examined to ascertain whether they satisfy the critical test: functional adequacy in terms of contemporary values.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Incompatible with: LWB103
Credit Points: 24 Contact Hours: 3 per week

LWB134 RESEARCH & LEGAL REASONING
Legal reasoning involves the application of rules or standards of law to the resolution of legal problems, which typically arise in disputes, or potential disputes, between parties. In this unit students will learn: how to find the existing rules or standards of law and apply them to the solution of straightforward legal problems; and how to try to anticipate the way in which courts will decide the more complex or controversial matters.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Incompatible with: LWB104
Credit Points: 12 Contact Hours: 3 per week

LWB135 LEGISLATION
Legislation (Acts of Parliament and delegated legislation) is the source of a very high and increasing proportion of law within the Australian system. An ability to understand the legislative process and the ability to read and interpret legislation provide some of the essential building blocks and background to the study and practice of statute based areas of the law. Such areas constitute the majority of later year units.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Incompatible with: LWB101
Credit Points: 12 Contact Hours: 3 per week

LWB201 LAND LAW
The principles relating to the law of Real Property in Queensland: the rights, interests and obligations which can exist in relation to land, and the methods of creating, enforcing, assigning and extinguishing such rights, interests and obligations. The course encompasses: the concept of real property; the doctrines of tenure and of estates; equitable interests; the Torrens system; easements; mortgages; leasehold interests; covenants affecting land; co-ownership; future interests and perpetuities; building units title and group title; time-sharing; Crown leasehold.
Courses: IF31, IF33, IF34, IF36, LW31, LX31
Contact Hours: 3 per week
Credit Points: 12 per semester

LWB202 CRIMINAL LAW & PROCEDURE
The criminal law in force in Queensland, encompassing criminal responsibility, parties to offences, and major indictable offences. The wider context of the operation of the criminal law, penal principles and the justifications for imposing punishment by the State, to aspects of the disposition of offenders in the sentencing part of a criminal trial, imprisonment and release procedures.
Courses: IF31, IF33, IF34, IF36, LW31, LX31
Contact Hours: 3 per week
Credit Points: 12 per semester

LWB203 CONSTITUTIONAL LAW
The power of the institutions which make, administer or apply the law. The federal constitution divides power between the State and Commonwealth governments, and between the legislative, executive and judicial branches of the Commonwealth government and actions which ignore those divisions can be challenged successfully in courts of law.
Courses: IF31, IF33, IF34, IF36, LW31, LX31, LX32
Contact Hours: 3 per week
Credit Points: 12 per semester

LWB231 INTRODUCTION TO PUBLIC LAW
The basic institutions of government - the executive, the Parliament and the judiciary; the general principles to which legislative power is subject, and the principles by which executive decision-making is kept open and accountable.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Incompatible with: LWB203 and LWB301
Credit Points: 12 Contact Hours: 3 per week

LWB232 CRIMINAL LAW AND PROCEDURE
The criminal law in force in Queensland; criminal responsibility; parties to offences; major indictable offences. The wider context of the operation of the criminal law; penal principles and the justifications for imposing punishment by the State; aspects of the disposition of offenders in the sentencing part of a criminal trial; imprisonment and release procedures.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Incompatible with: LWB202
Credit Points: 24 Contact Hours: 3 per week

LWB233 PROPERTY 1
The general principles of property law; the nature of property, ownership and title and the differences between various types of property; Aboriginal native title and the rules relating to real property.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Incompatible with: LWB201
Credit Points: 24 Contact Hours: 3 per week

LWB234 EQUITY AND TRUSTS
The major principles of equity including: fiduciaries, unconscionable dealings and the principal equitable remedies; trusts and trusteeship.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Incompatible with: LWB301
Credit Points: 24 Contact Hours: 3 per week

LWB235 AUSTRALIAN FEDERAL CONSTITUTIONAL LAW
The constitutional arrangements effected by the Commonwealth Constitution; the structure and institutions
of the constitution; the division of power between Commonwealth and States; and relations between the different levels of government; emphasis to Commonwealth legislative powers, executive and judicial powers.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

Prerequisites: LWB231

Incompatible with: LWB203

Credit Points: 12  Contact Hours: 3 per week

LWB301 EQUITY

Equitable doctrines were developed to complement the sometimes inflexible rules of the common law. In Semester 1, students are introduced to basic equitable principles, including a study of equitable estates and interests. Unconscionable dealings are also studied in some detail. In Semester 2, major areas of study include the law of trusts and equitable assignments.

Courses: IF31, IF33, IF34, IF36, LW31, LX31, LX32

Contact Hours: 3 per week

Credit Points: 12  Contact Hours: 12 per semester

LWB302 FAMILY LAW

The manner in which the law treats the special social relationships which exist among members of a family and transforms them into legal rights and duties. The family as a legal phenomenon; annulment of marriages; dissolution of marriages; consequences of separation and divorce, such as maintenance, adjustment of interests in property and custody.

Courses: IF31, IF33, IF34, IF36, LW31, LW33, LX31, LX32, LX33

Credit Points: 12  Contact Hours: 3 per week

LWB303 COMMERCIAL LAW

The legal framework; kinds of personal property recognised in the Australian legal system; rules which especially affect commercial transactions; nature and sources of commercial law; personal property; negotiable instruments including bills of exchange and cheques; bailment; sale of goods; consumer protection under the Trade Practices Act 1974; insurance.

Courses: IF31, IF33, IF34, IF36, LW31, LX31, LX32, LX33

Credit Points: 12  Contact Hours: 3 per week

LWB304 JURISPRUDENCE

Jurisprudence involves the application of insights gained from philosophy: in particular from logic and from moral, political and social philosophy: to the study of law. Topics include: historical background to modern theories; sociological and historical descriptions of law and legal change; theories of limited or unlimited government power; recognition of valid law and legal systems; legal reasoning; proper objects of law and the proper direction of legal change.

Courses: LW31, LX31

Credit Points: 12  Contact Hours: 3 per week

LWB306 LOCAL GOVERNMENT AND PLANNING LAW

The sources of legal authority for the Government of cities, towns and shires, with particular reference to the City of Brisbane: laws relating to town planning and subdivision, including the principles applicable to the rezoning of land; uses of land; control of developments by local authorities; rights to object to development; control exercised over subdivision of land by local authority; rights of appeal from local authority decisions; structure, purpose and procedure of the Planning and Environment Court; other legislation related to the town planning process, such as heritage legislation and contaminated land legislation.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

Credit Points: 8  Contact Hours: 2 per week

LWB307 INSOLVENCY LAW

The insolvency of individuals and the Bankruptcy Act 1966 (Cth); winding up of companies, provisional schemes of arrangement and official management as procedures other than winding up which may be open to an insolvent company; law relating to receivership and agents of and mortgagees in possession; relevant provisions of the Corporations Law.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

Prerequisites: LWB132 and LWB234

Credit Points: 12  Contact Hours: 3 per week

LWB308 INDUSTRIAL LAW

Rights and duties of employers and employees under the law of employment, breach of these duties, and the remedies of both parties; entitlement to workers compensation and the benefits available; the law governing the operation of trade unions and the rights of members; settlement of industrial disputes in the Commonwealth and State spheres by conciliation and arbitration.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

Credit Points: 8  Contact Hours: 2 per week

LWB309 SUCCESSION

Intestate and testamentary succession; definitions; joint and mutual wills; formal requirements for execution of valid will; alteration, revocation and revival of wills; administration of assets: duties, powers, rights and liabilities of personal representatives; family maintenance provisions: power of court to vary a will.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

Credit Points: 8  Contact Hours: 2 per week

LWB311 ADMINISTRATIVE LAW

An examination of the basis on which the courts review both administrative action taken by governments and delegated legislation, and of the remedies available and restrictions on judicial review; the alternative means of review, the Ombudsman and the Administrative Appeals Tribunal and access to government information; the special position of the Crown.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, 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 conveying.

Courses: IF31, IF33, IF34, IF36, LW31, LX31, LX32

Credit Points: 24  Contact Hours: 3 per week

LWB313 DISCRIMINATION/EQUAL OPPORTUNITY LAW

An examination of the law and policy with respect to discrimination and equal opportunity in Australia; relevant international treaties and Australian legislation such as the Racial Discrimination Act, Sex Discrimination Act, Human Rights and Equal Oppor-
capital, dividends and loan capital; introduction to The basic legal principles relating to registered com­panies; the principle of the veil of incorporation, economic, political and social objectives; the practi­cal consequences of application to legal and social contexts; underlying values and assumptions; the legal theories of the twentieth century; historical problems. The rules and principles that relate to the presentation and proof of facts to a Court of Law. Litigation largely involves the application of substantive law to the facts that are determined according to the rules of evidence. 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. The relationship between personal property and intellectual property rights; the protection of personal property interests; agency; bailment. 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. 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. 

**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 preparation of two memorials (one for the applicant and one for the respondent) satisfying the requirements of the Official Rules of the competition, with respect to the contents of and issues raised by the problem for the given year. Some or all of the team members will then present oral arguments in the Australian rounds of the Jessup Moot competition, and at the international rounds in the United States if the team wins the Australian round.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 12

**Contact Hours:** 3 per week

**LWB331 ADMINISTRATIVE LAW**
The law relating to the control of government officials and public authorities; especially where the exercise of power affects the rights and interests of individuals.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Prerequisites:** LWB231

**Incompatible with:** LWB311

**Credit Points:** 8

**Contact Hours:** 2 per week

**LWB332 PROPERTY 2**
Fundamental concepts of personal property law; the concept of negotiability; transfers of personal property; protection of personal property interests; agency, bailment.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Prerequisites or Co-requisite:** LWB233

**Incompatible with:** LWB303

**Credit Points:** 12

**Contact Hours:** 3 per week

**LWB333 THEORIES OF LAW**
The legal theories of the twentieth century; historical contexts; underlying values and assumptions; economic, political and social objectives; the practical consequences of application to legal and social problems.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Prerequisites:** LWB131

**Incompatible with:** LWB305

**Credit Points:** 12

**Contact Hours:** 3 per week

**LWB334 CORPORATE LAW**
The basic legal principles relating to registered companies; the principle of the veil of incorporation, internal functioning of a registered company including the memorandum and articles of association; dealings with third parties; legal rules relating to share capital, dividends and loan capital; introduction to obligations of company officers and shareholder rights.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB401

**Credit Points:** 12

**Contact Hours:** 3 per week

**LWB351 AUSTRALIAN INDIGENOUS PEOPLE AND THE LAW**
Customary law, issues of legal identity and statutory definition, Aboriginal Native Title (Mabo and its implications) and legislative schemes for claiming title, anti-discrimination laws, the criminal justice system, legal aid and effective communication with clients, sovereignty, self-determination and proposals for a Treaty.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8

**Contact Hours:** 2 per week

**LWB361 DRAFTING**
Drafting of deeds, contract conditions, leases and mortgage clauses in a plain English format. Stamp duties on instruments.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB414

**Credit Points:** 8

**Contact Hours:** 2 per week

**LWB364 INTRODUCTION TO TAXATION LAW**
The principles relating to the distinction between income and capital and the concept of deductions; introductory capital gains tax, the tax avoidance provisions and liability of tax advisers.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Incompatible with:** LWB403

**Credit Points:** 12

**Contact Hours:** 3 per week

**LWB366 LAW OF COMMERCIAL ENTITIES**
The legal principles pertaining to partnerships, joint ventures, unit trusts and commercial associations, statutory corporations. Partnerships and joint ventures: definition and existence, relationship to third parties, relationship inter-se and termination. Unit trusts: private unit trusts.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33

**Credit Points:** 8

**Contact Hours:** 2 per week

**LWB401 COMPANY LAW & PARTNERSHIP**
Company law and registered companies. Topics include: the nature of registered companies, including procedure to obtain registration, and classification of registered companies; prospectuses; general meetings; enforcement of directors’ and controlling members’ duties; shares, share capital and dividends; winding-up.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32, LX33

**Credit Points:** 24

**Contact Hours:** 3 per week

**LWB402 EVIDENCE**
The rules and principles that relate to the presentation and proof of facts to a Court of Law. Litigation largely involves the application of substantive law to the facts that are determined according to the rules of evidence.

**Courses:** IF31, IF33, IF34, IF36, LW31, LX31, LX32

**Credit Points:** 12

**Contact Hours:** 3 per week

**LWB403 TAXATION LAW**
The Income Tax Assessment Act 1936 (Cth) and some related statutes; the administrative structure and scheme of the Act; residence of taxpayers; determining assessable income and deductions; taxation of
partnerships; trusts and companies; capital gains tax; tax planning; liability of tax advisors, aspects of fringe benefit tax.

Courses: IF31, IF33, IF34, IF36, LW31, LX31, LX32
Credit Points: 24  Contact Hours: 3 per week

LWB404 CIVIL PROCEDURE

Procedures by which Superior Courts resolve civil disputes; Supreme, District and Federal Court rules and their application to civil litigation.

Courses: IF31, IF33, IF34, IF36, LW31, LX31, LX32
Credit Points: 24  Contact Hours: 3 per week

LWB405 SOLICITORS’ TRUST ACCOUNTS

Intending solicitors must study this unit which examines the Trust Account Act and Regulations and related legislation, including the Legal Assistance Act and Queensland Law Society Act. The legislation for practical and accounting purposes, including the format for documentation and records; reconciliations; investments; internal control and trust ledger accounts and trial balance. The role of the auditor, audit requirements and Ministerial involvement.

Courses: IF31, IF33, IF34, IF36, LW31, LX31, LX32
Credit Points: 8  Contact Hours: 2 per week

LWB406 FUNDAMENTALS OF PUBLIC INTERNATIONAL LAW

The legal rules which govern the activities of nations between themselves and with international organisations, such as the UN; the creation of international law: treaties, customary law, general principles of law; the concept of international legal personality: statehood, self-determination, recognition; the effects of international law: sovereignty, international responsibility.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 8  Contact Hours: 2 per week

LWB407 CONFLICT OF LAWS

The body of law governing the resolution of private legal problems with a significant foreign element; jurisdiction of domestic courts to determine matters having a foreign element; enforcement of foreign judgments in the domestic jurisdiction; choice of law for the resolution of the dispute, both generally and in relation to family law, contract, tort, property and succession.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Prerequisite: LWB131
Credit Points: 12  Contact Hours: 3 per week

LWB409 PROFESSIONAL CONDUCT

Barristers – conduct and etiquette at the Bar, specifically the character of practice at the Bar; regulation of practice at the Bar in Queensland; the respective duties of Barristers to the Law, the Court, the public, the client and the opponent. Solicitors – professional courtesies, division of the profession in Queensland, the Statutory Committee, malpractice, professional conduct, duties of a solicitor, respective functions of barristers and solicitors, a solicitor acting for more than one party, advertising fees, trust accounts and legal professional negligence.

Courses: IF31, IF33, IF34, IF36, LW31, LX31, LX32
Contact Hours: 2 per week for 5 weeks (10 hours)
Credit Points: 2

LWB410 TRADE PRACTICES

The Trade Practices Act 1974 (C’th) and the cases decided under it; restrictive trade practices and unfair practices.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 8  Contact Hours: 2 per week

LWB412 RESEARCH & WRITING PROJECT

An arranged and supervised piece of research into some area of legal knowledge, and the writing of a paper of between 10,000 and 15,000 words on the results of the research and conclusions drawn therefrom. The paper becomes the property of the Faculty of Law and may be placed in the Law Library. A student wishing to undertake the Research and Writing Project should discuss the matter as early as possible in the semester immediately before that in which he or she proposes to undertake it. The written proposal must reach the Dean at least two clear weeks before the beginning of the teaching semester in which the project is undertaken, and the proposal is accepted or refused, and the student notified accordingly, not later than the first day of that semester.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 8  Contact Hours: 2 per week

LWB414 DRAFTING & LEGAL TRANSACTIONS

A study of the general principles of drafting and analysis of instruments commonly used in practice including deeds, special conditions in Torrens Title conveyancing contracts, options to purchase and renew, Land Act contracts, business contracts and leases. Topics include: an introductory study of stamp duty and its applications, an examination of securities and trust instruments. Drafting covers mortgages, unit trusts and discretionary trusts, stamp duty.

Courses: IF31, IF33, IF34, IF36, LW31, LX31, LX32
Contact Hours: 2 per week
Credit Points: 8 per semester

LWB415 LEGAL RESEARCH & WRITING 2

Sources from other jurisdictions such as the UK, Canada, New Zealand and the USA are included. An important section of this unit is the researching/writing of an assignment based on a problem which involves a number of units studied during the LLB course, including researching recent developments.

Courses: IF31, IF33, IF34, IF36, LW31, LX31, LX32
Credit Points: 8  Contact Hours: 1 per week

LWB431 CIVIL PROCEDURE

The structures and processes of litigation conducted in the Supreme and Federal Courts; examination of jurisdiction, limitation of actions, motor vehicles insurance, client care, originating process, appearance, service, parties, joinder, pleadings, evidence, subpoena, settlement, trial, appeal costs and execution.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Incompatible with: LWB404
Credit Points: 12  Contact Hours: 3 per week

LWB432 EVIDENCE

The rules and principles that relate to the presentation of facts to a court of law.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Incompatible with: LWB402
Credit Points: 12  Contact Hours: 3 per week
The ethical principles upon which the practice of all professions is based; the principles which underpin the discipline of law and the workings of the legal profession; the history, nature, organisation and operation of the legal profession.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 12
Contact Hours: 3 per week

LWB434 ADVANCED RESEARCH AND LEGAL REASONING

Exploration of suitable theoretical frameworks for understanding Australian legal reasoning generally, topical developments in substantive areas of law by way of illustration of the theoretical models; advanced skills of legal research and analysis.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Prerequisites: LWB134
Incompatible with: LWB415
Credit Points: 12
Contact Hours: 3 per week

LWB451 (ALTERNATIVE) DISPUTE RESOLUTION

The emergence of Alternative Dispute Resolution methods, particular in the context of our court system; comparative advantages and disadvantages of the different processes; basic skills involved in negotiations and mediation.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 8
Contact Hours: 2 per week

LWB452 ASIAN LEGAL SYSTEMS

Basic knowledge of Asian legal systems; a general overview of the region; specific countries eg. China, Japan and Malaysia; practical areas of the law are studied and comparisons drawn with Australian law.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 8
Contact Hours: 2 per week

LWB455 LEGAL CLINIC (INDIVIDUAL PLANNED EXERCISE)

This unit allows students to participate in planning their own individual program in co-operation with some section of the legal profession, government or industry programs; combine academic objectives with professional development or community service objectives.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 12
Contact Hours: 3 per week

LWB456 LEGAL CLINIC (ORGANISED PROGRAM)

This unit provides students with the opportunity to see law in action through involving the student in the delivery of legal services to members of the community under the umbrella of the Legal Aid Office (Queensland).

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 8
Contact Hours: 2 per week

LWB462 SECURITIES

Security interests over real and personal property; Torrens Title Mortgages, bills of sale and credit legislation as it applies to security interests.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Incompatible with: LWB414
Credit Points: 8
Contact Hours: 2 per week

LWB480 MEDIA LAW

Journalists and their sources of information; defamation; contempt; confidential information; access to information; the Broadcasting Tribunal; and regulation of advertising and of ownership.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 8
Contact Hours: 2 per week

LWB481 MINERAL LAW

The legal principles governing the mining of 'hard' minerals, particularly in Queensland; exploration of basic concepts with respect to the meaning of mining title; minerals and ownership of minerals; mineral titles; enforcement of mining interests; government agreements; joint ventures; project financing environmental controls on exploration and mining; revenue aspects.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 8
Contact Hours: 2 per week

LWB482 COMPUTERS & THE LAW

The role of computers in legal practice; the body of law that has arisen in relation to computers and computer applications.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 8
Contact Hours: 2 per week

LWB483 MEDICO-LEGAL ISSUES

The constitutional framework supporting the regulation of health care; the relationship between the individual and the health care provider in terms of consent to treatment and negligence; the impact of the criminal law; abortion, removal from life support systems; mental illness and fitness to plead; medical records and evidence; ownership and confidentiality of records, expert evidence; the role of the coroner; complaints against hospitals and health care workers.

Courses: IF31, IF33, IF34, IF36, LW31, LX31, LX32, IF37, IF38, LX33, LW33
Prerequisites: LWB131, LWB133
Credit Points: 8
Contact Hours: 2 per week

LWB485 ENVIRONMENTAL LAW

An introduction to environmental law in Queensland; the sources, nature and development of environmental law in Queensland; the concepts of environmental law (eg. property, administrative control, law and policy, planning, management); access to the environment; planning to prevent environment degradation and pollution; protecting the environment; managing the environment; conservation; ecologically sustainable development; enforcement of environmental law; the role of the Commonwealth.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 8
Contact Hours: 2 per week

LWB486 INTELLECTUAL PROPERTY LAW

The most significant of the legislative enactments creating or protecting intellectual property in Australia, including those governing copyright, designs, patents and trade marks; application of the common law, particularly confidential information and passing off.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 8
Contact Hours: 2 per week
LWB487 MARITIME LAW
Carriage of goods by sea; charterparties; marine insurance; general average; salvage; collisions; admiralty jurisdiction and arrest of ships; oil pollution; registration, sale and mortgage of ships; and limitation of ship operators' liability.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, LW31, LW33, LX31, LX32, LX33
Credit Points: 8 Contact Hours: 2 per week

LWN003 ADVANCED FAMILY LAW
A detailed examination of the law and underlying principles of selected areas of Family Law including: jurisdiction; financial aspects of marriage and divorce; children; marital and non-marital relationships. Where appropriate, comparisons with other countries are used and the impact of treaties.
Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

LWN008 COMMERCIAL LEASES
The principles governing standard clauses of a modern Australian commercial lease in the light of recent case law and Queensland statutory provisions affecting such interests. Topics include: negotiation of leases, subject matter of leases, construction of leases, covenants for repair, user, assignment, quiet possession, options to renew and purchase, insurance, the phenomenon of default, remedies of lessor and lessee, guarantees of leases.
Courses: LW50, LW51
Credit Points: 24 Contact Hours: 2 per week

LWN017 RESTITUTION
The law of Restitution is concerned with those cases where a plaintiff obtains a money remedy and/or recovers property from a defendant who has been unjustly enriched by the receipt of money or other benefits at the expense of the plaintiff. The theoretical basis and scope of restitutory claims and defences to them and their relationship with those claims founded on the traditional common law obligations, torts and contract and the law of property will be considered.
Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

LWN018 SELECT PROBLEMS OF TRUSTS
Aspects of express trusts including a short refresher, management of trustee investments, and consideration of a model trustee code; the nature of the constructive trust; the acquisition of property by a fiduciary and the constructive trust; the acquisition of property on death and the constructive trust; the acquisition of land under an oral agreement or trust and the constructive trust; unconscionable insistence on legal rights, unconscionable conduct and the constructive trust with particular reference to estoppel and relief against forfeiture; determining the ownership of property in disputes between unmarried partners.
Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

LWN020 NON-RESIDENT & FOREIGN SOURCE TAXATION
Questions relating to residence, source, transfer pricing and the legislation relating to Controlled Foreign Entities, the effect of Double Tax Treaties.
Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

LWN021 BANKING & FINANCE LAW 1
The legal environment of the financial industry, which contributes approximately 10 per cent of Australia's annual GNP, and which operate the clearing and payment system through which most debts of any significance are settled, and which provides the bulk of debt financing on which Australian industry and commerce depends.
Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

LWN022 BANKING & FINANCE LAW 2
Securitisation of debts; factoring; SWAP transactions (interest rate and currency swaps); options and derivatives, foreign exchange transactions, the concept of 'money' and 'payment' and 'legal tender'; the nature of interest; advanced security techniques; personal property security law reform; letters of credit and the UCP; corporate finance - capita selecta; commodity financing.
Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

LWN023 INTERNATIONAL TRADE LAW
Origins, sources and modern developments; harmonisation of law; international commercial transactions; international sale of goods; countertrade; marketing arrangements; financing international transactions; carriage of goods by sea; litigation; international commercial arbitration; other alternative dispute resolution; export assistance; investment protection; ANZCERTA; globalisation of legal services; principles of international business conduct; examination of the trade law of a selected trading partner of Australia.
Courses: LW50, LW51
Credit Points: 24 Contact Hours: 2 per week

LWN024 SELECT PROBLEMS OF TRIBUNALS & ENQUIRIES
Investigation of problems that occur in the law relating to the activities of tribunals and enquiries; concentrates on Royal Commissions and related forms of enquiries, as well as statutory tribunals exercising quasi-judicial functions. Topics include: the power to require information; the privilege against self-incrimination; Crown privilege and duties of secrecy; do the rules of procedural fairness apply?; can an enquiry commit a contempt of court?; enquiries and the rules of parliamentary privilege; the power of the courts to review the activities of enquiries; enquiries that investigate a mixture of Federal and State matters; the laws of privacy and confidentiality. Legislative attempts to oust judicial review of inquiries and tribunals.
Courses: LW50, LW51
Credit Points: 24 Contact Hours: 2 per week

LWN025 RESEARCH PROJECT 1A
A supervised research project over one semester approved by the Postgraduate Studies Committee.
Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

LWN026 RESEARCH PROJECT 2A
A supervised research project over the whole year approved by the Postgraduate Studies Committee.
Courses: LW50, LW51
Credit Points: 24

LWN028 ADVANCED SECURITIES
Competing claims to fixtures on land; the nature of a charge and a mortgage; security over bank accounts; recent problems with Bills of Sale legislation; the
mortgage’s power of sale; guarantees and indemnities; fixed and floating securities; some problems arising from receiverships and mortgages in possession; securities and the Trade Practices Act; bank guarantees and unconditional performance bonds; the demise of the scintilla temporis principle; rontalpa clauses; co-ownership and security interests; negative pledges; securities over future property; the nature of various security interests; and the giving of formal opinions in relation to security documentation.

Courses: LW50, LW51
Credit Points: 12

- **LWN029 THEORETICAL CRIMINOLOGY**

Legal and criminological conceptions of crime and punishment; nature, scope and objects of criminology. Criminological theory: classical and neo-classical theories; the positivist school; physical and biological factors and theories; psychological and psychiatric explanations, including the notion of danger; crime as a social phenomenon; radical or critical criminology; law and social change; theories of punishment.

Courses: LW50, LW51
Credit Points: 12

- **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

- **LWN031 FOREIGN INVESTMENT LAW & PRACTICE**

The law and policy regime for Australian foreign investment at Commonwealth and State levels; direct regulation of foreign investment; indirect regulation of foreign investment and general project infrastructure regulation.

Courses: LW50, LW51
Credit Points: 12

- **LWN032 CREDIT FOR UQ SUBJECT 1**

Under the course rules, a coursework student may, with the prior approval in writing of the Deans of the Faculties of Law of the Queensland University of Technology and of the University of Queensland, undertake one whole year or two one-semester subjects offered in the LLM degree by Coursework at the University of Queensland. This unit code represents a one-semester subject taken pursuant to that course rule at the University of Queensland.

Courses: LW50, LW51
Credit Points: 12

- **LWN033 CREDIT FOR UQ SUBJECT 2**

See LWN032.

Courses: LW50, LW51
Credit Points: 12

- **LWN034 CREDIT FOR UQ SUBJECT 3**

See LWN032.

Courses: LW50, LW51
Credit Points: 24

- **LWN035 MEDICO-LEGAL ISSUES**

The constitutional framework supporting the regulation of health care; the relationship between the individual and the health-care provider in terms of consent to treatment and negligence; the impact of the criminal law; abortion, removal from life support systems; mental illness and fitness to plead; medical records and evidence; ownership and confidentiality of records, expert evidence; the role of the coroner; complaints against health-care workers.

Courses: LW50, LW51
Credit Points: 12

- **LWN036 SELECT ISSUES IN INTELLECTUAL PROPERTY LAW**

The application of intellectual property law to 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

- **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

- **LWN038 CAPITAL GAINS TAX & COMMERCIAL TRANSACTIONS**

The capital gains tax provisions contained in Part IIIA of the Income Tax Assessment Act have the potential to apply to innumerable acts, transactions and events. Upon completion of this unit, students have a sound understanding of the scheme of taxation which underpins the Part and of the application of that scheme to commercial transactions. Topics include: the relationship between Part IIIA and the other taxing provisions of the Act; the general scheme of Part IIIA; the threshold conditions to the application of the Part; the calculation provisions of the Part; the function and operation of roll-over provisions; companies and capital gains tax; partnerships and capital gains tax; trusts and capital gains tax; planning and structuring issues; tax avoidance and capital gains tax.

Courses: LW50, LW51
Credit Points: 12

- **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

- **LWN040 THEORIES OF JUSTICE 1**

This unit complements LWN042. However, both units stand alone and neither is a prerequisite for the other.
It will provide a comparative analytical perspective from which to consider the notion of justice and related concepts. A thematic approach will be adopted to issues arising in various spheres of society to do with the environment, welfare, law, religion and women. Topics include: a consideration of the following: Epistemologies of justice; Justice in the context of the modern Western society; The environmental paradigm of Justice; Welfare, equality and distributive justice; the law professionals and the cultural context; religion; faith doing justice; women; feminist perspectives on law and justice; comparative justice: the voice of other cultures. Includes seminars and guest lectures. Students lead one presentation.

Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

LWN041 ECONOMIC ANALYSIS OF THE LAW

This course will consider the manner in which, and the extent to which, the principles and methodologies of economics can be applied in the analysis of statutes from which to consider the notion of justice and related concepts. A thematic approach will be adopted to issues arising in various spheres of society to do with the environment, welfare, law, religion and women. Topics include: a consideration of the following: Epistemologies of justice; Justice in the context of the modern Western society; The environmental paradigm of Justice; Welfare, equality and distributive justice; the law professionals and the cultural context; 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

LWN042 THEORIES OF JUSTICE 2

This unit compliments LWN040 and LWN041. This unit will provide a comparative analytical perspective from which to consider the notion of justice and related concepts. A thematic approach will be adopted to issues arising in various spheres of society to do with the environment, welfare, law, religion and women. Topics include: a consideration of the following: Epistemologies of justice; Justice in the context of the modern Western society; The environmental paradigm of Justice; Welfare, equality and distributive justice; the law professionals and the cultural context; 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

LWN043 LAW OF COMPANY

Takeovers

Aspects of Corporation Law which regulate acquisition of shares which effect a change in a company's control; practical perspectives and conceptual analysis in relation to the present law; the regulation of expropriation by corporations.

Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

LWN044 INSTITUTIONAL INVESTORS

The unit is an advanced corporate banking financial institution course. Institutional investors are financial institutions like premium funds, insurance companies, mutual funds, savings and trust departments of banks, trust companies, securities firms, all of which invest on behalf of the public. The way they make investments is governed by statute and by common law as well as by contract. Institutional investors now are investors in the global financial and capital markets. The course would entail three parts. The first part would deal with a description of institutional investors in Australia, Asia, North America and Europe. The second part canvasses the common and statutory law regulating and governing institutional investors as well as contract law. The third part deals with modern tax issues such as conflict of interest, exclusive self dealing and the investor's role in corporate coups especially in proxy battles, mergers and takeovers as well as social investments and the breach of the prudent man rule. The unit will also familiarise students with modern portfolio theory as an alternative paradigm to the prudent man rule which considers investments in black and white terms like risky, non-risky, productive and non-productive.

Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

LWN045 LAW RELATING TO PUBLIC & OFFICIAL CORRUPTION

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 & Environmental 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 objects, objector appeals and appeals by applicants. Reasonable and relevant conditions in certain specified case areas together with an examination of relevant case law applicable thereto. Existing and non-conforming uses; other legislation impacting on town planning. Prior experience in town planning is not a prerequisite.

Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

LWN046 ADVANCED PLANNING

An introduction to the main schools of thought on legal education. A review of legal education from an historical and sociopolitical perspective noting more modern developments such as the introduction of the training guarantee levy and funding policies. Consideration of the implications of legal education of new schools of contemporary thought on legal education, such as feminist legal theory and critical legal studies. An analysis of the learning process considering varying learning styles: consideration of a variety of teaching styles/techniques and the appropriateness and effectiveness of each. Consideration of matching learning styles with teaching methods and the validity and effectiveness of such an approach. Consideration for the need, role and implementation of training needs analyses and goal setting. Analysing the elements of objectives and aims and how to set them with a view to designing a teaching/training program. Consideration of the means of evaluating teaching/training effectiveness: Consideration of the legal education continuum. Consideration of the needs of adult learners.

Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

LWN047 LEGAL EDUCATION

An introduction to the main schools of thought on legal education. A review of legal education from an historical and sociopolitical perspective noting more modern developments such as the introduction of the training guarantee levy and funding policies. Consideration of the implications of legal education of new schools of contemporary thought on legal education, such as feminist legal theory and critical legal studies. An analysis of the learning process considering varying learning styles: consideration of a variety of teaching styles/techniques and the appropriateness and effectiveness of each. Consideration of matching learning styles with teaching methods and the validity and effectiveness of such an approach. Consideration for the need, role and implementation of training needs analyses and goal setting. Analysing the elements of objectives and aims and how to set them with a view to designing a teaching/training program. Consideration of the means of evaluating teaching/training effectiveness: Consideration of the legal education continuum. Consideration of the needs of adult learners.
deal at length with the presentation and defence of research including the respective roles of researcher and supervisor; structuring research material in support of a thesis, the diagnosis and remedy of structural problems. It will also deal with the conventions of presentation 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: LWN052, LWN053
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: LWN050, LWN051
Credit Points: 12 Contact Hours: 2 per week

LWN050 RESTRICTIVE TRADE PRACTICES LAW
The unit is concerned with an analysis of those sections of the Trade Practices Act dealing with horizontal and vertical restraints of competition, misuse of market power, price discrimination and mergers. These substantive prohibitions are intended to regulate workable competition in markets. The early part of the course focuses on basic concepts such as markets, competition, market power and the structure, conduct, performance paradigm. The main part of the course is concerned with analysing the elements of each of the substantive prohibitions contained in Part IV of the Act and the way in which they may apply to various agreements and business practices. After considering the substantive prohibitions, the final part of the unit is concerned with remedies and defences and the role played by the Trade Practices Commission, the Tribunal and the Courts.

Courses: LWN050, LWN051
Credit Points: 12 Contact Hours: 2 per week

LWN051 CONSUMER PROTECTION & PRODUCT LIABILITY
The statutory and common law actions which are available to protect consumers from misleading or deceptive conduct; the statutory and common law actions available when loss or damage is suffered as a result of defective products.

Courses: LWN050, LWN051
Credit Points: 12 Contact Hours: 2 per week

LWN052 LITIGATION
Contains three modules: civil procedure, evidence and forensic skills. The civil procedure module seeks to address current issues which present interest of difficulty in relation to the rules of practice and procedure for civil cases. The evidence module seeks to address current issues which present interest or difficulty in relation to the rules of admissibility of evidence in Queensland and Commonwealth court. The forensic module seeks to address elected areas of forensic science with particular emphasis on the substantive rules governing procedure and evidence.

Courses: LWN050, LWN051
Credit Points: 12 Contact Hours: 2 per week

LWN053 RESEARCH PROJECT 1B
A supervised research project over one semester approved by the Postgraduate Studies Committee.

Courses: LWN50, LWN51
Credit Points: 12

LWN054 AUSTRALIAN COMMERCIAL THEORY & PRACTICE
The exploration of topical Australia legal developments across different areas of law which affect commercial practice; theoretical frameworks for understanding Australian legal interpretation generally and recent High Court decisions in particular (covering such matters as the influence of 'policy' on judges); judicial law-making; crown immunity developments; liability in professional negligence to clients and third parties; legal problems in property valuation.

Courses: LWN050, LWN051
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: LWN050, LWN051
Credit Points: 12 Contact Hours: 2 per week

LWN056 RESEARCH PROJECT 1C
A supervised research project over one semester approved by the Postgraduate Studies Committee. Students may undertake up to 48 credit points of Research Projects only with the approval of the Director of Postgraduate Studies.

Courses: LWN050, LWN051
Credit Points: 12 Contact Hours: 2 per week

LWN057 RESEARCH PROJECT 1D
See LWN056.

Courses: LWN050, LWN051
Credit Points: 12

LWN058 RESEARCH PROJECT 2B
See LWN056.

Courses: LWN050, LWN051
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: LWN050, LWN051
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: LWN050, LWN051
Incompatible with: LWN014
Credit Points: 12 Contact Hours: 2 per week
[LIST OF COURSES]

- **LWN061 NATURAL RESOURCES LAW**
The principles and concepts of natural resources law in Queensland dealing with the ownership and control of natural resources, providing access to these resources, controlling the operational side of the development of these resources, and recognising commercial structures for achieving these operational objectives; an assessment of a number of developed and evolving mechanisms for achieving these objectives such as policy objectives, management plans, incentives and inducements, market instruments and property rights.

Courses: LW50, LW51  
Prerequisite: LWN027  
Credit Points: 12  
Contact Hours: 2 per week

- **LWN062 FEDERAL ENVIRONMENTAL LAW**
History of Commonwealth involvement in environmental management; the Inter-Governmental Agreement of 1992; relevant paragraphs of s.51 of the Constitution; federal legislation dealing with offshore development, marine environment protection, environmental impact assessment, national estate, wildlife conservation, Great Barrier Reef, hazardous waste and industrial chemicals, world heritage, ozone protection, ecologically sustainable development and biological diversity.

Courses: LW50, LW51  
Credit Points: 12  
Contact Hours: 2 per week

- **LWN063 COMPARATIVE ENVIRONMENTAL LAW**
The principles of environmental regulation in other jurisdictions and the range of policy and legal instruments being utilised to achieve environmental objectives; jurisdictions studied include European countries, both within the EEC and potentially so, North America and the Asia Pacific Region.

Courses: LW50, LW51  
Credit Points: 12  
Contact Hours: 2 per week

- **LWN064 THEORIES OF CONTEMPORARY LEGAL CRITIQUE**
The influence upon legal, political and institutional reforms of contemporary critiques of orthodox law; these oppositional critiques have been based upon legally entrenched power inequalities, especially of race, gender, culture and class; the impact of the 'new world order' of the 1990·s upon these legal critiques will also be analysed.

Courses: LW50, LW51  
Credit Points: 12  
Contact Hours: 2 per week

- **LWN065 CONSTRUCTION & ENGINEERING LAW**
Standard contracts used in the Australian construction and engineering industries and the legal issues confronting users of these documents; the law of contract and legislation as it applies to the construction and engineering industries at an advanced level; issues of drafting in relation to the relevant standard forms.

Courses: LW50, LW51  
Credit Points: 12  
Contact Hours: 2 per week

- **LWN100 HONOURS DISSERTATION**
A dissertation by students enrolled in the Master of Laws by Coursework who have obtained 96 credit points with a GPA of 6 or better. The dissertation is between 20,000 and 30,000 words in length.

Courses: LW50, LW51  
Credit Points: 48

- **LWS001 MEDICINE & THE LAW**
This unit seeks to teach students to appreciate the impact of some important fields of law upon the medical profession and upon hospital staff, patients and visitors. Introduction to law and the legal system. The Federal and State systems; general principles of the law of tort; principles of negligence; trespass; liability of hospitals; industrial law and industrial relations; workers' compensation; legal aspects of medical practice; medico-legal investigations; medical ethics. A consideration of emerging legal issues surrounding surrogacy and assisted reproductive technology. 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 tissues; medical records and confidentiality; control of poisons; the Coroners Act (Qld).

Courses: N540, NS48  
Credit Points: 8  
Contact Hours: 3 per week

- **LWS006 HEALTH ETHICS & THE LAW**
This unit enables students to develop an awareness of the legal issues associated with the care of public health and an appreciation of the legal and ethical implications of the work done by health care professionals in this area. Topics include: introduction to the Australian legal system; tort law and its impact upon the public health system; workplace health and safety legislation; medical records and confidentiality; criminal law and the health care profession; transplantation of organs and tissues; complaints against hospitals and health care professionals.

Courses: HL85, NS48  
Credit Points: 12  
Contact Hours: 3 per week

- **MAA251 STATISTICS & DATA PROCESSING**
A basic unit in statistics, including statistical terminology and organization of data, elementary probability, binomial and normal distribution, sampling theory, regression and correlation.

Courses: LS15, ME23, SC10  
Prerequisite: Approval of Head of School of Mechanical and Manufacturing Engineering.  
Credit Points: 8  
Contact Hours: 3 per week

- **MAB003 MATHEMATICS FOR SCIENCE & TECHNOLOGY 1**

Courses: CE42, EF44, IF23, IF34, IF52, IF53, ME45, SC30  
Credit Points: 6  
Contact Hours: 3 per week

- **MAB004 MATHEMATICS FOR SCIENCE & TECHNOLOGY 2**
Algebra: Complex numbers, polar and exponential forms, applications. Vector Analysis: scalar and vector products, differentiation of vectors, applications.
Differential Calculus: hyperbolic functions, partial derivatives, total differential, applications.

**Courses:** CE42, EE44, IF23, IF34, IF52, IF53, ME45, SC30

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

**MAB102 BASIC MATHEMATICS**

Algebra; factorising polynomials; index and logarithm laws; AP and GP; trigonometrical ratios; Pythagorean identities; graphs; sine and cosine rule; coordinate geometry; equations of lines and standard conics; introduction to differential calculus; curve sketching; Newton-Raphson method; elementary integration; definite and indefinite integrals; use of tables of integrals; Simpson's rule.

**Course:** SC30  
**Credit Points:** 12  
**Contact Hours:** 4 per week

**MAB151 QUANTITATIVE TECHNIQUES**

A basic mathematics unit with emphasis on the interpretation of data and the application of numerical techniques.

**Course:** PH38  
**Credit Points:** 4  
**Contact Hours:** 2 per week

**MAB152 QUANTITATIVE METHODS**

Organisational, analysis and interpretation of data; practical problems in basic calculus techniques and numerical methods: probability distributions; sampling; estimation; regression and correlation.

**Courses:** PU42, PU44, PU45  
**Credit Points:** 8  
**Contact Hours:** 3 per week

**MAB172 STATISTICAL METHODS**

Organisation and analysis of data; use of computer packages in data analysis; probability and probability distributions; sampling theory: estimation: testing of hypotheses: regression and correlation.

**Courses:** BS50, IS08, IS43, IT20  
**Credit Points:** 12  
**Contact Hours:** 3 per week

**MAB173 QUANTITATIVE METHODS**

To enable students to use mathematical reasoning and skills to obtain solutions to financial, economic and general business problems. On completion, students should have an understanding of the types of problems amenable to a mathematical solution; they should be able to develop appropriate mathematical models and appreciate any limitations or assumptions and solutions to these models.

**Courses:** BS50, IF31  
**Credit Points:** 12  
**Contact Hours:** 3 per week

**MAB177 MATHEMATICS FOR DATA COMMUNICATIONS**

This unit provides the basic mathematical background required for the study of data communication; coding theory and cryptography.

**Course:** IT20  
**Credit Points:** 12  
**Contact Hours:** 3 per week

**MAB178 PROBABILITY FOR TELECOMMUNICATIONS**

Fundamentals of probability and random processes as required for the modelling and mathematical analysis of data communication networks; basics of 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

**MAB182 APPLIED MATHEMATICS FOR DESIGNERS 2**

Applications of plane and solid geometry in design; revision of basic geometry; symmetry; construction and packing of solids; spherical geometry and its applications. Applications of trigonometry in design; revision of basic trigonometry; calculation of heights, distances, areas and volumes. Data collection and analysis in design; introduction to statistics; use of computers in data analysis; computer programming.

**Course:** BN30  
**Credit Points:** 6  
**Contact Hours:** 3 per week

**MAB183 MATHEMATICS 1**

Computational mathematics: circular functions-trigonometric identities; vector algebra-addition/subtraction of vectors, components and projections, modulus, unit vectors, scalar products; linear algebra-elementary matrix algebra, solution of linear equations; complex numbers-cartesian form; addition/subtraction, multiplication, modulus and argument, Argand diagram; differential calculus: elementary functions, product and quotient rules, chain rule.

**Course:** ME35  
**Credit Points:** 8  
**Contact Hours:** 3 per week

**MAB184 MATHEMATICS 2**

Computational mathematics: errors/accuracy, solution of equations, use of mathematical support software (DERIVE); vector algebra-vector products, scalar and vector triple products; complex numbers-polar and exponential forms, applications; differential calculus: trigonometric, exponential and logarithmic functions, applications to max/min, limits, rates of change; indefinite integration-standard forms; integration by parts, integration by substitution, applications.

**Course:** ME35  
**Credit Points:** 8  
**Contact Hours:** 3 per week

**MAB185 INTRODUCTION TO STATISTICS**

Data and its presentation, qualitative reporting of graphical presentations; distributions: properties and parameters, normal probability plots; sampling: correlated versus independent observations, mean and other statistics, normal case; confidence intervals for means/proportions and differences of means/proportions, pairwise, tolerance limits, introduction to quality and SPC, variance; hypothesis testing, tests for means/proportions; basic concepts of experimentation, and ANOVA; introduction to regression; introduction to product and system reliability.

**Course:** ME35  
**Credit Points:** 8  
**Contact Hours:** 3 per week

**MAB186 MATHEMATICS 3**

Computational mathematics: numerical integration; differential calculus: hyperbolic functions, partial derivatives, total differential, applications; vector calculus: differentiation of vectors, applications; definite integration-areas, volumes, arc lengths, centroids, moments of inertia, multiple integrals.

**Course:** ME35  
**Prerequisite:** MAB184  
**Credit Points:** 8  
**Contact Hours:** 3 per week
MAB187 ENGINEERING MATHEMATICS 1A
Computational mathematics: errors/accuracy, solution of equations, use of mathematical support software (DERIVE); vector algebra-vector products, scalar and vector triple products; complex numbers: cartesian, polar and exponential forms, Argand diagram, complex arithmetic/argument, applications; differential calculus: trigonometric, exponential and logarithmic functions, applications to max/min, limits, rates of change; indefinite integration: standard forms, integration by parts, integration by substitution, applications.
Courses: CE42, EE43, EE44, IF23, IF52, IF53, ME45, SV34
Credit Points: 6 Contact Hours: 3 per week

MAB188 ENGINEERING MATHEMATICS 1B
Computational mathematics: numerical integration; differential calculus: hyperbolic functions, partial derivatives, total differential, applications; vector calculus: differentiation of vectors, applications; definite integration: areas, volumes, arc length, centroids, moments of inertia, multiple integrals.
Courses: CE42, EE43, EE44, IF23, IF52, IF53, ME45, SV34
Credit Points: 6 Contact Hours: 3 per week

MAB195 QUANTITATIVE METHODS 1
Applications of plane and solid geometry in design, revision of basic geometry; construction and packing of solids; spherical geometry and its applications. Application of trigonometry in design; calculation of heights, distances, areas and volumes.
Course: BN30
Credit Points: 6 Contact Hours: 3 per week

MAB196 QUANTITATIVE METHODS 2
Data collection and analysis in design; introduction to statistics; use of computers in data analysis.
Course: BN30 Prerequisite: MAB181
Credit Points: 6 Contact Hours: 3 per week

MAB212 MATHEMATICS 1
Courses: CH32, ED50, IT20, SC30
Credit Points: 12 Contact Hours: 4 per week

MAB222 MATHEMATICS 2
Courses: ED50, SC30 Prerequisite: MAB212
Credit Points: 12 Contact Hours: 4 per week

MAB232 DISCRETE MATHEMATICS
Combinatorics; logic; set theory; axiomatic systems; modular arithmetic; rings, integral domains, fields; finite groups; number theory; difference equations.
Courses: ED50, IT20, SC30 Co-requisite: MAB222
Credit Points: 12 Contact Hours: 4 per week

MAB237 STATISTICS
This unit shows students how to collect statistical data from surveys and experiments; how to analyse the data and how to draw valid conclusions. Students study real data via computer packages and are introduced to estimation, hypothesis testing, regression and analysis of variance.
Courses: CH32, ED50, SC30
Credit Points: 12 Contact Hours: 4 per week

MAB251 MATHEMATICS 1
Data handling; determinants and matrices; differentiation with applications; partial differentiation; integral calculus with applications; numerical methods.
Course: OP42
Credit Points: 8 Contact Hours: 4 per week

MAB252 STATISTICS
Organisation and analysis of data; probability and probability distributions; sampling theory; estimation; tests of hypothesis; regression and correlation.
Course: OP42 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-parametric methods.
Course: OP42 Prerequisite: MAB252 Credit Points: 4 Contact Hours: 2 per week

MAB272 RESEARCH METHODS
Students in the information management and information systems fields should have knowledge of a variety of techniques associated with collecting and analysing data, be capable of critical interpretation of survey research and be able to use data reduction techniques themselves. In addition to an introduction to descriptive statistics and statistical inference, this unit introduces historical and theoretical approaches and compares rationalisation with experimentation.
Course: IT20 Prerequisite: Completion of at least 60 credit points from the Information Management or Information Systems majors in IT20.
Credit Points: 12 Contact Hours: 3 per week

MAB297 MATHEMATICS FOR CONSTRUCTION
Data handling and basic algebra, geometry, trigonometry, vector techniques; introduction to financial mathematics, probability and statistics.
Course: CN31 Credit Points: 4 Contact Hours: 2 per week

MAB298 MATHEMATICS & STATISTICS
See MAB297.
Course: CN32 Credit Points: 4 Contact Hours: 2 per week
MAB301 CALCULUS & ANALYSIS A
Real value functions; differentiation; introduction to partial differentiation; integration.
Courses: MA34, SC30
Credit Points: 12 Contact Hours: 4 per week

MAB303 ALGEBRA & ANALYSIS B
Set theory, relations and functions; introduction to difference equations; infinite series; complex numbers; linear equations; matrices and determinants; vector spaces; eigenvalues and eigenvectors.
Courses: MA34, SC30 Co-requisite: MAB301
Credit Points: 12 Contact Hours: 4 per week

MAB304 CALCULUS & VECTOR ALGEBRA
Improper integrals; first and second order linear differential equations; elementary vector algebra; Euclidean spaces; introduction to differential geometry of curves, conic sections.
Courses: MA34, SC30 Prerequisite: MAB301
Credit Points: 12 Contact Hours: 4 per week

MAB324 COMPUTATIONAL MATHEMATICS
Sources of errors; computer arithmetic; computations with polynomials, standard functions, recurrence relations and series; computations with data, searching, sorting, sums and means; computations with arrays; use of calculators, programming languages and graphical/mathematical software.
Courses: ED50, MA34, SC30
Co-requisite: MAB301 or MAB212
Credit Points: 12 Contact Hours: 4 per week

MAB342 MATHEMATICS OF FINANCE
Interest rates; solution of problems in compound interest; annuities; applications of annuities; capital redemption policies; valuation of securities; introduction to basic modelling techniques.
Courses: ED50, MA34, SC30
Credit Points: 12 Contact Hours: 4 per week

MAB347 STATISTICS 1A
Collection and representation of data, parameters and statistics; sampling; sample mean and variance; statistical estimation and tests of hypotheses based on the normal, t, F and chi-square distributions; control charts; linear regression; introduction to experimental design and ANOVA.
Courses: MA34, SC30
Credit Points: 12 Contact Hours: 4 per week

MAB348 STATISTICS 1B
Probability; conditional probability; random variables and probability distributions; binomial, Poisson, exponential, uniform, normal; expected values and moments, sums and differences of random variables; q-q plots, correlation, multiple regression; power; goodness-of-fit; introduction to non-parametric tests.
Courses: ED50, MA34, SC30
Prerequisite: MAB347 or credit in MAB237
Co-requisite: MAB212 or MAB301
Credit Points: 12 Contact Hours: 4 per week

MAB422 TOPICS IN MATHEMATICS
Topics in geometry, recreational mathematics, and the history of mathematics.
Courses: ED50, SC30 Prerequisite: MAB222
Credit Points: 12 Contact Hours: 4 per week

MAB423 MATHEMATICS 3
Laplace transforms; ordinary differential equations of first and higher order; multivariable calculus.
Course: SC30 Prerequisite: MAB222
Credit Points: 12 Contact Hours: 4 per week

MAB452 MATHEMATICS 4
Partial differential equations. Complex analysis; Cauchy-integral theorem; Laurent-series; residue theorem. Fourier series and Fourier transforms. Vector analysis, Green's theorems, Stokes' theorem, the Divergence theorem. Applications to physics.
Course: SC30 Prerequisite: MAB432
Credit Points: 12 Contact Hours: 4 per week

MAB493 ENGINEERING MATHEMATICS 2
Solution of systems of linear equations by direct and iterative methods, rank of a matrix; representation of a function by Taylor series, Maclaurin series, Fourier series; finite differences, polynomial interpolation, Newton-Gregory interpolation formula; solution of first and second order differential equations, operator D and Laplace transform methods. Taylor series and Runge-Kutta techniques; basic descriptive statistics, probability theories, distributions.
Courses: CE42, EE43, EE44, IF23, IF53, ME45
Prerequisite: MAB193
Credit Points: 12 Contact Hours: 3 per week

MAB494 SURVEY MATHEMATICS 1
Spherical trigonometry: definition of sphere, circles on sphere and spherical triangles; columnar, antipodal and polar triangles; sine, cosine and half-angle formulae, Napier's and Delambre's analogies; solution of spherical triangles, spherical excess, area of spherical triangle; relation between plane and spherical trigonometry; differential calculus; Taylor and Maclaurin series for functions of a single variable; extension to functions of several variables; maxima and minima with constraints, Lagrange multipliers; integral calculus: evaluation of double and triple integrals, change of order of integration.
Course: PS47 Prerequisite: MAB188
Credit Points: 6 Contact Hours: 3 per week

MAB495 SURVEY MATHEMATICS 2
Courses: IF52, SV34 Prerequisite: MAB199
Credit Points: 12 Contact Hours: 6 per week

MAB496 SURVEY MATHEMATICS 2
Linear algebra: systems of linear equations in two and three dimensions, the no solution, many solution and unique solution cases, geometric interpretation; extension of concepts to large scale systems, matrix formulation. Matrices: elementary matrix algebra, equality, addition, multiplication by a scalar, matrix products, inverse matrix, transpose matrix; types of matrix, elementary matrices, identity matrices, singular and non-singular matrices, symmetric matrices; orthogonal matrices; reduction of a matrix to echelon form. Eigenvalue problem: solution of characteristic equation in two and three dimensions, corresponding eigenvectors; reality of eigenvalues in symmetric cases; quadratic forms, principal axes; geometrical applications, (classification of conics), extension of concepts to large scale system.
Course: PS47 Prerequisite: MAB497
Credit Points: 6 Contact Hours: 3 per week

MAB601 MULTIVARIABLE CALCULUS
Differentiation, extrema; double integrals, triple integrals, surface integrals; functions of a complex variable, analyticity, complex integration.
Courses: MA34, SC30
Prerequisites: MAB303, MAB304
Credit Points: 12 Contact Hours: 4 per week
MAB602 VECTOR FIELD THEORY
Vector analysis; scalar and vector fields; line integrals; surface integrals; differential field operators; the integral properties of fields. Tensor analysis; curvilinear coordinates; application to potential theory; hydrodynamic theory, and electromagnetic theory; calculus of variations; functionals; Euler’s differential equation; problems with subsidiary conditions.
Courses: MA34, SC30
Prerequisite: MAB601
Credit Points: 12
Contact Hours: 4 per week

MAB612 DIFFERENTIAL EQUATIONS
Courses: MA34, SC30
Prerequisites: MAB303, MAB304
Credit Points: 12
Contact Hours: 4 per week

MAB618 NUMERICAL ANALYSIS 1
Linear equations; numerical solution of a single nonlinear equation; interpolation; quadrature; numerical solution of a single first order differential equation.
Courses: IT20, MA34, SC30
Prerequisite: MAB321
Credit Points: 12
Contact Hours: 4 per week

MAB620 FINITE MATHEMATICS
Set theory; relations and functions; finite group theory; Boolean algebra; methods of proof including induction; introduction to combinatorics; finite state machines; number theory; introduction to ring theory.
Courses: IT20, MA34, SC30
Prerequisite: MAB303
Credit Points: 12
Contact Hours: 4 per week

MAB630 LINEAR ALGEBRA & ITS APPLICATIONS
Real and complex vector spaces, inner products; linear operators in finite dimensional space; eigen analysis, vector and matrix norms; quadratic forms.
Courses: ED50, IT20, MA34, SC30
Prerequisite: MAB303
Credit Points: 12
Contact Hours: 4 per week

MAB635 MECHANICS
Statics; kinematics of a particle; relative motion; conservation laws of dynamics; motion of a particle in one and two dimensions; impulsive motion.
Courses: MA34, SC30
Prerequisite: MAB304
Credit Points: 12
Contact Hours: 4 per week

MAB637 OPERATIONS RESEARCH 1A
Linear programming; replacement, maintenance and reliability; project scheduling techniques; simulation.
Courses: ED50, IT20, MA34, SC30
Prerequisites: LSB155, MAB303, MAB347
Credit Points: 12
Contact Hours: 4 per week

MAB638 OPERATIONS RESEARCH 1B
Transportation, transshipment and assignment models; introduction to sensitivity analysis; inventory models; introduction to queuing theory.
Courses: IT20, MA34, SC30
Prerequisite: MAB637
Credit Points: 12
Contact Hours: 4 per week

MAB641 ACTUARIAL MATHEMATICS
The life table; demographic techniques; pure endowments and annuities; assurance; policy values; laws of mortality; benefits depending on other contingencies; pension funds.
Courses: MA34, SC30
Prerequisites: MAB301, MAB342
Credit Points: 12
Contact Hours: 4 per week

MAB642 METHODS OF MATHEMATICAL ECONOMICS
The nature of mathematical economics; optimization theory and its application in economics; ordinary differential equations and economic dynamics; difference equations in the theory of growth and trade cycles; systems of simultaneous equations, multi-market equilibrium, stability, equilibrium of dynamic macroeconomic models.
Course: MA34
Credit Points: 12
Contact Hours: 4 per week

MAB647 STATISTICS 2A
Bivariate distributions; conditional distributions; covariance; moment generating functions; joint mgf’s and their uses in iid cases; transformations; sampling distributions; sampling from finite populations; introductory Markov chains; time series and auto correlation; convergence ideals; order statistics.
Courses: MA34, SC30
Prerequisite: MAB303
Credit Points: 12
Contact Hours: 4 per week

MAB648 STATISTICS 2B
Experimental design and linear models; least squares; replication, interaction; factors, levels, factorial designs; missing values, data quality; regression; residuals; use of covariates; using time diagnostics; transformations; non-parametric techniques.
Courses: MA34, SC30
Prerequisite: MAB348
Credit Points: 12
Contact Hours: 4 per week

MAB795 SURVEY MATHEMATICS 3
Courses: IF52, PS47, SV34
Prerequisite: MAB495
Credit Points: 6
Contact Hours: 3 per week

MAB893 ENGINEERING MATHEMATICS 3
Data analysis in engineering contexts with emphasis on real data and use of computer packages; estimation, testing, SPC, regression, ANOVA, reliability.
Courses: CE42, EE43, EE44, IF23, ME45
Prerequisite: MAB493
Credit Points: 6
Contact Hours: 3 per week

MAB894 ENGINEERING MATHEMATICS 4
Solution of linear systems of differential equations employing operator-D and Laplace transform methods, variation of parameters methods for non-homogenous equations; solution of partial differential equations, separation of variables method, introduction to numerical techniques; complex variables, Cauchy-Riemann equations, conformal mapping.
Courses: EE43, EE44, IF23
Prerequisite: MAB495
Credit Points: 6
Contact Hours: 3 per week

MAB906 TOPICS IN ANALYSIS
Topics selected from the following: measures; Lesbesgue integrals; product of measures; normed spaces; metric spaces; constrained optimisation, Gateaux and Frechet derivatives.
Courses: MA34, SC30, SC60
Prerequisite: MAB601
Credit Points: 12
Contact Hours: 4 per week
MAB901 STATISTICS 3A
Estimation; testing; exponential; linear models; introduction to generalised linear models; multicollinearity; heteroscedasticity; effect of autocorrelation; non linear LSE; diagnostics.
Courses: MA34, SC30
Prerequisites: MAB647, MAB648, MAB303
Credit Points: 12 Contact Hours: 4 per week

MAB908 STATISTICS 3B
Experimental design; response surfaces; optimal design; transformations; diagnostics; influential observations; some EDA, likelihood, deviance.
Courses: MA34, SC30
Prerequisite: MAB648
Credit Points: 12 Contact Hours: 4 per week

MAB911 NUMERICAL ANALYSIS 2
Systems of linear equations: direct methods, measure of work, iterative refinement, error analysis; indirect methods, convergence considerations; systems of non-linear equations; quadrature, Romberg integration; ordinary differential equations (initial and boundary value problems); eigenvalue problems, (power method, inverse iteration).
Courses: MA34, SC30
Prerequisite: MAB618 Co-requisite: MAB630
Credit Points: 12 Contact Hours: 4 per week

MAB912 FLUID DYNAMICS
Mathematical models of fluid motion, equations of motion and some exact solutions. Dimensional analysis and similarity, incompressible potential flow, Reynolds Numbers, boundary layer equations.
Courses: MA34, SC30
Prerequisite: MAB602
Credit Points: 12 Contact Hours: 4 per week

MAB913 NUMERICAL ANALYSIS 3
Hilbert spaces; the projection theorem; application to discrete polynomial and trigonometric approximation; Legendre polynomials; Gaussian quadrature; Chebyshev polynomials; Chebyshev approximation. Reduction of a matrix to upper Hessenberg form by similarity transforms, orthogonal reductions, Givens and Householder methods, determination of eigenvalues by the QR algorithm, emphasis on symmetric matrices. Stability analyses for IVPs, types of instability, inherent and induced, partial instability.
Courses: MA34, SC30, SC60
Prerequisite: MAB619
Credit Points: 12 Contact Hours: 4 per week

MAB927 OPERATIONS RESEARCH 2A
Algorithms of linear programming; integer and mixed integer programming; non-linear programming; dynamic programming; heuristic methods.
Courses: MA34, SC30
Prerequisite: MAB638
Credit Points: 12 Contact Hours: 4 per week

MAB928 OPERATIONS RESEARCH 2B
Simulation; queuing theory; decision analysis; implementation in operations research.
Courses: MA34, SC30
Prerequisite: MAB637
Credit Points: 12 Contact Hours: 4 per week

MAB929 TIME SERIES & STATISTICAL FORECASTING
Review of smoothing and decomposition methods; ARMA time series methods; Box-Jenkins methodology; pooling of time series and cross-sectional data; causality; recursive estimation and prediction of stationary processes; multivariate time series; comparison and selection of forecasting methods.
Courses: MA34, SC30, SC60
Prerequisite: MAB642 Co-requisite: MAB601
Credit Points: 12 Contact Hours: 4 per week

MAB941 MATHEMATICAL MODELLING IN ECONOMICS
Mathematical models in economics; macro and micro economic models; simulation; growth and decay models; dynamic economic models; introduction to stability theory; stability of linear systems.
Courses: MA34, SC30
Prerequisites: MAB601, MAB612
Credit Points: 12 Contact Hours: 4 per week

MAB942 OPTIMISATION METHODS
Analytic calculation of maxima and minima in functions; constrained optimisation using Lagrange multiplier and penalty techniques; quadratic and convex programming; one dimensional search techniques; direct search techniques; gradient methods; least squares; global optimisation strategies.
Courses: MA34, SC30
Prerequisites: MAB601, MAB618
Credit Points: 12 Contact Hours: 4 per week

MAB960 PROJECT WORK
Students, either individually or in small groups, undertake a substantial project which is relevant to the needs of industry and which is designed to give students insight into industrial requirements. Each student, or group of students, undertakes a different project and is supervised, generally by a member of staff, throughout the duration of the project.
Courses: MA34, SC30
Prerequisite: Successful completion of at least 192 credit points including at least two units from List D of the course requirements.
Credit Points: 12 Contact Hours: 4 per week

MAB970 PROBABILITY THEORY & STOCHASTIC PROCESSES
Probability measures, conditional probability; distributions and random variables. Convergence of random variables; strong and weak laws of large numbers; central limit theorems. Markov processes: birth and death, queues; epidemics; inference. Point processes: marked point processes; filtered processes; inference, simulation. Branch process.
Courses: MA34, SC30, SC60
Prerequisite: MAB647
Credit Points: 12 Contact Hours: 4 per week

MAB971 ADVANCED MATHEMATICS OF FINANCE
Background to investments, asset classes; risk theory; mathematical theories of finance; assets versus liabilities; investment performance measurement.
Courses: MA34, SC30, SC60
Prerequisite: MAB641
Credit Points: 12 Contact Hours: 4 per week

MAB973 PARTIAL DIFFERENTIAL EQUATIONS
Derivation and solution of first order partial differential equations. Derivation and classification of second order partial differential equations; the wave equation, the heat conduction equation, the equation of a bending beam, equations for fluid flow; boundary conditions. Second order equations: characteristics, separation of variables, integral transforms.
Courses: MA34, SC30, SC60
Prerequisites: MAB602, MAB612
Credit Points: 12 Contact Hours: 4 per week

MAB974 SAMPLING & SURVEY TECHNIQUES
Random sampling; estimates; design of questionnaires; data quality and errors in surveys; systematic,
cluster and double sampling plans; imputation techniques; alternatives to household surveys.

Courses: MA34, SC30, SC60
Prerequisites: MAB647, MAB648
Credit Points: 12 Contact Hours: 4 per week

MAB975 ORDINARY DIFFERENTIAL EQUATIONS & CHAOS
Ordinary differential equations; eigenvalues of systems of ordinary differential equations; system stability using phase plane portraits; chaotic systems; analytic and numerical solution of equations describing systems with chaotic and singular behaviour.

Courses: MA34, SC30, SC60
Prerequisites: MAB601, MAB612, MAB619
Credit Points: 12 Contact Hours: 4 per week

MAB976 RELIABILITY & SURVIVAL ANALYSIS
Failure rates; life distributions and inference; extreme values; fitting tails; flood data; IFR, NBU; system reliability; censored sampling; Cox's proportional hazards model; competing hazards.

Courses: SC30, SC60
Prerequisites: MAB647, MAB648
Credit Points: 12 Contact Hours: 4 per week

MAB977 SCHEDULING & NETWORKS

Course: SC60
Credit Points: 12 Contact Hours: 4 per week

MAB978 STATISTICAL SIGNAL PROCESSING & IMAGE ANALYSIS

Course: SC60 Prerequisites: MAB318, MAB608
Credit Points: 12 Contact Hours: 4 per week

MAB979 STATISTICAL MODELLING & DATA ANALYSIS
Robust procedures and principles: influence function; robust estimation; simulation studies; M-estimation. Distribution theory of statistics based on ranks. Robust regression: EDA, graphical model choice, assessment and fitting; distributional families used in data analysis, inference studies and simulations; transformations, including Box-Cox. Outliers.

Courses: MA34, SC60
Prerequisites: MAB601, MAB907
Credit Points: 12 Contact Hours: 4 per week

MAB980 STOCHASTIC PROCESSES & APPLICATIONS
Gaussian processes; Brownian motion; diffusions; stochastic equations; martingale; random walks; central limit theorems; epidemic models; queuing models; stochastic compartment models; extreme value theory for stochastic processes.

Course: SC60
Prerequisites: MAB970 or (MAB906, MAB929)
Credit Points: 12 Contact Hours: 4 per week

MAB981 APPLIED STATISTICAL INFERENCE & EXPERIMENTATION
Normal error models: multiple linear regression; diagnostics; prediction. Non-normal error models: likelihood theory; quasi likelihood; diagnostics. Modern data analysis techniques: smoothers.

Course: SC60
Prerequisites: MAB630, MAB907, MAB908
Credit Points: 12 Contact Hours: 4 per week

MAB984 ACTUARIAL STATISTICS
Distribution theory. Financial stochastic models and problem-solving with them. Credibility, utility and risk theory. Loss and ruin models.

Course: SC60
Prerequisite: MAB907 Co-requisite: MAB970
Credit Points: 12 Contact Hours: 4 per week

MAB985 NUMERICAL ANALYSIS

Course: SC60
Prerequisite: MAB913
Credit Points: 12 Contact Hours: 4 per week

MAB986 MATHEMATICAL MODELLING OF INDUSTRIAL PROCESSES
Solution of the steady/unsteady heat conduction equation with: variable thermal conductivity, different types of boundary conditions, irregular boundaries, moving interfaces, eg. solidification, non-linear forms, eg. natural convection, point sources. Derivation and discussion of the viscous fluid flow equations: primitive form of equations, stream function and vorticity transport form, conservative and non-conservative forms, stability, solving the equations numerically, boundary conditions.

Course: SC60
Prerequisites: MAB973, MAB601, MAB913
Credit Points: 12 Contact Hours: 4 per week

MAB987 OPTIMISATION OF CONTROLLED PROCESSES
Calculus of variations, Lagrange formulation, Mayer formulation, Bolza formulation, constraints, corner conditions, transversal conditions. Pontryagin's maximum principle. Relationship of the above to dynamic programming. Practical applications of the above to design of optimal control strategies, time optimal control, optimal continuous scheduling.

Course and Prerequisite: MAB601, MAB612
Credit Points: 12 Contact Hours: 4 per week

MAB989 PROJECT
Project and thesis component of Honours course (SC60).

Course: SC60
Prerequisite: Approved Honours program.
Credit Points: 36

MAN009 EXPERIMENTAL DESIGN & STATISTICAL ANALYSIS FOR RESEARCH
See MAN007.
Course: HI88
Credit Points: 12 Contact Hours: 3 per week
MAN012 ADVANCED STUDIES
Advanced studies in quality management concepts and techniques with emphasis on the application of statistics.
Course: SC60
Prerequisite: Permission of the Head of School
Credit Points: 12
Contact Hours: 4 per week

MAN120 QUANTITATIVE SYSTEMS ANALYSIS
The use of quantitative models in the solution of problems for quality systems; model formulation, inventory systems, production planning and scheduling and simulation.
Course: BS86
Credit Points: 6
Contact Hours: 3 per week

MAN210 DESIGNED EXPERIMENTS FOR QUALITY IMPROVEMENTS
The principles underlying the design of experiments; a practical approach explains the procedures used, with emphasis on the use of robust techniques for industrial experimentation and explanatory studies.
Course: BS86
Credit Points: 6
Contact Hours: 3 per week

MAP001 READING COURSE 1
Provides the candidate with appropriate background at an advanced level necessary for the completion of a research program.
Course: SC60
Credit Points: 8

MAP002 READING COURSE 2
See MAP001.
Course: SC60
Credit Points: 12

MAP111 STATISTICAL METHODS IN QUALITY
Describing variation; boxplot, histogram, estimation of process parameters, misuse of measures. Normal distribution; application to quality phenomena, probability paper. Important distributions for describing quality-related phenomena by attribute; hypergeometric, binomial, Poisson, approximations. Sampling distributions; interval estimation for normal and binomial, test of hypothesis, consumer and supplier risks, tests for binomial parameter and process mean, tests for comparing process means, paired data and independent samples.
Course: BS77
Credit Points: 6
Contact Hours: 3 per week

MAP120 QUANTITATIVE SYSTEMS ANALYSIS
Prepares students to use quantitative models in the solution of problems for quality systems. Models include: inventory systems, production planning and scheduling, networks and optimal decision theory.
Course: BS86
Credit Points: 6
Contact Hours: 3 per week

MAP121 STATISTICAL PROCESS CONTROL
Course: BS77
Credit Points: 6
Contact Hours: 3 per week

MAP211 SAMPLING PROCEDURES
Concepts and principles in sampling. Attribute batch sampling, sampling plans (single, double and multiple), OC curves. AS1199, terminology and definitions, choice of plan and switching rules. Attribute batch sampling with rectifying inspection, Dodge Romig procedure, use of tables. Attribute continuous sampling and the Dodge system (CSP-1, etc.). Sampling by variables, plans and procedures. AS2490, terminology, definitions, inspection rules.
Course: BS77
Credit Points: 6
Contact Hours: 3 per week

MAP212 STATISTICAL QUALITY CONTROL
Control chart concept; variable charts for location and dispersion, pattern analysis, interpretation. Process capability; natural tolerance, capability index. Modified control charts. Attribute charts; p, c and u charts. Cusum technique; variable data, procedures, V mask, decision interval, application to attribute data.
Course: BS77
Credit Points: 6
Contact Hours: 3 per week

MAP221 QUALITY PROBLEM SOLVING TECHNIQUES
Course: BS77
Credit Points: 8
Contact Hours: 2 per week

MAP222 QUALITY IMPROVEMENT
Flow charts; deployment, layout, detailed. Pareto analysis; stratified data, frequency v cost. Cause and effect diagram; dispersion analysis, process classification. Correlation analysis; scattergram, percentage variation explained, several predictors. Affinity relations and matrix diagrams.
Course: BS77
Credit Points: 12
Contact Hours: 3 per week

MAS090 MATHEMATICS
This intensive unit is aimed at providing an appropriate background for those who may wish to undertake a tertiary course in science, business or other areas which require competence in certain mathematical areas prior to entry. Topics include: algebra, analytical geometry, trigonometry, differential and integral calculus, matrices; applications from elementary statics, kinematics, dynamics and statistics. The treatment assumes some initial knowledge of basic algebra, such as manipulation of indices and factorisation, and elementary trigonometry at a level equivalent to Year 10 Advanced Mathematics.
Course: BN10
Contact Hours: 3 per week
Credit Points: 6 per semester

MDB231 MATHEMATICS EDUCATION 2
Greater insight into children's acquisition of mathematical competence with particular emphasis on the role of higher-order thinking skills in the learning process. Emphasis on the development of important mathematical skills such as decision making and
problem solving, critical analysis and reflection, and logical reasoning. Examination of curriculum topics from both a content perspective and a processing perspective. The topics to be addressed include the skills of problem solving, statistical analysis, elementary probability, measurement concepts and processes, visual imagery and spatial problem solving.

Course: ED41  Prerequisite: MDB222
Credit Points: 12  Contact Hours: 4 per week

**MDB262 HISTORY OF MATHEMATICS**
Philosophy and history of mathematical thinking: role of thinking in mathematics and vice versa, history of the thinking movement, and approaches to developing mathematical thinking skills. History of basic mathematical topics: number systems, algorithms, algebra, geometry and measurement. Conceptions of mathematics: role of intuition, logic, real world applications and formality. Applications to teaching.

Course: ED41  Prerequisite: MDB222
Credit Points: 12  Contact Hours: 3 per week

**MDB263 APPLICATIONS IN MATHEMATICS**

Courses: ED41, ED51  Prerequisite: MDB262
Credit Points: 12  Contact Hours: 3 per week

**MDB264 SCIENCE & SURVIVAL**

Course: ED41  Prerequisite: MDB261
Credit Points: 12  Contact Hours: 3 per week

**MDB265 BIOLOGY & TECHNOLOGY**
The interaction of organisms and their physical environment; the human influence in the biosphere; how technology empowers communities to exploit and/or protect biological systems and the integrity of the earth as humanity experiences it today.

Courses: ED41, ED51  Prerequisite: MDB264
Credit Points: 12  Contact Hours: 3 per week

**MDB270 COMPUTER EDUCATION**
Exploration of uses of computer-based technology. Consideration of educational issues such as curriculum planning and implementation considerations; criteria for evaluation of computer hardware and software; and policies for computer use in schools.

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

**MDB300 TEACHING IN THE INFORMATION AGE**
This subject explores the impact of information technology on education. It examines the concept of an information society, it explores how what is defined as knowledge is contested and changed by information technology and it develops strategies for learning and teaching using information technology. Practical skills using computer hardware and software communication technology and multimedia will be developed with a view to appropriate implementation within the curriculum.

Courses: ED37, ED51, ED52
Credit Points: 12  Contact Hours: 3 per week

**MDB301 HISTORY OF MATHEMATICS**
Different methods that have been used to record numbers; early view of number (fact and fantasy); numeration systems used today; early methods of calculation from ancient times, to Napier's logarithms to the modern computer; contributions of mathematicians including the Greeks, Fibonacci, Pascal, Euler, Gauss, Galois, Fermat, Turing; major historical developments in content areas of geometry, algebra, probability and applications involving measurement.

Courses: ED51, ED52  Prerequisite: First three semesters of the course
Credit Points: 12  Contact Hours: 3 per week

**MDB302 MATHEMATICS FOUNDATIONS**
The process of mathematics and the role of mathematics in society; mathematical competencies in a technological world; logic and sets and the various forms of mathematical thinking; basic mathematical structures and properties and how these can be seen within mathematics syllabuses.

Courses: ED51, ED52
Credit Points: 12  Contact Hours: 3 per week

**MDB303 SCIENCE FOUNDATIONS**
The development of understanding of significant concepts in science. Presenting a positive view of science through the examination of: the nature of science; the historical development of major concepts of science; development of scientific language; relationship of science to society. Links between the view of society and the ideas and knowledge which have been generated and applied to the solution of problems.

Courses: ED51, ED52
Credit Points: 12  Contact Hours: 3 per week

**MDB325 BIOLOGY CURRICULUM STUDIES I**
This subject assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

Course: ED50  Prerequisite: Normally the completion of 48 credit points in each relevant discipline area
Credit Points: 12  Contact Hours: 3 per week

**MDB326 BIOLOGY CURRICULUM STUDIES 2**
This subject extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Course: ED50  Prerequisite: MDB325
Credit Points: 12  Contact Hours: 3 per week

**MDB327 CHEMISTRY CURRICULUM STUDIES 1**
This subject assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribu-
This subject extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Course: ED50
Prerequisite: Normally the completion of 48 credit points in each relevant discipline area.
Credit Points: 12 Contact Hours: 3 per week

MDB330 COMPUTING CURRICULUM STUDIES 2

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

Course: ED50
Prerequisite: MDB329
Credit Points: 12 Contact Hours: 3 per week

MDB331 EARTH SCIENCE CURRICULUM STUDIES 1

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

Course: ED50
Prerequisite: Normally the completion of 48 credit points in each relevant discipline area.
Credit Points: 12 Contact Hours: 3 per week

MDB332 EARTH SCIENCE CURRICULUM STUDIES 2

This subject extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Course: ED50
Prerequisite: Normally the completion of 48 credit points in each relevant discipline area.
Credit Points: 12 Contact Hours: 3 per week
MDB338 SCIENCE CURRICULUM STUDIES 2
This subject extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.
Course: ED50
Credit Points: 12
Contact Hours: 3 per week

MDB339 MATHEMATICS EDUCATION
Key concepts and skills in the domains of percents, rate, ratio, chance and data, prealgebra and geometry will be studied. Focus on developing appropriate teaching episodes within these domains. Special emphasis on the teacher as 'sense-maker'.
Course: ED51
Prerequisite: MDB329
Credit Points: 12
Contact Hours: 3 per week

MDB340 MATHEMATICS & TECHNOLOGY EDUCATION
This subject builds on the understandings developed in Mathematics Foundations and Mathematics Education. In particular, it explores issues concerned with the teaching of measurement and mathematical problem solving. This subject also investigates how information technology can be used to facilitate the development of high-level learning skills in mathematics and other areas in the primary school.
Course: ED51
Prerequisite: 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
Credit Points: 12
Contact Hours: 3 per week

MDB342 COMPUTERS IN THE SCHOOL CURRICULUM
This subject is designed to provide teachers with a framework for investigating the present and future influence of computer on curriculum development in educational institutions.
Course: ED51
Credit Points: 12
Contact Hours: 3 per week

MDB343 DIAGNOSIS & REMEDIATION IN MATHEMATICS
Overview of numerical and conceptual learning difficulties in mathematics; learning experiences in various areas of mathematics, utility of mathematics in real life situations; examination of mathematics in other curriculum areas; learning experiences in the integration of mathematical topics; use of hand-held calculator and the computer as aids to conceptual development and as practical tools; error analysis and diagnostic inventories; remedial strategies.
Course: ED51
Credit Points: 12
Contact Hours: 3 per week

MDB344 INITIATIVES IN SCIENCE
In this subject students will have the opportunity to explore alternative practices in science education particularly through the development of research based project work for children, the extended excursion or field trip and involvement in community sponsored and/or related science activities and events.
Course: ED51
Credit Points: 12
Contact Hours: 3 per week

MDB345 SOFTWARE DEVELOPMENT FOR EDUCATIONAL CONTEXTS
Algorithmic thinking and its implementation is a major component within the Information Processing and Technology syllabus now implemented in secondary schools. Prospective teachers of courses such as these require a sound foundation in the design and development of software along with the use of modern abstract procedural, data and object handling representations. Furthermore, the design principles developed in this subject mirror general problem solving strategies that have been found to be particularly effective in many educational areas. Software design and development is closely bound to particular problems contexts. This subject is based on the design of educational software because this area is relevant to the students concerned and because there is a clear demand for such software. Students in this subject will employ a range of powerful programming techniques and structures in the development of educational computer software.
Course: ED50
Prerequisite: MDB302
Credit Points: 12
Contact Hours: 3 per week

MDB347 EXCURSIONS IN NUMBER
An invitation to explore some interesting byways off the high road of mathematics. Discover some intriguing diversions to add quality to your lessons.
Course: ED51
Credit Points: 12
Contact Hours: 3 per week

MDB348 HISTORY OF MATHEMATICS
Methods to record numbers; early view of number (fact and fantasy); numeration systems used today; early methods of calculation from ancient times, to Napier’s logarithms to the modern computer; contributions of mathematicians including the Greeks, Fibonacci, Pascal, Euler, Gauss, Galois, Fermat, Turing; major historical developments in content areas of geometry, algebra, probability and modern day applications involving measurement.
Course: ED51, ED52
Prerequisite: First three semesters of the course
Credit Points: 12
Contact Hours: 3 per week

MDB349 MATHEMATICAL THINKING
The concept of thinking and intelligence; the nature of mathematical thinking during the first half of this century; modern ideas on the nature of mathematical thinking; the thinking skills movement and programs designed to foster thinking; analysis of children’s thinking in solving mathematical problems; analysis of students’ ‘everyday cognition’ together with their thinking in mathematical situations.
Course: ED51
Credit Points: 12
Contact Hours: 3 per week

MDB375 COMPUTING TOOLS FOR EDUCATORS
Graduates of this course are expected to be able to use technology confidently and competently for personal and professional teaching tasks. This subject will allow students to gain technological skills and understandings while investigating applications of these technologies in a teaching context. Students will gain experience in a wide range of applications including the use of writing and publishing software, graphics design software, computer managed learning...
development tools, numerical software tools, personal and project management tools, communications technologies and computer peripherals used in the production of computer generated materials.

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

■ MDB377 PROJECT PLANNING & IMPLEMENTATION FOR EDUCATIONAL PURPOSES
The study of computing and its application in educational and other environments is very much associated with planned and sequenced implementation of tasks. A study and understanding of how tasks might be represented, sequenced and implemented is essential if technology is to be used effectively in education.
The use of project work as a pedagogical technique is a popular strategy to promote independent learning and student autonomy.
This subject provides students with a framework to evaluate this methodology.
Course: ED50  Prerequisite: MDB375  Credit Points: 12  Contact Hours: 3 per week

■ MDB378 EARTH & SPACE
This unit initiates the development of competence in pedagogical content knowledge in science for students. It examines scientific concepts in important areas of space, time and motion, the origin and history of earth and its environments. Scientific principles and techniques for observing space and earth phenomena are investigated. Strategies for incorporating this knowledge in teaching settings.
Course: ED51  Credit Points: 12  Contact Hours: 3 per week

■ MDB379 SCIENCE & SURVIVAL
This unit continues to develop competence in pedagogical content knowledge. It examines a range of scientific concepts in the area of matter and energy and how these concepts are applied in a technological context. On a broader horizon, the scientific principles underlying major innovations, disasters and controversial issues are examined. Strategies for incorporating this knowledge in a teaching situation.
Course: ED51  Credit Points: 12  Contact Hours: 3 per week

■ MDB380 TECHNOLOGY & LIFE SCIENCE
The interaction of organisms and their physical environment; the human influence in the biosphere; how technology empowers communities to exploit and/or protect biological systems and the integrity of the earth as humanity experiences it today. This subject focuses on the use of instrumentation and technology in the area of science research in the life sciences and investigates how this technology can be adapted to practice in primary classrooms.
Course: ED51  Credit Points: 12  Contact Hours: 3 per week

■ MDB410 COMPUTERS IN THE SCHOOL CURRICULUM
The introduction of computers into the school environment and curriculum; methods for teaching computer studies; the use of computers for classroom management and support; computer technology and its impact on schools and society. Access to an appropriate microcomputer is required.
Course: ED26  Credit Points: 12  Contact Hours: 3 per week

■ MDB411 EARLY CHILDHOOD MATH CURRICULUM
Theoretical background and research; logical sequence of mathematics and children's cognitive development; content and learning experiences for early childhood; integration and application.
Course: ED26  Credit Points: 12  Contact Hours: 3 per week

■ MDB412 PRIMARY MATHEMATICS CURRICULUM
Influential factors on development and content of mathematics education; how students learn and apply mathematics; identification of effective curriculum models and teaching strategies for mathematics.
Course: ED26  Prerequisite: CUB410 (or equivalent)  Credit Points: 12  Contact Hours: 3 per week

■ MDB413 SECONDARY MATHEMATICS CURRICULUM
Current syllabus developments, teaching strategies and curriculum models for secondary mathematics; planning and evaluating sequences of learning activities for secondary school mathematics; designing and evaluating a variety of forms of assessment.
Course: ED26  Credit Points: 12  Contact Hours: 3 per week

■ MDB440 COMPUTERS & EDUCATION
An overview of microcomputer hardware and software with an emphasis on the usefulness of various components in schools; use of educationally valuable application software; critical examination of a variety of uses of computers in education; the impact of computers on society and education in particular.
Course: ED26  Credit Points: 12  Contact Hours: 3 per week

■ MDB442 QUANTITATIVE LITERACY
The importance of quantitative literacy in our society; its development through learning and teaching; its social context and the role of technology.
Course: ED26  Credit Points: 12  Contact Hours: 3 per week

■ MDB443 PRACTICAL SCIENCE PROGRAMMING
Novel and interesting ways of improving science teaching in a practical situation, the processes involved in developing school based science research projects; new technology and ways of improving teachers' own practical skills.
Course: ED26  Credit Points: 12  Contact Hours: 3 per week

■ MDB444 SCIENCE CURRICULUM
Review of direction for science education nationally and globally; critical evaluation of current practice and curricula; review of how students learn science with reference to current research; application of these principles to changes in curriculum and teaching strategies; design implementation and evaluation of curriculum change.
Course: ED26  Credit Points: 12  Contact Hours: 3 per week

■ MDB445 TEACHING PROBLEM SOLVING & REASONING
Problem solving in the curriculum, strategies, logic and reasoning, the planning and teaching of problem-centred curricula; the use of technology in problem solving.
Course: ED26  Credit Points: 12  Contact Hours: 3 per week

■ MDB446 SCIENCE FOR EARLY CHILDHOOD
Science for young children; theoretical background of science education; development of process and
manipulative skills; the role of the teacher in a child centred science curriculum.
Course: ED26
Credit Points: 12  Contact Hours: 3 per week

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<thead>
<tr>
<th>UNIT</th>
<th>COURSE NO.</th>
<th>SHORT DESCRIPTION</th>
<th>CREDIT POINTS</th>
<th>CONTACT HOURS</th>
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<tbody>
<tr>
<td>5.1</td>
<td>MDP410SENIORCHEMISTRY</td>
<td>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</td>
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<tr>
<td>5.2</td>
<td>MDP403 MATHEMATICS CURRICULUM STUDIES 1</td>
<td>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</td>
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<td>5.3</td>
<td>MDP404 MATHEMATICS CURRICULUM STUDIES 2</td>
<td>See MDP403. Course: ED37 Prerequisite: MDP403 Credit Points: 12  Contact Hours: 3 per week</td>
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<td>5.4</td>
<td>MDP405 COMPUTER EDUCATION CURRICULUM STUDIES 1</td>
<td>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</td>
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<td>5.5</td>
<td>MDP406 COMPUTER EDUCATION CURRICULUM STUDIES 2</td>
<td>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</td>
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<td>5.6</td>
<td>MDP407 SENIOR SCIENCE CURRICULUM STUDIES 1</td>
<td>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</td>
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<td>5.7</td>
<td>MDP408 SENIOR AGRICULTURE CURRICULUM STUDIES 2</td>
<td>Offers students the opportunity to extend expertise with respect to this particular discipline. Emphasis will be placed on current issues in the discipline and teaching strategies which allow these issues to be freely discussed in the classroom. Course: ED37 Prerequisite: MDP407 Credit Points: 12  Contact Hours: 3 per week</td>
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<td>5.8</td>
<td>MDP409 SENIOR BIOLOGY CURRICULUM STUDIES 2</td>
<td>See MDP408. Course: ED37 Prerequisite: MDP407 Credit Points: 12  Contact Hours: 3 per week</td>
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<td>5.9</td>
<td>MDP410 SENIOR CHEMISTRY CURRICULUM STUDIES 2</td>
<td>See MDP408. Course: ED37 Prerequisite: MDP407 Credit Points: 12  Contact Hours: 3 per week</td>
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<td>5.10</td>
<td>MDP411 SENIOR EARTH SCIENCE CURRICULUM STUDIES 2</td>
<td>See MDP408. Course: ED37 Prerequisite: MDP407 Credit Points: 12  Contact Hours: 3 per week</td>
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MDP450 MATHEMATICS, SCIENCE & TECHNOLOGY 1
The contexts of learning and processes by which effective mathematics/science learning takes place; the nature of mathematics/science and the rationale for mathematics/science education; theoretical constructs of curriculum development; approaches to teaching; key concepts and processes; technology in mathematics/science teaching.
Course: ED36
Credit Points: 12
Contact Hours: 4 per week

MDP451 MATHEMATICS, SCIENCE & TECHNOLOGY 2
Application of key concepts and processes in mathematics/science; concepts and processes studied in Semester 1 transferred to other mathematics/science topics; development of teaching episodes incorporating the concepts and processes. Assessment and evaluation; difference between assessment and evaluation; nature and types of assessment/evaluation. Child study: student selects child and mathematics/science topic to assess; develop instruments for assessment; analyse child's performance; develop individual program to cater for child's individual mathematical/scientific needs.
Course: ED36
Prerequisite: MDP450
Credit Points: 12
Contact Hours: 3 per week

MDP503 INFORMATION SYSTEMS IN EDUCATION
Explores some of the characteristics and applications of information systems in an educational context. It looks at how information is modelled, stored and retrieved using relational database techniques; the impact of society of the use of information systems; the pedagogies associated with teaching about and using information systems in schools are explored.
Courses: ED21, ED26
Credit Points: 12
Contact Hours: 3 per week

MDP504 SCHOOL ADMINISTRATION USING INFORMATION TECHNOLOGY
The use of information technologies in the administration of schools; explores a range of administrative packages; cost benefits and ethical implications.
Course: ED21
Prerequisite: MDP532 or MDP530
Credit Points: 12
Contact Hours: 3 per week

MDP506 COMPUTER EDUCATION PROJECT
Offers students the opportunity to extend expertise gained in other units in the Graduate Diploma in Education (Computer Education). Under supervision students select a problem relevant to computer education and implement a solution.
Course: ED21
Credit Points: 12
Contact Hours: 3 per week

MDP507 TEACHING SECONDARY COMPUTER STUDIES
Investigates and develops the pedagogy and management associated with computer studies courses currently implemented in Queensland Secondary schools. Emphasis is given to the Information Processing and Technology syllabus and the Practical Computer Methods syllabus.
Courses: ED21, ED26
Prerequisites: 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, ED26, ED70
Prerequisite: MDP537 or MDP532 or MDP530
Credit Points: 12
Contact Hours: 3 per week

MDP520 THINKING & LEARNING IN MATHEMATICS & SCIENCE
Concepts of thinking, learning and intelligence; modern theories on mathematical and scientific thinking; methods to promote thinking; designing effective mathematics and science learning experiences.
Courses: ED22, ED62, ED74
Credit Points: 12
Contact Hours: 3 per week

MDP529 ASSESSMENT & REMEDIATION IN MATHEMATICS
Overview of numerical and conceptual learning difficulties in mathematics; learning experiences in various areas of mathematics, utility of mathematics in real life situations; examination of mathematics in other curriculum areas; learning experiences in the integration of mathematical topics; use of hand-held calculator and the computer as aids to conceptual development as practical tools; geometric and algebraic concepts across the curriculum; error analysis and diagnostic inventories; remedial strategies.
Courses: ED24, ED75
Credit Points: 12
Contact Hours: 3 per week

MDP530 COMPUTER APPLICATIONS IN EDUCATION
Allows students to gain technological skills and understanding while investigating applications of these technologies in the context of teaching and learning. A wide range of computer applications will be covered including writing, publishing, graphics, communications and project management tools.
Courses: ED21, ED70
Incompatible with: CO4046, MDP505
Credit Points: 12
Contact Hours: 3 per week

MDP531 INVESTIGATIONS INTO COMPUTER AIDED LEARNING
The use of interactive technology in the teaching/learning process; approaches to and uses of computer aided learning, hypermedia authoring systems such as Hypercard, Linkway 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
Incompatible with: CO4035, MDP501
Credit Points: 12  Contact Hours: 3 per week

MDPS53 TEACHING INFORMATION SYSTEMS MODELLING
Designed for prospective teachers of information system modelling; explores the pedagogies and approaches appropriate for teaching students at a variety of levels including a secondary school environment; development and writing of specification documents for information system implementation within an educational context; tools such as relational languages and CASE used by students to implement small educational information systems.
Course: ED21  Prerequisite: MDP503
Incompatible with: CO4044, MDP509
Credit Points: 12  Contact Hours: 3 per week

MDPS54 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 application support for teachers of the AI topic within the Information Processing and Technology unit at a secondary school level.
Course: ED21  Prerequisite: MDP535
Incompatible with: CO4042, CSP842
Credit Points: 12  Contact Hours: 3 per week

MDPS55 EDUCATIONAL SOFTWARE DEVELOPMENT
Data, procedural and object-orientated abstractions used in conjunction with modular programming practices. These understandings are used to solve problems from a wide range of practical educational applications especially with respect to the development of educational software.
Course: ED21  Prerequisite: MDP532
Incompatible with: CO4037, CSP857
Credit Points: 12  Contact Hours: 3 per week

MDPS56 COMPUTER GRAPHICS IN TEACHING
The use of computer graphics to enhance teaching and learning in a school environment. A problem solving approach is employed and students are given the opportunity to apply what they are learning to their own curriculum areas.
Courses: ED21, ED70
Prerequisite: MDP532 or MDP530
Incompatible with: CO4034, CSP843
Credit Points: 12  Contact Hours: 3 per week

MDPS57 MAJOR ISSUES IN COMPUTER EDUCATION
The application and implication of the use of information technologies in an educational environment; the impact of teaching, learning and the curriculum.
Courses: ED21, ED70
Incompatible with: CO4036, MDP502
Credit Points: 12  Contact Hours: 3 per week

MDPS40 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

MDPS41 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

MDPS42 HISTORY OF MATHEMATICS & SCIENCE
Selected topics are studied in depth - number, systems, algebra, astronomy, energy and matter.
Course: ED22
Credit Points: 12  Contact Hours: 3 per week

MDPS43 CURRICULUM SPECIALISATION IN MATHS & SCIENCE
Recent trends 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

MDPS44 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

MDPS45 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
Mechanical design: power transfer; V-belt drives; chain drives; gear drives; machine components.
Courses: IF53, ME35, ME45
Prerequisites: CEB184, MEB121
Credit Points: 8 Contact Hours: 3 per week

MEB111 DYNAMICS
The principles of dynamics: kinetics of particles and systems of particles in plane motion; coordinate systems; relative motion; various methods for the solution of mechanisms; freebody diagrams; work-energy equations; impulse; momentum and impact.
Courses: CE42, EE43, EE44, IF53, ME23, ME45, ME46
Prerequisite: MAB187
Credit Points: 6 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
Credit Points: 6 Contact Hours: 3 per week

MEB133 MATERIALS 1
Bonding; thermodynamics of solids; state and phase changes; defects; elasticity, plasticity and fracture; recovery diffusion; recrystallisation; hot and cold deformation; creep and fatigue mechanisms; heat treatment. Alloving and strengthening in metals, polymers and ceramics.
Courses: CE42, EE43, EE44, IF53, ME45, ME46
Credit Points: 6 Contact Hours: 3 per week

MEB171 INTRODUCTION TO MANUFACTURING
Manufacturing in the Australian economy; modern concepts in manufacturing systems design: the 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, IF53
Credit Points: 2 Contact Hours: 1 per week

MEB173 MANUFACTURING PRACTICE
Manufacturing in world and Australian contexts; concept of manufacturing systems; conventional and non-traditional manufacturing technology; introduction to value analysis, product design and material selection; tolerancing and metrology; total quality control.
Course: IF53
Credit Points: 7 Contact Hours: 3 per week

MEB190 ENGINEERING IN THE MEDICAL ENVIRONMENT
Overview of health system in Australia; clinical disciplines within medicine; medical terminology; history of health technology; health technology from an engineering perspective; case studies.
Course: IF53
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 and variables and the use of storage classes, string functions and data forms; engineering problems using C.
Course: ME46
Credit Points: 4 Prerequisite: CSB191 Contact Hours: 2 per week

MEB200 INDUSTRIAL EXPERIENCE 1
Students should engage in at least five weeks employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form completed by both student and the employer.
Course: ME45 Contact Hours: 5 weeks

MEB221 ENGINEERING SCIENCE 1
Statics: forces in equilibrium; resolution of forces; friction; inertia and change of motion: application to connected bodies; dynamics of rotation; centripetal force; the hoist; periodic motion; balancing; work and energy; impulse and momentum; introduction to fluids at rest and in motion.
Course: PS47
Prerequisite: MAB188 Co-requisite: PHB172
Credit Points: 6 Contact Hours: 3 per week

MEB230 MATERIALS 2
Solidification of ingots and castings; segregation; defects; properties of cast iron; steel and non-ferrous alloys. Properties of welded materials; arc characteristics; metal transfer; thermal diffusivity; cooling rates and transformations; carbon equivalents; hot and cold cracking; residual stresses and dilution effects. Properties of wrought materials; strain hardening; anisotropy, preferred orientation; defects; toughness. Microstructures and properties of high strength low alloy steels, Important non-ferrous alloys.
Courses: IF53, ME35, ME45
Prerequisite: MEB133
Credit Points: 3 Contact Hours: 3 per week

MEB231 MATERIALS 3
The structure and properties of polymers; composites and modern engineering ceramics; stress transformations; fibre and matrix properties; fibre density and orientation; rule of mixtures; modern engineering polymers; properties and applications; fracture toughness of polymers, ceramics and metals; linear elastic fracture mechanics; application to static and dynamic forces such as fatigue and stress corrosion cracking.
Courses: IF53, ME45, ME46
Prerequisite: MEB133
Credit Points: 6 Contact Hours: 3 per week

MEB250 THERMODYNAMICS 1
Basics of engineering thermodynamics; reversibility; first and second laws of thermodynamics; applications to heat engines; compressors; engine testing; emphasis on single phase systems; field visit.
Courses: IF53, ME45, ME46
Credit Points: 6 Contact Hours: 3 per week

MEB251 THERMODYNAMICS 2
Steam plant; impulse and reaction turbines; gas turbines; refrigeration; field visit.
Courses: IF53, ME35, ME45
Prerequisite: MEB250
Credit Points: 6 Contact Hours: 3 per week

MEB270 INDUSTRIAL EXPERIENCE 2
See MEB270.
Course: ME45 Contact Hours: 5 weeks

MEB300 INDUSTRIAL EXPERIENCE 2
MEB409 PROJECT 1
Investigate and present a formal report on a mechanical engineering project; project may be industry based or arise from applied research.

Course: MEB45
Prerequisite: MEB502 Co-requisite: MEB489
Credit Points: 14 Contact Hours: 6 per week

MEB409 PROJECT 2
Investigate and present a formal report on a mechanical engineering project; project may be industry based or arise from applied research.

Course: MEB46
Credit Points: 8 Contact Hours: 3 per week
MEB470 INDUSTRIAL EXPERIENCE 2
Students should engage in at least five weeks employment approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form completed by both the student and the employer.
Course: IF53
Credit Points: 6 Contact Hours: 5 weeks

MEB471 MANUFACTURING ENGINEERING 1
Practical machining principles and mechanics of chip formation; economics of machining; practical applications in metrology; NC part programming.
Course: IF53
Credit Points: 6 Contact Hours: 3 per week

MEB472 MANUFACTURING SYSTEMS 2
Fundamentals and applications of plasticity theory in the deformation of metals and plastics; concepts and applications of non-traditional machining and forming processes; introduction to automation and advanced manufacturing techniques.
Courses: ME35, ME45, ME46
Prerequisite: MEB370
Credit Points: 7 Contact Hours: 3 per week

MEB483 DESIGN 3
Design of mechanisms; welded structures; flexible components; journal bearings; computer aided design.
Courses: IF53, ME45
Prerequisites: CEB102, CSB191, MEB111, MEB133, MEB381
Co-requisites: MEB231, MEB313, MEB411
Credit Points: 7 Contact Hours: 3 per week

MEB484 BIOENGINEERING DESIGN 1
Introduction to design methodology and problem solving; risk and safety factors in design; types of bearing and bearing selection; design of beams and shafts; type and choice of gear mechanisms; human factors engineering; psychological factors in design of displays; bioengineering applications of design theory.
Course: ME46 Prerequisites: CEB185, MEB121
Credit Points: 6 Contact Hours: 3 per week

MEB489 MECHANICAL DESIGN PROJECT
A team approach to design: projects from University or industry; application of theoretical and practical design principles; design, draw and supervise manufacture of project; presentation of formal report.
Course: ME45 Co-requisites: MEB772, MEB911
Prerequisites: MEB483, MEB511, MEB610, MEB773
Credit Points: 14 Contact Hours: 3 per week

MEB490 PROJECT
Investigation and analysis of technological or managerial problem in medical engineering and presentation of a written report.
Course: ME46
Credit Points: 16 Contact Hours: 3 per week

MEB500 SPECIAL TOPIC 1
A series of lectures and tutorials in unit areas which are of special professional relevance to the student’s intended career path, or which may be available on occasions from visiting scholars.
Courses: IF53, MEB45
Prerequisites: Students to have achieved an appropriate level of preparation in topic area concerned.
Co-requisites: Depend on the syllabus of the particular special topic offered.
Credit Points: 7 Contact Hours: 3 per week

MEB501 PROJECT
A survey of relevant literature and organised experimental work resulting in conclusions presented in a formal report.
Course: ME35
Credit Points: 16 Contact Hours: 3 per week

MEB502 RESEARCH METHODS
The project exposes students to self-regulated, supervised research on a specified topic associated with materials or manufacturing engineering. Survey of relevant literature and organised experimental work resulting in conclusions presented in a formal report.
Course: ME45 Prerequisites: MEB230, MEB231
Credit Points: 8 Contact Hours: 4 per week

MEB510 NOISE & VIBRATIONS
Introduction to noise and vibration measurements and instruments; free and forced vibration of normal mode vibration; Holzner’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 Co-requisite: MAB893
Prerequisites: MAB493, PHB132
Credit Points: 7 Contact Hours: 3 per week

MEB511 STRESS ANALYSIS
Analysis of strain and stress; strain-displacement relations; stress and strain transformation; two-dimensional problems including curved bars, thick-walled cylinders and rotating discs; tension of prismatic bars and thin-walled sections; failure criteria and their applications; experimental strain measurement.
Courses: ME45, ME46
Credit Points: 7 Contact Hours: 3 per week

MEB531 ADVANCED MATERIALS
Properties and applications for modern advanced composites; fibre reinforcements of ceramic, metal and polymer materials. Coatings of metals and ceramics by vapour deposition; plasma and advanced techniques. Surface treatments for frictional and wear performance. Properties of ultra high strength steels.
Courses: IF53, ME45, ME46
Prerequisites: MEB230, MEB231
Credit Points: 7 Contact Hours: 3 per week

MEB550 HEAT TRANSFER
Conduction: steady-state, one and two-dimensions, unsteady-state; convection: boundary layers, forced, natural and radiation black and grey bodies, shape factors.
Courses: ME35, ME45, ME46
Credit Points: 6 Contact Hours: 3 per week

MEB551 PROPULSION & ENGINES
Piston engines; super chargers and 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: 5 Contact Hours: 3 per week

MEB553 AERODYNAMICS 2
Transonic and supersonic flows; critical Mach numbers; quasi one-dimensional stationary current equations, shock waves, compressional and expansion; linear flow around aerfoil sections; convergent divergent nozzles; qualitative study of flow around differing wing areas and shape; climb, cruise, descent, take off and landing calculations.
Course: EE43 Prerequisite: MEB454
Credit Points: 6 Contact Hours: 3 per week
MEB571 MANUFACTURING ENGINEERING 2
Fundamentals and applications of plasticity theory in
the deformation of metals and plastics; forming
machine performance and selection of machine tools.
Course: IF53
Credit Points: 6 Contact Hours: 3 per week

MEB580 BIOENGINEERING DESIGN 2
Effect of manufacturing processes on material properties
and product design; manufacturing tolerances;
computer-aided design and solid modelling; effect of
computer-aided manufacturing on component design;
rapid prototyping techniques; use of prototypes in
manufacturing; reverse engineering by non-invasive
techniques; design/testing/prototyping/production cycle;
application of design for manufacturing of
bioengineering devices.
Course: ME46 Prerequisite: MEB484
Credit Points: 8 Contact Hours: 3 per week

MEB600 INDUSTRIAL EXPERIENCE 3
Students should engage in at least five weeks
employment, approved by the Head of School. For the
employment to be recognised, students must submit
an industrial experience record form completed by
both the student and the employer.
Course: IF53 Contact Hours: 5 weeks

MEB601 SPECIAL TOPIC 2
A series of lectures and tutorials in unit areas which
are of special professional relevance to the student's
intended career path, or which may be available on
occasions from visiting scholars.
Courses: IF53, ME45, ME46
Prerequisites: Students require an appropriate level
of preparation in the topic area concerned.
Co-requisites: Depend on the syllabus of the par-
ticular special topic offered.
Credit Points: 7 Contact Hours: 3 per week

MEB610 MECHANICS 2
Introduction to mechanical frames and methods of
analysis; investigation of the effects of static and
dynamic loading upon frames and frame members.
Course: ME45 Co-requisite: MEB511
Prerequisites: MAB493, MEB411, MEB510
Credit Points: 6 Contact Hours: 3 per week

MEB611 STABILITY & CONTROL OF AIRCRAFT
Equations of motion; longitudinal, lateral and direc-
tional stick fixed and stick free control and stability;
manoeuvring flight; use of aerodynamic coefficients
without derivation; control system modelling.
Course: EE43 Prerequisite: MEB553
Credit Points: 5 Contact Hours: 3 per week

MEB612 MECHANICAL MEASUREMENTS
Stress and strain; force, torque and power measure-
ments; vibration measurements; pressure and sound
measurements; flow measurements; data transmis-
sion and recording.
Course: ME35
Credit Points: 8 Contact Hours: 3 per week

MEB640 AUTOMATION 1
Mathematical models of mechanical systems; system
response to given inputs; modification of system
parameters to obtain a more desirable response in
closed loop.
Courses: IF53, ME45, ME46
Prerequisites: MAB493, MEB111
Co-requisite: MEB660
Credit Points: 7 Contact Hours: 3 per week

MEB650 THERMODYNAMICS 3
Properties and testing methods of solid, liquid and
gaseous fuels; combustion calculations; flue gas
analysis; energy tariffs and audits; major applications
of energy management, eg. buildings, process plant,
compressed air systems, vehicle fleets; economic
evaluation of energy projects; introduction and
management of energy-saving programs; field visit.
Course: ME45 Prerequisite: 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 com-
ponents; hydraulic system design; hydraulic circuits.
Courses: IF53, ME45, ME46
Prerequisite: MEB462
Credit Points: 6 Contact Hours: 3 per week

MEB670 INDUSTRIAL ENGINEERING 1
Project planning and control; plant location and
layout; work study; design of experiments; linear
programming applications.
Courses: IF53, ME45, ME46
Credit Points: 6 Contact Hours: 3 per week

MEB673 MANUFACTURING ENGINEERING 3
Machine tool vibration and chatter; water-jet, laser,
EDM machining; introduction to CAD/CAM and
CNC part programming; robotics and its industrial
applications; use of laser interferometry.
Course: IF53 Prerequisite: 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 com-
ponents; machinery, process control and instrumen-
tation in the plastics forming process.
Courses: IF53, ME35
Credit Points: 7 Contact Hours: 3 per week

MEB680 ADVANCED MECHANICAL DESIGN
The application of modern materials and analytical
techniques to mechanical design; case studies; statistical
analysis of failures; application of material science in design; fracture mechanics; computer aided
optimisation techniques.
Courses: ME45, ME46
Prerequisites: MEB230, MEB231, MEB411,
MEB483
Credit Points: 7 Contact Hours: 3 per week

MEB681 BIOENGINEERING DESIGN 3
Real-time data processing circuitry; operational
amplifier design and application; filter selection and
design; logic circuit design; electrical control circuits;
design for safety and reliability; biomedical
transducers and sensors; computer control and data
quality control
project planning and control; scheduling; capacity planning; resource planning; inventory control; total quality control.

Course: ME46
Prerequisites: EEB202, EEB371, PHB504
Credit Points: 8  Contact Hours: 3 per week

■ MEB690 AIRCRAFT SYSTEMS
Design criteria and techniques of hydraulic, pneumatic and electrical circuits to provide the services to operate a modern aircraft, eg. detailed analysis of undercarriage and flap systems; aircraft fuel systems; pressurisation systems; cockpit instrumentation and associated equipment; principles and operation of gyroscopes and accelerometers.
Course: EE43
Credit Points: 6  Contact Hours: 3 per week

■ MEB701 SPECIAL TOPIC 3
See MEB601.
Courses: ME45, ME46
Credit Points: 7  Contact Hours: 3 per week

■ 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: EEB43, EEB35
Credit Points: 6  Contact Hours: 3 per week

■ MEB771 INDUSTRIAL ENGINEERING 2
Forecasting; manufacturing resources planning; scheduling; capacity planning; total quality control; modelling and simulation.
Courses: IF53, ME45  Prerequisite: MEB670
Credit Points: 6  Contact Hours: 3 per week

■ MEB772 ENGINEERING PROJECT APPRAISAL
Rational economic analysis of engineering projects at product and project level; techniques needed to establish the cost of a project; techniques for determining design changes needed to reduce the manufacturing cost of a product; strategies for new product planning.
Course: ME45
Prerequisites: MEB502, MEB472, MEB483
Co-requisites: MEB670, MEB773
Credit Points: 6  Contact Hours: 3 per week

■ MEB773 DESIGN FOR MANUFACTURING 1
Value analysis and principles related to product design; tolerance technology; design of jigs and fixtures; cutting tools applicable for various machining operations including assembly.
Courses: IF53, ME35, ME45
Prerequisite: MEB171
Credit Points: 7  Contact Hours: 3 per week

■ MEB774 OPERATIONS MANAGEMENT
Method study and work measurements; job design, project planning and control; scheduling; capacity planning; resource planning; inventory control; total quality control.
Course: EE43
Credit Points: 7  Contact Hours: 3 per week

■ MEB780 REHABILITATION EQUIPMENT DESIGN & EVALUATION
Functional requirements of orthoses; orthotic biomechanics; design and construction of orthoses; biomechanics of artificial limbs; alignment techniques; amputee socket design and manufacture; wheelchair design requirements; clinical evaluation of rehabilitation equipment.
Course: ME46
Credit Points: 8  Contact Hours: 3 per week

■ MEB790 SPACECRAFT & SATELLITE DESIGN
Analysis techniques of space vehicle control including pulsation and altitude 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: 6  Contact Hours: 3 per week

■ MEB800 SPECIAL TOPIC 4
See MEB701.
Courses: ME45, ME46
Credit Points: 7  Contact Hours: 3 per week

■ MEB810 INDUSTRIAL NOISE & VIBRATION
Vibration measurements; spectrum analysis; Kurotsis, 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  Prerequisite: MEB51
Credit Points: 7  Contact Hours: 3 per week

■ MEB891 HEALTH LEGISLATION & THE MEDICAL ENVIRONMENT
National and international legislative controlling bodies and codes; quality systems and good manufacturing practice; audit function and document trail; standards and compliance; law and medical products; hazard analysis and medical products; corrective actions and design charge; recall (hospital and production).
Course: ME46
Credit Points: 8  Contact Hours: 3 per week

■ MEB892 ROBOTICS IN HEALTH CARE
Components and terminology; dynamics of multi-linked systems; coordinate systems; mechanics and design of manipulators and end-effectors; servo system control theory; robotic sensors and location devices; computer programming of robots; anthropomorphic robots; applications of robots in surgery, rehabilitation and industry.
Course: ME46
Credit Points: 8  Contact Hours: 3 per week

■ MEB900 MANUFACTURING PROJECT
The student is required to investigate in depth and present a formal report on a problem area taken from the full range of manufacturing engineering practices. Project may arise through investigation in applied research programs or specific topics from industry.
Course: IF53
Credit Points: 24  Contact Hours: 3 per week
**MEB911 Finite Element Analysis**

General description of the finite element method; static and dynamic analysis of mechanical engineering problems; review of finite element packages.

Course: ME45

Prerequisites: MEB462, MEB511, MEB550, MEB610

Credit Points: 7  
Contact Hours: 3 per week

**MEB950 Process Plant Design**

Duct and industrial pipework system design; pressure vessel design methods; field visits.

Course: ME45

Prerequisites: MEB251, MEB462

Co-requisite: MEB511

Credit Points: 7  
Contact Hours: 3 per week

**MEB960 Fluid Systems Design**

Analysis of selected fluid systems; performance characteristics of components and systems.

Course: ME45

Co-requisite: MEB464

Credit Points: 7  
Contact Hours: 3 per week

**MEB971 Knowledge-Based Manufacturing Systems**

Introduction to knowledge-based systems (KBS); knowledge representation; inference methods and uncertainty; examples of KBS in process planning, production management, diagnostic systems; building a KBS.

Course: IF53

Prerequisite: MEB976

Credit Points: 7  
Contact Hours: 3 per week

**MEB974 Design for Manufacturing 2**

Design of press tools, dies for forming operations and joining processes; CAD in tool and die design.

Course: IF53

Prerequisite: MEB571

Credit Points: 7  
Contact Hours: 3 per week

**MEB975 Design of Manufacturing Systems**

Modelling of manufacturing systems using techniques such as IDEF; strategic planning for CIM; planning and design of FMS including selection of work stations, fixtures, AGV and robots; introduction to simulation and the use of simulation as a design tool.

Courses: IF53, ME45

Prerequisite: MEB976

Credit Points: 7  
Contact Hours: 3 per week

**MEB976 Computer Integrated Manufacturing**

Implementing CAD/CAM systems; component design using geometric modelling techniques; classification systems for part family formation and computer aided process planning; concepts and applications of flexible manufacturing systems (FMS).

Courses: IF53, ME35, ME45

Credit Points: 7  
Contact Hours: 3 per week

**MEB977 Computer Control of Manufacturing Systems**

Analysis of digital control systems; applications and control of programmable controllers; control of information systems in manufacturing; data base techniques; integration and interfacing of machine tools; application and control systems in robots; communications network.

Courses: IF53, ME45

Prerequisite: MEB976

Credit Points: 7  
Contact Hours: 3 per week

**MEB979 Manufacturing Resources Planning**

Manufacturing planning and control systems; recognising the various phases of planning in a manufacturing enterprise; lot size analysis and scheduling techniques; design aids and specifications of MRPII; measuring performances.

Course: IF53

Credit Points: 7  
Contact Hours: 3 per week

**MEB980 Design of Power Transmission Systems**

Design of systems for the transmission of mechanical power; solid elements: gears, clutches, belts, etc.; fluid elements: pneumatic and hydraulic.

Course: ME45

Prerequisites: EEB209, MEB313, MEB411, MEB483

Co-requisites: MEB510, MEB511

Credit Points: 7  
Contact Hours: 3 per week

**MEB981 Design of Materials Handling Systems**

Design of bulk material conveying and process plants, storage silos and bins, ground stockpiling systems, and the associated supporting structures.

Course: ME45

Prerequisites: EEB184, EEB185, MEB111, MEB411, MEB483, MEB511

Credit Points: 6  
Contact Hours: 3 per week

**MEI140 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-assembly renewal; overhaul and renewal; Hastings' repair limit; inspect or monitor; physics of failure.

Course: ME76

Credit Points: 12  
Contact Hours: 3 per week

**MEI170 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

**MEI171 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 guided vehicles, on-line computer aided inspection, automation integration, support technologies and planning for CIM.

Course: ME76

Credit Points: 12  
Contact Hours: 3 per week

**MEI180 Project Management**

Covers aspects of project management, including project planning feasibility assessments and financial evaluation, scheduling and resource control, controlling the project with respect to time, cost and equality.

Course: BS86

Credit Points: 6  
Contact Hours: 3 per week
**MEN181 LOSS CONTROL MANAGEMENT**
Teaches students the principles of loss prevention and how to apply them to the reduction of accidents, property loss and quality improvements.
Course: BS86
Credit Points: 6  Contact Hours: 3 per week

**MEN190 PROJECT**
Substantial piece of work relevant to the course and carried out by each student on an individual basis; report will be examined and marked by academic supervisor in consultation with industrial supervisor.
Course: ME76
Credit Points: 24  Contact Hours: 3 per week

**MEN240 MAINTENANCE MANAGEMENT & TECHNOLOGY**
Economic and environmental importance of maintenance; management of the maintenance function including organisation, data systems, cost control, spares policy, design for reliability, planning of overhauls; the maintenance of buildings; mechanical maintenance and failure analysis; electrical and electronic maintenance.
Course: ME76
Credit Points: 12  Contact Hours: 3 per week

**MEN270 MANUFACTURING RESOURCE PLANNING**
Functions and inter-relationships between the three major components - production planning, operations planning and operations control - of a manufacturing requirements planning (MRP) system; practical exercises to provide hands on experience with a MRP system such as FACT.
Course: ME76
Credit Points: 12  Contact Hours: 3 per week

**MEN271 METROLOGY**
The theory and practice of metrology which relates overall quality system requirements, methods of specifying products and components, calibration requirements, the theory of errors and uncertainties and some specialist measurements into a meaningful interpretation of metrology as part of a quality system.
Course: BS86
Credit Points: 6  Contact Hours: 3 per week

**MEN280 ENGINEERING PROJECT MANAGEMENT**
Definition of project management; organisational structures for project management; planning the project; feasibility analysis; organising the project; legal aspects; project control; quality control.
Course: ME76
Credit Points: 12  Contact Hours: 3 per week

**MEP173 QUALITY PLANNING**
Quality terminology; SQC and the Deming philosophy; quality costs; the business plan; total quality management; the place of QA; quality improvement techniques; quality assurance, the essential requirements; quality manual, program and plan; setting up and developing an appropriate QA program; organisation for quality; procedures; activities, action and QA role for design, procurement and manufacturing, audit and corrective action.
Course: BS77
Credit Points: 6  Contact Hours: 3 per week

**MEP201 SAFETY TECHNOLOGY & PRACTICE 1**
Overview of models of the accident phenomenon; technological background of potential hazards with electrical power; construction site mechanical equipment hazards and failure; failure modes of engineering materials; mechanical properties of engineering materials and their effect on failure mode.
Courses: HL88, PU65
Credit Points: 12  Contact Hours: 3 per week

**MEP273 QUALITY MEASUREMENT & TESTING**
Measurement basics; measurement and standards; measurement errors; reliability of measurements; application of statistics; the cumulative distribution function; weights and errors; statistical interpretation of test results; the hypergeometric distribution; the binomial distribution; the poisson distribution; the Pascal distribution; the normal distribution; the central limit theorem. Quality assurance in the laboratory; calibration in the laboratory; uncertainty of measurements; the laboratory quality manual; assignments and laboratory audits.
Course: BS77
Credit Points: 6  Contact Hours: 3 per week

**MEP274 QUALITY SYSTEMS IMPLEMENTATION & MAINTENANCE**
Expectations of quality systems in relation to the AS3900 series of standards and AS3905.2; system implementation principles; complexities and solutions; State purchasing policy; auditing objectives, philosophy, methodology and standards.
Course: BS77
Credit Points: 12  Contact Hours: 3 per week

**MEP301 SAFETY TECHNOLOGY & PRACTICE 2**
The psychology of industrial accidents; the technology of electrical power plant mechanical equipment and materials failure pertaining to accident prevention; accident prevention and hazard recognition; risk management and control; design and maintenance of personal protection equipment; safe habits and the effective use of personal protection equipment.
Course: PU65  Prerequisite: MEP201
Credit Points: 12  Contact Hours: 3 per week

**MEP371 RELIABILITY & MAINTAINABILITY**
Reliability and maintainability; relationship between reliability and quality; designer, manufacturer and operator; means of achieving high reliability and maintainability; fundamental theory of reliability; reliability data analysis; practical applications of Weibull's distribution to reliability and maintainability; modelling; computerised maintenance systems, economics and systems availability.
Course: BS77
Credit Points: 6  Contact Hours: 3 per week

**MEP372 MEASUREMENT TESTING & RELIABILITY**
Measurement basics; reliability of measurements; application of statistics; statistical interpretation of test results; quality (product) from reliability (process); designer, manufacturer and operators role in achieving reliability.
Course: BS77
Credit Points: 12  Contact Hours: 3 per week

**MET120 ENGINEERING DRAWING 1**
Lettering and linework; principles of third angle projection; orthographic projection; pictorial drawing; assembly drawing; sectional views; CAD.
Course: CE21
Credit Points: 7  Contact Hours: 3 per week
MET140 ENGINEERING MATERIALS I

General properties of materials; materials selection; service requirements and properties of ferrous and non-ferrous metals and alloys; corrosion types and prevention; testing procedures; plastics, ceramics and other materials.
Course: CE21
Credit Points: 8 Contact Hours: 3 per week

MET250 THERMODYNAMICS

Basic engineering thermodynamics concepts; systems; reversibility; first and second laws; working fluids; IC engine cycles and simple performance evaluations.
Course: ME23
Credit Points: 6 Contact Hours: 3 per week

MET320 ENGINEERING DRAWING 3

Geometric tolerancing; structural drafting; simplified dimensioning techniques; CAD.
Course: ME23 Prerequisites: MET120, MET220
Credit Points: 6 Contact Hours: 3 per week

MET350 PROCESS ENGINEERING

Steam plant; positive displacement compressors; refrigeration plant; positive expanders; reciprocating engines; gas turbines.
Course: ME23 Prerequisite: MET250
Credit Points: 7 Contact Hours: 3 per week

MET352 AIR CONDITIONING & REFRIGERATION

Ideal and actual refrigeration cycles including variation of operating conditions; performance of refrigeration equipment; psychrometry; cooling load estimation; air supply systems.
Course: ME23 Prerequisite: MET250
Credit Points: 7 Contact Hours: 3 per week

MET511 NOISE, STRESS & VIBRATION PRACTICE

Instrumentation used to measure vibrations, noise and stress; fundamental principles and equations related to such measurement; vibration isolation; noise standards; stress/strain transformations.
Course: ME23 Co-requisites: MET210, MET310
Credit Points: 6 Contact Hours: 3 per week

MET572 PRODUCTION PLANNING & CONTROL

Overview of production management; introduction to quality control; types of production; plant layout; scheduling and inventory control.
Course: ME23 Prerequisite: MET171
Credit Points: 6 Contact Hours: 3 per week

MET573 CAD/CAM TECHNOLOGY

Introduction to the fundamentals of CAD/CAM and geometrical modelling; automated process planning; practical applications in CNC programming and economics of machine tools; the use of robots and principles of integrated manufacturing systems.
Course: ME23
Credit Points: 7 Contact Hours: 3 per week

MET580 MACHINE ELEMENTS 1

Practical application of shear force and bending moment diagrams; selection of components from BHP manual; use of handbooks, codes and rolled steel section tables; bolted and welded connections; application of standard rolled steel sections; shafts.
Course: ME23
Prerequisites: MET120, MET220, MET210
Credit Points: 6 Contact Hours: 3 per week

MET600 MATERIALS FOR ELECTRICAL ENGINEERS

Properties of materials; materials selection; service requirements and properties of ferrous and non-ferrous metals and alloys; corrosion types and prevention; testing procedures; plastics, ceramics, etc.
Course: EE22
Credit Points: 4 Contact Hours: 1.5 per week

MET650 ENGINEERING MATERIALS II

Selection and application of shafts and couplings; selection of spur, helical and worm reduction unit; determination of gear forces; selection of springs and brakes; curved beams.
Course: ME23 Prerequisite: MET580
Credit Points: 7 Contact Hours: 3 per week

MET733 INDUSTRIAL METALLURGY

Techniques in casting; metallurgical advances in materials and their evaluation.
Course: ME23 Prerequisite: MET433
Credit Points: 6 Contact Hours: 3 per week

MET782 JIG & TOOL DESIGN

Design of jigs and fixtures for various machine operations and assembly; principles in design of blanking and forming dies; special forming techniques; dies used in blow and injection moulding; simple press capacity calculation.
Course: ME23 Prerequisite: MET171
Credit Points: 6 Contact Hours: 3 per week

MET850 ENERGY MANAGEMENT

Tariff framing and objectives; energy and power losses in electrical and mechanical plant; equipment and buildings; identification of losses; energy audits; load forecasting and control.
Course: ME23 Co-requisites: BET500, MET250
Credit Points: 6 Contact Hours: 3 per week

MET920 COMPUTER AIDED DESIGN & DRAFTING

Computer based drafting; two-dimensional drafting; design and solid modelling.
Course: ME23 Prerequisites: MET120, MET220
Credit Points: 6 Contact Hours: 3 per week

MET933 INDUSTRIAL TRIBOLOGY

Maintenance and maintenance systems; types and mechanisms of wear; bearings and seals; friction; lubricants; oils, greases, solid lubricants; gas as a lubricant; application of lubricants.
Course: ME23
Credit Points: 6 Contact Hours: 3 per week

MET960 FLUID POWER

Introduction to fluid power; compressed air systems; graphical symbols; cascade method of pneumatic system design; hydraulic components; hydraulic circuits.
Course: ME23
Credit Points: 7 Contact Hours: 3 per week

MET961 FLUID MECHANICS

Characteristics of pumps; turbines; compressors and fans; fluid couplings and torque converters. Friction losses in pipes and fittings. Pumping systems.
Course: ME23 Prerequisite: MET560
Credit Points: 7 Contact Hours: 3 per week
Course: 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 Pre requisite: COB113
Credit Points: 12 Contact Hours: 3 per week

Course: 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

Course: 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

Course: MJB105 FILM & SOCIETY
The Great Depression era, Roosevelt's new deal; the ways 1930s genre films refracted these problems; post-war reconstruction and the re-affirmation of the family unit in 1940s films; the period of the House Committee on un-American activities and associated films; the films of the 1960s and various radical movements; the treatment of a range of social issues in American films of the 1970s and 1980s.
Course: BS50, ED50
Prerequisites: MJB130 (or AAB052 or COB113)
Credit Points: 12 Contact Hours: 3 per week

Course: 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 script-writing unit.)

Course: MJB107 GENDER & THE MEDIA
Cultural gender representation of masculinity and femininity in a range of media texts; historical, sociological and economic contexts of gender ideology and cultural discourses such as motherhood, romance, the new woman; violence; women as creators of visual art and media texts; women as audience; gender and popular cultures.
Course: BS50, ED50
Credit Points: 12 Contact Hours: 3 per week

Course: 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, pixelation, computer graphics.
Course: BS50
Contact Hours: 3 per week Note: Workshops may involve a further 3 hours per week.
Credit Points: 12

Course: 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.
Course: BS50, ED50
Prerequisite: AAB052 or COB113 or MJB130
Credit Points: 12 Contact Hours: 3 per week

Course: 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 Embratel.
Course: BS50, ED50
Credit Points: 12 Contact Hours: 3 per week

Course: MJB1113 FILM DRAMA PRODUCTION
Analysis of the process and effects of mediated communication; budgeting and production management; effective presentation methods; innovation and special media events; advanced production techniques. Students are required to work in crews to produce a significant film production.
Course: BS50 Prerequisite: MJB126
Contact Hours: 3 per week Note: Workshops may involve a further 3 hours per week.
Credit Points: 12

Course: MJB1114 FILM & VIDEO BUSINESS
The role of the producer and executive producer in the packaging and financing of film and television production: corporate, training and documentary, grant films, features and mini-series; achieving balance in above-the-line, below-the-line and market-
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 theoretical perspectives. The theory and practice of communication through video; criteria used in selection of the appropriate mediated form; principles of production; realising the intention of program, conversion of script to mediated form, roles and responsibilities, budgeting and production management; future directions in video; principles and practice of editing; pictorial composition, lighting, recording; use of special effects.

Courses: BS50, BS72, ED50, IS43, IT20
Contact Hours: 3 per week Note: Workshops may involve a further 3 hours per week.
Credit Points: 12

■ MJB127 NARRATIVE CONCEPTS

The inter-relationship between improved means: lenses, editing techniques, cameras and sound and how they increase the scope of film makers. Elements of the graphic arts, the novel, dramatic forms and social phenomena in the various national groupings; designed to assist students in choosing effective narrative styles for short films and especially dramas and dramatised documentaries by providing historical analysis of stylistic and technical developments of narrative film making.

Courses: BS50, BS72
Contact Hours: 3 per week Note: Workshops may involve a further 3 hours per week.
Credit Points: 12

■ MJB129 FILM & TELEVISION SCRIPTWRITING

Writing through analysis of features, documentaries and drama; indepth approach to writing through analysis of audiences and the industry; the writer's commitment to social responsibility; use of film in television and public relations; analysis of scripts and script requirements in contemporary markets.

Courses: BS50, BS72
Prerequisite: MJB127 or 96 credit points in a degree program.
Contact Hours: 3 per week Note: Workshops may involve a further 3 hours per week.
Credit Points: 12

■ MJB130 MEDIA TEXT ANALYSIS

The strategies applied in the analysis of texts are drawn from the following areas: new criticism and the traditional legacy; semiotics and structuralism/post-structuralism; marxism and contextual/historical approaches; feminism. The media texts chosen include films, television programs, newspaper articles and cartoons, photographs and advertisements. Some examples are also drawn from literature.

Courses: BS50, BS72
Credit Points: 12

■ MJB131 TELEVISION STUDIO/POST PRODUCTION

Television studio production and post production of news/current affairs, corporate, documentary and drama; the roles of producer, director, art director, camera and audio operator, vision mixer, floor manager, technical director, production assistant and on-line editor.

Courses: BS50
Prerequisites: MJB126 and MJB129
Contact Hours: 3 per week Note: Workshops may involve a further 3 hours per week.
Credit Points: 12
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.

Course: BS50
Prerequisites: MJB121, MJB126
Credit Points: 12
Contact Hours: 3 per week

Video Documentary Production

Orientation to the history and development of documentary film and video and of the role of editing in the production: affective elements, the scope and limitations of creative editing, evolution of an editing plan, correlation of image, sound, music, pace, and tone in the total design; editing practice in workshops throughout the semester using materials provided on tape; production of a documentary or corporate video.

Courses: BS50, BS72
Prerequisites: MJB126 and MJP100 or MJB129 or MJB124
Contact Hours: 3 per week
Note: Workshops may involve a further 3 hours per week.
Credit Points: 12

Professional Media Practice

An opportunity to observe, and gain insight into, the applications of theory to practice. The student is placed with an approved employer. The lecturer in charge of the unit obtains reports from the student at regular intervals. The student is required to complete a progressive assessment program. The student's result is determined on the basis of reports, continuous assessment and the employer's report.

Course: BS50
Prerequisites: MJB122 or MJB138 or BBus (InL) majors; MJB113 or MJB134 for BBus (Ftv) majors.
Credit Points: 12
Contact Hours: 3 per week

Public Affairs Reporting

The role of the reporter in covering local, state, national and international politics, and major political issues are examined in depth. Topics include: the public's right to know, defamation restrictions, the constitution, federalism, defence, immigration and multiculturalism, health, welfare and education, the environment, science and industrial issues, economics and finance reporting.

Course: BS50
Prerequisite: MJB124
Credit Points: 12
Contact Hours: 3 per week

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

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 faced in ethical dilemmas and asked to make decisions and justify their choices; the value of
deathknocks, privacy, defining off-the-record, handling leads and women in the media.

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

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, BS72
Prerequisite: MJB130 (or AA B052 or COB113)
Credit Points: 12
Contact Hours: 3 per week

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, Nino cinema, the influence of the war on film content and production, and the New German cinema, including the work of Herzog, Fassbinder, Wenders, Scholendorf and Kluge. France: the work of Bresson, Resnais, Tati, Demy and Deville, the avant-garde and post-1968 cinema.

Course: BS50
Prerequisite: MJB130 (or AA B052 or COB113)
Credit Points: 12
Contact Hours: 3 per week

Australian Film

The trend towards period films and the construction of a national identity in the 1970s compared with earlier periods; the representation of women and its relationship with the growth of the women's movement; the depiction of Aborigines in recent films compared with earlier portrayals; images of masculinity; low budget features and independent film makers; images of adolescence in recent films.

Course: BS50
Prerequisite: MJB130 (or AA B052 or COB113)
Credit Points: 12
Contact Hours: 3 per week

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 costuming; cinematography: including camera angle, distance, movement, animation, and special effects, editing, and sound.

Courses: BS50, BS72
Prerequisite: MJB130 (or AA B052 or COB113)
Credit Points: 12
Contact Hours: 3 per week

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, BS72
Credit Points: 12
Contact Hours: 3 per week
MJB149 FILM HISTORY
The development of the Hollywood classical continuity style; notions of realism and their relation to French poetic realism of the 1930s, neo-realism in post war Italy, and the kitchen-sink films of Britain in the 1960s; modernism; expressionism and film noir; the impact of wide-screen formats; the various ‘new waves’ of the 1950s and 1960s; and the impact of new technologies and information systems on film.
Courses: BS50, ED50
Credit: 12 Contact Hours: 3 per week

MJNI01 ADVANCED MEDIA THEORY
This is the first unit of the media studies strand of the Master of Business (Communication). As a preliminary to undertaking research in media studies, students study contemporary media theory in detail, extending the overview of communication and media theory offered in Communication Theory 2. Topics include: contemporary political economy of the media, feminist cultural theory, textual and audience studies in media and cultural studies, post-modernism, and cross-cultural communication. These studies will find preliminary application in some relevant research areas.
Course: BS84
Prerequisite or Co-requisite: MJ101 or equivalent
Credit: 12 Contact Hours: 3 per week

MJNI01 ADVANCED MEDIA ANALYSIS
The theoretical strategies discussed in MJNI01 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 the print media, including newspapers and magazines; film; television; and popular fiction.
Course: BS84
Prerequisite or Co-requisite: MJ100
Credit: 12 Contact Hours: 3 per week

MJNI03 AUSTRALIAN MEDIA CONTEXTS
Analyses specific aspects of the interaction between mass media and the Australian cultural context; approaches this relationship through cultural studies methodologies: discourse analysis, semiotics, structuralism and theories of cultural production; explores at an advanced level the histories and contemporary configurations of Australian media industries; telecommunications, television, film, radio, advertising and the print media.
Course: BS84
Prerequisite or Co-requisite: MJ100
Credit: 12 Contact Hours: 3 per week

MJNI05 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: 12 Contact Hours: 3 per week

MJNI06 JOURNALISTIC FREEDOM & RESPONSIBILITY
Provides opportunities for in-depth studies of the historical, philosophical and theoretical foundations of journalism, the law of journalism and journalistic responsibilities. Students learn historiography and how to research the law. They present to the class papers that might later become part of their theses on a historical issue or a legal issue or on an ethical issue.
Course: BS84
Credit: 12 Contact Hours: 3 per week

MJNI07 NEWS MEDIA & INTERNATIONAL CONFLICT
Covers social contract and ethical theory in order to establish the rights and obligations of the citizen and government in Western liberal democracies; role of the media and free press in time of war or limited conflict; the wider ethical and theoretical issues behind reporting conflict, defence and defence theory to meet the military on equal terms, and the practicalities of international defence and war reporting.
Course: BS84
Credit: 12 Contact Hours: 3 per week

MJP101 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: 12 Contact Hours: 3 per week

MJP102 COMMUNICATION THEORY 2
A systematic introduction to the critical and quantitative traditions of communication theory and research, with special emphasis on critical media theory. Applications to mass media, including television, film, radio, advertising, print, music.
Courses: BS61, BS72, BS84
Credit: 12 Contact Hours: 3 per week

MJP103 THE LITERATURE OF JOURNALISM
The body of ‘classical’ literature pertaining to the theories of journalism; identification of individual research interests.
Course: BS84
Credit: 12 Contact Hours: 3 per week

MKB104 ADVANCED MARKETING RESEARCH TECHNIQUES
A market research project utilizing concepts and techniques gained from market research.
Course: BS50
Prerequisite: MKB151
Credit: 12 Contact Hours: 3 per week

MKB105 PROFESSIONAL PUBLIC RELATIONS PRACTICE
Final year students work in public relations oriented organisations under supervision for 4 weeks. Students arrange for their own placements, with approval from lecturer responsible for the unit. Acceptance into this unit is subject to the approval of the Head of School, and/or major coordinator.
Course: BS50
Prerequisites: MKB123, MKB120. Students must have completed 5 semesters full-time or equivalent.
Credit: 12 Contact Hours: 3 per week
MKBI06 PROFESSIONAL ADVERTISING PRACTICE

Final year students work in advertising oriented organisations under supervision for 4 weeks. Undergraduates arrange their own placements, which must be approved by lecturer responsible for the unit. Acceptance into this unit is subject to the approval of the Head of School, and/or major coordinator.

Course: BS50
Prerequisite: MKB126 and students must have completed 5 semesters full-time or equivalent.
Credit Points: 12
Contact Hours: 3 per week

MKB107 MARKETING DECISION SUPPORT SYSTEMS

Advanced treatment of the theory and application of marketing decisions; the evaluation of marketing policy and strategy; consumer and organisational buying behaviour; market segmentation, demand assessment; product, price, promotion and distribution.

Course: BS50
Prerequisite: MKB141 and EB109
Credit Points: 12
Contact Hours: 3 per week

MKB112 RESEARCH METHODS

Traditions and methods in research, primary and secondary, qualitative and quantitative research.

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

MKB116 PRINCIPLES OF ADVERTISING

History of advertising; structure of the industry; functions and objectives; campaign planning; budgeting; elementary media planning; creative functions; elementary copywriting; principles of advertising.

Courses: BS50, BS72
Prerequisite: MKB140 (may be a co-requisite)
Credit Points: 12
Contact Hours: 3 per week

MKB117 PUBLIC RELATIONS CAMPAIGNS

This is a specialist public relations unit examining strategies to relate an institution or individual to the community through comprehensive public relations programs; these may include fundraising, special events, and corporate sponsorships; designed to increase intellectual depth of understanding and give students practical experience in problem solving and the implementation of actual community relations programs for various organisations.

Course: BS50
Prerequisites: MKB120 and MKB133
Credit Points: 12
Contact Hours: 3 per week

MKB118 ADVERTISING COPYWRITING

Target audience definition; copywriters and their functions, copy platforms; copy rationales; positioning; creative thought processes; advertising writing theories and styles; layout principles; newspaper, magazine and direct mail; outdoor copywriting; basic print production.

Courses: BS50, BS72
Prerequisites: MKB116, MKB112 or MKB151
Credit Points: 12
Contact Hours: 3 per week

MKB119 ADVERTISING COPYWRITING - ELECTRONIC

Development of copy platforms and positioning; introduction to electronic media copy and storyboarding; electronic copywriting; graphic production; production of radio and TV commercials; campaign development and presentation of campaigns.

Courses BS50, BS72
Prerequisites: MKB118 and MB126 (may be a co-requisite)
Credit Points: 12
Contact Hours: 3 per week

MKB120 PUBLIC RELATIONS WRITING & EDITING

The function of media other than mass media. Public relations practitioners work in government, institutional and corporate environments which deal with internal and external audiences through a wide range of written materials as well as speechmaking. Writing and editing newsletters are covered through workshops. The role of the editor is emphasised to give an understanding of the importance of communication to achieve corporate objectives. Of equal importance is an understanding of techniques to write, edit and present speeches effectively.

Course: BS50
Prerequisite: MKB123
Credit Points: 12
Contact Hours: 3 per week

MKB121 RETAIL ADVERTISING

Retail advertising; motivational techniques; national advertising; imagery and typography; advertising departments versus agencies; handbills, inserts, direct mail and catalogues; audience differentiation; measuring results; planning, copywriting and presentation of retail campaigns.

Courses: BS50, BS72
Prerequisite: MKB118 or MKB145 (may be a co-requisite)
Credit Points: 12
Contact Hours: 3 per week

MKB122 ADVERTISING REGULATION & ETHICS

The various laws, codes and regulations which apply to advertising in Australia; the codes of ethics of the different institutions of advertising; recent and current examples of contentious advertisements; application of the principles and ethical standards covered.

Courses: BS50, BS72
Prerequisite: MKB129
Contact Hours: 3 per week

MKB123 PUBLICATION MANAGEMENT

The requirements for communicating in print and managing this process. It analyses the steps involved in design and production, focusing on management and liaison skills. The unit offers students desktop publishing skills which are required for assignments, and the scope to produce a brochure for a client.

Courses: BS50, BS72
Prerequisite: MKB129
Contact Hours: 3 per week

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 practice the public relations skills emphasised in later units.

Courses: AA21, BS50, BS72, JS43
Credit Points: 12
Contact Hours: 3 per week

MKB125 MEDIA PLANNING

Costing and scheduling media, qualitative and quantitative factors affecting media selection and use, market targeting, researching the media plan, planning media strategy, coordination, media options, concepts of media decision making, comparisons, trends, media and the computer.

Courses: BS50, BS72
Prerequisite: MKB116
Credit Points: 12
Contact Hours: 3 per week
MKBI26 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

MKBI27 ADVANCED ADVERTISING
Expansion and addition of theoretical perspectives and skills gained in the prerequisite unit. There is heavy emphasis on application of these perspectives to solving advanced advertising problems and the use of both basic and advanced skills in these solutions.
Course: BS50
Prerequisite: MKB118 or MKB125
Credit Points: 12 Contact Hours: 3 per week

MKBI28 DIRECT RESPONSE ADVERTISING
Principles and practice of direct response advertising in its various forms; ethical considerations against a background of Australian societal norms.
Courses: BS50, BS72
Prerequisite: MKB126 or MKB157
Credit Points: 12 Contact Hours: 3 per week

MKBI29 PUBLICITY & PROMOTION - PRINT
This unit focuses on communication with the print media. Students are given the background, techniques and skills needed to work with newspapers, magazines and trade press. Producing and evaluating communication materials such as news releases, features, and media kits form the core of the unit. Guest lecturers join the class to discuss aspects of media relations, writing style and publicity planning.
Courses: BS50, BS72
Prerequisite: MJBI26, MKB124
Credit Points: 12 Contact Hours: 3 per week

MKBI30 PUBLICITY & PROMOTION - ELECTRONIC
Production skills in video as they apply to public relations in organisations. Students produce a complex video news magazine for a client organisation. This includes scripting, presenting, studio management, special effects, graphics, field operation of video equipment and video editing, techniques for producing community service announcements.
Course: BS50
Prerequisite: MJBI26, MKB129
Credit Points: 12 Contact Hours: 3 per week

MKBI31 ADVERTISING CAMPAIGNS
Students draw together and apply all of the professional knowledge and skills gained throughout their degree studies. Application of this to problems or cases set by lecturers and practitioners. The accent is on development and application.
Course: BS50
Prerequisite: MKB126
Credit Points: 12 Contact Hours: 3 per week

MKBI32 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

MKBI33 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 in a particular area.
Course: BS50
Prerequisite: MKB123
Credit Points: 12 Contact Hours: 3 per week

MKBI34 BUSINESS FORECASTING
The theory and application of quantitative forecasting models including smoothing techniques, CDA and auto-projective; causal models in sales and advertising; qualitative models including Delphi.
Course: BS50
Prerequisites: EPB109 and MKB108
Credit Points: 12 Contact Hours: 3 per week

MKBI35 MARKETING LOGISTICS
Distribution strategies and techniques and the activities that facilitate product flow; distribution and level strategies; inventory costs and control; efficient raw product mix and the application of linear programming; transhipment models; allocation efficiency; customer queuing.
Course: BS50
Prerequisites: MKB140, EPB109 or MKN106
Credit Points: 12 Contact Hours: 3 per week

MKBI36 COMPUTER APPLICATIONS IN MARKETING
Techniques in market research; univariate and bivariate analysis; nonparametric statistics; ANOVA; the multivariate techniques common to marketing research; dependence methods such as multiple regression, MANOVA, multiple discriminant analysis and conjoint measurement; interdependence methods including factor analysis, cluster analysis and multidimensional scaling.
Course: BS50
Co-requisite: MKBI51
Prerequisites: EPB109 and MKB140
Credit Points: 12 Contact Hours: 3 per week

MKBI37 PRINCIPLES OF MARKETING
The role of marketing and its importance in contemporary organisations. Introduction to marketing decision areas: the marketing concept; understanding consumer behaviour and preferences, marketing research and marketing information systems; market segmentation and planning, strategy and control; the components of the marketing mix, viz. product planning, management and development; pricing methods and strategies; promotion including personal selling, advertising, publicity, sales promotion, distribution.
Courses: BS50, BS72, ED23, IF52, IF53, IS43, IT20
Credit Points: 12 Contact Hours: 3 per week

MKBI41 MARKETING MANAGEMENT
Contemporary marketing concepts linked to strategic applications; market segmentation, product positioning, product portfolio analysis, marketing strategies in key areas such as product development, promotion, distribution and pricing.
Courses: BS50, IF53
Prerequisite: MKB140 or MKN106
Credit Points: 12 Contact Hours: 3 per week
MKB142 CONSUMER BEHAVIOUR
Internal and external influences on the individual consumer including motivation, perception, learning, attitudes and social class, culture, reference groups, communicating and market segmentation, and the consumer decision process.
Courses: BS50, IF53  Co-requisite: MKB140
Prerequisite: MKB140 or MKN106
Credit Points: 12  Contact Hours: 3 per week

MKB143 EXPORT MANAGEMENT
The role of government including need to export; export incentives; methods of exporting, including agents and merchants, consultants and overseas organisations; bases for export sales, including terminology and exporter's responsibilities; export documentation; finance of export trade, including methods of payment, finance for export transactions and foreign exchange transactions; export finance insurance corporation; modes of International transport; marine insurance; quoting for export, including pricing policies, export costs, marketing and packaging and quotations. A major case study is included as part of the study program.
Courses: BS50, IF53
Credit Points: 12  Contact Hours: 3 per week

MKB144 SALES MANAGEMENT
The range of analytical activities performed in the design and management of the selling function of the organisation. These activities include sales forecasting, sales force size, territory management, selling logistics, sales force motivation, sales negotiation, sales ethics.
Course: BS50
Prerequisite: MKB140 or MKN106
Credit Points: 12  Contact Hours: 3 per week

MKB145 RETAILING MANAGEMENT
Introduction to the techniques, concepts and analytical issues involved in retailing management. The dynamics of the retail system are examined from a strategic marketing viewpoint and include a basic appreciation of retail customer behaviour and retail information needs. The analysis of store location and the evaluation of retail trade areas are given detailed attention along with store layout and design. Elements of merchandising, franchising and promotion are also examined.
Course: BS50  Prerequisite: MKB140 or MKN106
Credit Points: 12  Contact Hours: 3 per week

MKB146 SERVICES MARKETING
The special characteristics of services and possible strategies to deal with those characteristics; the nature and classification of services; the differences between services and products and their implications for the marketing/customer mix and for marketing strategy; the relationship of the service organisation with its customers; the management of product support services; the concept of productivity for services, including the management of demand and supply; the search for service quality and consistency, including the issue of standardisation versus customisation.
Courses: BS50, IF53
Prerequisite: MKB140 or MKN106
Credit Points: 12  Contact Hours: 3 per week

MKB147 RETAIL MERCHANDISING
Development of a strong grounding in those retailing activities that comprise the merchandising function of the different types of retail stores including the distributors of durable consumer goods from the large supermarket or department store to the smallest corner store. Topics associated with the merchandising of retail products: forecasting customer demand, planning, promotions, as well as the managerial control of buying and stocking merchandise.
Course: BS50  Prerequisite: MKB140 or MKN106
Credit Points: 12  Contact Hours: 3 per week

MKB148 MARKETING DECISION MAKING
Examines the kinds of decisions marketing practitioners have to deal with in their daily business activities. These areas include: sales forecasting, market analysis, product planning, pricing, promotion, distribution and other related areas. Decisions are viewed from a predominantly quantitative perspective with emphasis on computer models and spreadsheets as the vehicles for their application.
Courses: BS50, IF53
Prerequisite: MKB140, MKN106 or ISB892
Credit Points: 12  Contact Hours: 3 per week

MKB149 INTERNATIONAL MARKETING
Nature and practice of international marketing. Assumes a familiarity with general marketing management and builds on this to develop insight into and understanding of the peculiar nature of international marketing management and the problems of marketing within different national markets. The unit is managerial in the sense that it focuses on problems and decisions facing managers of international marketing in business enterprises.
Courses: BS50, IF53
Prerequisite: MKB140 or MKN106
Credit Points: 12  Contact Hours: 3 per week

MKB150 MARKETING RESEARCH
Problem formulation; research design and sources of information; data collection; analysis and interpretation of data; the marketing research report and presentation.
Courses: BS50, IF53
Prerequisite: MKB141 or MKN106
Credit Points: 12  Contact Hours: 3 per week

MKB151 PROMOTIONAL STRATEGY
The marketing promotional mix and its relationship with the marketing mix, the structure of marketing communications and their environmental framework of promotion practice; the media of marketing communications; the planning and control.
Course: BS50  Prerequisite: MKB140 or MKN106
Credit Points: 12  Contact Hours: 3 per week

MKB152 PROFESSIONAL MARKETING PRACTICE
With the approval of the lecturer, students undertake a preferred study program within the marketing framework, e.g. some particular area of the marketing mix. This requires students to undertake a project or internship with a suitable company, where they actively work on a part-time basis. The program is aligned as closely as possible to the preferred area of study. Students are required to submit a number of reports reflecting the theoretical concepts learned and the application to their job experience.
Courses: BS50, IF53  Prerequisite: MKB151
Credit Points: 12  Contact Hours: 3 per week

MKB153 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 strategies.
strategy, a task undertaken in most companies at the strategic business unit level.

Courses: BS50, IS3
Prerequisite: MKB 141 or MKN 106
Credit Points: 12  Contact Hours: 3 per week

MKB 157 PRINCIPLES OF DIRECT MARKETING
The underlying principles, standards and practice of direct marketing: customer requirements; acquisition and servicing; strategic and tactical planning; database marketing; list procurement and use; cost and profit considerations; product delivery.

Courses: BS50, BS72
Prerequisite: MKB 140 (may be a co-requisite)
Credit Points: 12  Contact Hours: 3 per week

MKB 158 TELEMARKETING
As direct marketing is a growth area it is essential that students understand the fundamentals of effective telemarketing. There is heavy emphasis on practical work: how to set up a telemarketing centre and how to conduct a structured telemarketing campaign. Includes lectures by practitioners and field visits.

Course: BS50  Prerequisite: MKB 157
Credit Points: 12  Contact Hours: 3 per week

MKB 159 DIRECT MARKETING CAMPAIGNS
Students examine and analyse contemporary direct marketing and integrated marketing practice and present their findings in seminars. They plan and execute direct marketing campaigns as briefed by practitioners. Recommendations are presented to those practitioners for comment. Skills in appropriate areas are advanced to fully operative level.

Course: BS50  Prerequisite: MKB 158
Credit Points: 12  Contact Hours: 3 per week

MKN 100 SEMINARS IN MARKETING THEORY & RESEARCH METHODS
A grounding in recent developments in marketing theory and in research methods; topics covered include: marketing thought and theories, evaluating marketing theories, designing research studies and the thesis, research proposals.

Credit Points: 12  Contact Hours: 3 per week

MKN 101 SEMINARS IN BUSINESS FORECASTING
Exponential and moving average techniques; decomposition models; seasonal regression models; stochastic models; stationary and non-stationary models; model identification and estimation; diagnostic checking; transfer functions.

Courses: BS61, BS85
Credit Points: 12  Contact Hours: 3 per week

MKN 102 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

MKN 103 SEMINARS IN MARKETING MODELLING
Introduction to advanced simulation work in market structures and the impact of influencing variables.

Courses: BS61, BS85  Prerequisite: MKN 100
Credit Points: 12  Contact Hours: 3 per week

MKN 105 DECISION SUPPORT SYSTEMS
Timely and accurate information is a management resource, and computers can process much of this information to augment and extend a manager’s capacity; provides an understanding of the importance, variety and value of both quantitative and qualitative decision support systems, including a significant emphasis on computer-based information systems such as data bases and expert systems from the point of view of systems users rather than of specialist system analysis.

Course: BS81  Credit Points: 12  Contact Hours: 3 per week

MKN 106 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

MKN 107 SEMINARS IN MARKETING MANAGEMENT
An advanced study of marketing, marketing systems and market management decision processes within the contemporary structure of social, cultural, political, economic, business and organisational environments. Advanced marketing theory from both strategic and tactical perspectives with emphasis on the relationship between marketing and corporate policy as well as both the internal and external social and behavioural and motivational factors. Marketing issues associated with both profit and non-profit organisations and the relevance of marketing theory to these institutions, including the developing area of international marketing.

Courses: BS61, BS83
Credit Points: 12  Contact Hours: 3 per week

MKN 108 SEMINARS IN CONSUMER BEHAVIOUR
Consumer behaviour models and the influences of psychological and behavioural variables.

Course: BS85  Prerequisite: MKB 142
Credit Points: 12  Contact Hours: 3 per week

MKN 109 PRODUCT INNOVATION & DEVELOPMENT
Formal innovation techniques and the development process through to new product initiation.

Courses: BS61, BS85
Credit Points: 12  Contact Hours: 3 per week

MKN 110 SEMINARS IN STRATEGIC MARKETING
Students examine the theoretical concepts in strategy formulation and develop applied models. The development of strategic marketing plans for organisations.

Course: BS85  Prerequisite: MKN 107
Credit Points: 12  Contact Hours: 3 per week

MKN 111 MARKETING FOR QUALITY MANAGEMENT
Introduction to advanced marketing theories and practice and the need for a focus on marketing and quality management.

Courses: BS85, BS86
Credit Points: 6  Contact Hours: 3 per week
MKNI12/1-4 THESIS
Synthesis and applications of studies in the course. Topic may be taken from any aspect of marketing. Formulation of thesis undertaken in conjunction with supervisor and other academic staff.
Courses: BS51, BS87
Credit Points: 48

MKNI13/1-8 THESIS
Same as for MKNI12/1-4. This unit forms the final two thirds of the masters thesis.
Course: BS51
Prerequisite: MKNI12/1-4
Credit Points: 96

MKP100 FUNDRAISING PRINCIPLES
Fundamentals of fundraising; preparation of the case statement; planning methods; the various techniques of fundraising. Introductory segments on public relations, advertising, marketing and management. Topics include: philosophy of fundraising, its role in society, budget, fundraising, gift and capital campaigns, planned giving, researching and establishing prospect bases, procedures of solicitation, team building of boards and volunteers, role of foundations.
Courses: BS72, BS78
Credit Points: 12
Contact Hours: 3 per week

MKP101 FUNDRAISING CAMPAIGNS
Practical experience in planning and implementing a fundraising campaign: planning a complete fundraising program; defining relevant constituencies and pinpointing appropriate vehicles for linking to these target markets; budgeting and managing campaign elements; working successfully with boards and volunteers where appropriate; evaluating fundraising efforts. Students undertake a group project in the form of the analysis of a fundraising program. Topics include: strategic planning, management, financial issues, ethics and evaluation techniques.
Courses: BS72, BS78
Prerequisite: MKP100
Credit Points: 12
Contact Hours: 3 per week

MKP102 ENTREPRENEURSHIP
This unit is a capstone to the course for Business Administration students. It encompasses the use of entrepreneurial management styles and creative business planning as a strategic management tool. Students will be required to develop and write a business plan based on an entrepreneurial idea, incorporating a hands-on practical approach.
Courses: BS73, ED23
Prerequisite: Four postgraduate business units
Credit Points: 12
Contact Hours: 3 per week

MKP107 MARKETING FOR ARTS ADMINISTRATORS
This unit provides students of arts administration with an understanding of the principles of promotion, sponsorship, advertising, communication and marketing in the arts environment and the skills to develop marketing plans and campaigns for arts organisations.
Course: BS73
Prerequisite: MKP108 or MKN106
Credit Points: 12
Contact Hours: 3 per week

MKP108 ARTS ADMINISTRATION & SOCIETY
Arts administration in the context of the national and international community; social, political, cultural and economic influences; government arts policies and funding processes; organisational structures and strategic planning in the arts; community, multicultural and regional arts; current research and practices in arts administration.
Course: BS73
Credit Points: 12
Contact Hours: 3 per week

MKP109 THE ARTS INDUSTRY
The framework of the arts as an industry; operational procedures; financial management; arts and the law; industrial relations in the arts; the use of the media; computer applications; business and volunteer support; work secondment case study.
Course: BS73
Prerequisite: MKP108
Credit Points: 12
Contact Hours: 3 per week

NSB114 CLINICAL PRACTICE 1A
The acquisition of skills which are fundamental to nursing practice; communication skills, health assessment skills and selected technical skills in both University (on-campus) and clinical (off-campus) laboratories. Clinical laboratory experiences take place in a variety of settings which include various types of health care facilities, community facilities, domiciliary nursing services, occupational health services, disability services and outpatients clinics.
Course: NS40
Co-requisite: NSB151
Credit Points: 8
Contact Hours: 60 per 2 week block following semester

NSB115 CLINICAL PRACTICE 1B
Provides students with the opportunity to consolidate the skills they have acquired during the preceding clinical unit, and aims at achievement of a specific level of clinical competence. Learning experiences are conducted in the clinical (off-campus) laboratory, and settings are as previously described.
Course: NS40
Co-requisite: NSB114
Contact Hours: 60 per 2 week block following semester

NSB150 NURSING MANAGEMENT
This unit provides nurses with the opportunity to examine theory and processes that are relevant to the management of nursing care. Students will study selected management and leadership theories from a variety of perspectives. Management processes: planning, organising, staffing, directing, controlling.
Course: NS48
Credit Points: 8
Contact Hours: 3 per week

NSB151 FOUNDATIONS OF NURSING PRACTICE 1
An introduction to the major concepts which are fundamental to nursing practice. Topics include: the nature of individuals, families and communities, the impact of the environment on health, the concept of health, and the relationship between nursing and health care. The significance of a conceptual approach to nursing practice is explored.
Course: NS40
Credit Points: 8
Contact Hours: 3 per week

NSB152 FOUNDATIONS OF NURSING PRACTICE 2
Further development of the concepts of people, environment, health and nursing in order to facilitate an understanding of the theoretical basis of nursing practice. Topics include: human needs from a holistic perspective, human resources which can be utilised in the attainment of health, the roles of the nurse as a clinician, patterns of nursing care delivery, health care in Australia, and the concept of the multidisciplinary health care team.
Course: NS40
Prerequisite: NSB151
Credit Points: 8
Contact Hours: 3 per week

NSB201 PRINCIPLES OF PATIENT CARE
Emphasises the ethical, legal and clinical accountability of the radiographer for safe patient care; aims to develop in radiography students an awareness of
their responsibilities in protecting patients and promoting their well-being.

Course: PH152
Credit Points: 4       Contact Hours: 2 per week

- **NSB207 NURSING & THE INDIVIDUAL**
  Designed to deepen and broaden the clinical decision making skill base of students who already have a foundation in nursing and related sciences from previous studies; explores the significance of conceptual models for clinical decision-making; provides physical and psychosocial assessment skill practice; explores the concept of nursing diagnosis and associated core planning, and highlights the use of research in support of clinical decisions.

Course: NSB40
Credit Points: 8       Contact Hours: 3 per week

- **NSB214 CLINICAL PRACTICE 2A**
  Provides students with the opportunity to continue the development of skills which are fundamental to nursing practice. Students practise applied communication skills, nursing diagnosis and care planning skills, and further selected technical skills in both University (on-campus) and clinical (off-campus) laboratories. The clinical laboratory experiences in this unit take place in a variety of settings which include hospitals, nursing homes and palliative care facilities.

Course: NSB40
Co-requisites: NSB114, NSB115, NSB151, NSB152
Credit Points: 8       Contact Hours: 3 per week

- **NSB215 CLINICAL PRACTICE 2B**
  Provides students with the opportunity to consolidate the skills which they have acquired during the preceding unit; aims at the achievement of an increasing level of competence in clinical situations. The learning experiences are conducted in the clinical (off-campus) laboratory and the settings are as described for the preceding clinical practice unit.

Course: NSB40
Co-requisites: NSB114, NSB115, NSB214
Contact Hours: 60 per 2 week block following semester
Credit Points: 8

- **NSB301 NURSING & BIOPHYSICAL HEALTH 1**
  Effects of selected pathophysiologic processes on meeting human needs; topics include: assessment and nursing diagnosis of gas exchange, circulation, hydration, physical comfort and safety problems; and independent and collaborative strategies designed to promote, maintain and/or restore health.

Course: NSB40
Prerequisites: NSB151, NSB152
Credit Points: 8       Contact Hours: 3 per week

- **NSB302 NURSING & MENTAL HEALTH 1**
  Theories, concepts and models which provide the basis for understanding the individual and their mental health needs, and aims to provide a framework for nursing care which acknowledges the importance of promoting, maintaining and restoring mental health. It addresses contemporary concepts of mental health and mental illness; biological and sociocultural factors which can influence mental health and mental health problems; mental health assessment; and strategies for mental health promotion.

Course: NSB40
Prerequisites: NSB151, NSB152
Credit Points: 8       Contact Hours: 3 per week

- **NSB304 NURSING & CULTURE**
  Socio-structural, behavioural, lifestyle and genetic factors play a large part in the determination of health status in contemporary Australia; aims to develop an understanding, acceptance and appreciation of culture such that students are better able to provide people-centred care within a multicultural health care context. Topics include: nature of culture and behavioural practices of societies, fundamental aspects of socio-anthropological and epidemiological methodology, cultural nature of contemporary Australian society, health policy and ethnic sub-cultural diversity, and cultural beliefs, activities, values and behaviour regarding selected health-related practices.

Courses: NS40, NS48
Credit Points: 8       Contact Hours: 3 per week

- **NSB308 NURSING & MENTAL DISORDER**
  Mental disorder is common and extensive across Australia, and affects all age and social groupings. This unit provides a framework for addressing the important issues and principles associated with the understanding of the interrelatedness of individual, family, community and environment in the development, maintenance and resolution of mental disorders. Topics which include the psychodynamics of normal and abnormal behaviour, diagnosis and presentation of common mental disorders, psychobiology, psychopharmacology, nursing intervention and research in the aetiology and treatment of mental disorders and mental health legislation.

Courses: NS40, NS48
Credit Points: 8       Contact Hours: 3 per week

- **NSB349 COUNSELLING & CRISIS MANAGEMENT**
  This unit will provide an awareness of the basic theories and principles of crisis intervention methodology, and will focus on the role of nurses in counselling clients who are experiencing difficulties in their ability to deal with situations in which they find themselves. Topics to be addressed include major theoretical and conceptual perspectives of counselling; the process of change; counselling in a group context; typology of crises; and crisis management.

Course: NS48
Credit Points: 8       Contact Hours: 3 per week

- **NSB350 HEALTH EDUCATION IN NURSING**
  This unit is designed as a foundation for the exploration of the theoretical bases of education, including concepts and issues within educational research. Topics to be explored include historical perspectives of educational developments; educational research; educational theories; their utilisation; and client education in a health care context.

Course: NS48
Credit Points: 8       Contact Hours: 3 per week

- **NSB360 CLINICAL PRACTICE 3A/BH**
- **NSB370 CLINICAL PRACTICE 3A/MH**
  Students develop a range of skills which are associated with the nursing care of people experiencing biophysical or mental health dysfunction. Students practise the application of problem solving skills, selected technical and process skills and organising skills in both University (on-campus) and clinical (off-campus) laboratories. The clinical laboratory experiences in this unit are undertaken in settings which include hospitals and palliative care facilities or psychiatric-mental health facilities.

Course: NS40
Co-requisites: NSB214, NSB301, NSB215, or NSB302
Credit Points: 8       Contact Hours: 3 per week
- NSB361 CLINICAL PRACTICE 3B/BH
- NSB371 CLINICAL PRACTICE 3B/MH

See NSB215.

Course: NS40  Co-requisite: NSB360 or NSB370
Contact Hours: 60 per 2 week block following semester
Credit Points: 8

- NSB401 NURSING & BIOPHYSICAL HEALTH 2

Further develops an appreciation of the effects of selected pathophysiological processes on the meeting of human needs. Topics addressed include the assessment and nursing diagnosis of elimination, mobility, nutrition, skin integrity and sleep/rest problems along with independent and collaborative strategies designed to promote, maintain and/or restore health.

Course: NS40  Credit Points: 8  Contact Hours: 3 per week

- NSB402 NURSING & MENTAL HEALTH 2

Expansion of the application of nursing knowledge and research about mental health to the provision of nursing care to clients with mental health problems. It provides, at an advancing level, a theoretical foundation for mental health nursing practice with a focus on diagnostic reasoning and intervention strategies to promote mental health and wellbeing. Topics include: theories of stress and adaptation; assessment, diagnosis and intervention in situations of developmental disorder, selected organic and non-organic mental syndromes and crisis intervention.

Course: NS40  Prerequisites: NSB151, NSB152  Credit Points: 8  Contact Hours: 3 per week

- NSB406 NURSING & THE FAMILY

Family nursing practice recognises the substantial impact families can have on the health of individuals within the family unit, and upon society as a whole. An introduction to the knowledge base which underpins family nursing practice, and facilitates the development of decision-making skills in this area. Topics include: nature of the family unit; family development; models of the family; and families with particular situational or developmental needs.

Course: NS40, NS48  Credit Points: 8  Contact Hours: 3 per week

- NSB407 NURSING & THE COMMUNITY

Community health is an important focus for nursing practice and provides an introduction to fundamentals of community nursing practice and facilitates development of decision-making skills in this area. Topics include: models of community; community development; perspectives of community health; application of epidemiological principles to community health; community groups with particular health needs; strategies for promotion of community health.

Course: NS40, NS48  Credit Points: 8  Contact Hours: 3 per week

- NSB450 READINGS IN NURSING

This unit reflects the specialised expertise of staff and the interests of students. It includes the preparation of a summative review of relevant, current literature relating to a selected area of scholarship or research, including reports, monographs and journal articles.

Course: NS48  Credit Points: 8  Contact Hours: 3 per week

- NSB460 CLINICAL PRACTICE 4A/BH
- NSB470 CLINICAL PRACTICE 4A/MH

Provides further opportunity for students to develop skills which are associated with the nursing care of people experiencing biophysical or mental health dysfunction. Students practise the application of problem-solving skills, technical skills and health teaching skills in both the University (on-campus) and clinical (off-campus) laboratories. The clinical laboratory experiences take place in settings which include hospitals, palliative care facilities, and disability services or psychiatric-mental health facilities.

Course: NS40  Co-requisites: NSB214, NSB401, NSB215 or NSB402  Credit Points: 8  Contact Hours: 3 per week

- NSB461 CLINICAL PRACTICE 4B/BH
- NSB471 CLINICAL PRACTICE 4B/MH

See NSB215.

Course: NS40  Co-requisite: NSB460 or NSB470  Contact Hours: 60 per 2 week block following semester  Credit Points: 8

- NSB504 PROFESSIONAL ISSUES IN NURSING 1

Nursing as a profession and the implications for nursing practice. Topics include: the nature of professions; the development of standards; quality assurance strategies; the significance of continuing education; nursing authorities and organisations; influences on the development of nursing as a profession; the future of professional nursing.

Courses: NS40, NS48  Credit Points: 8  Contact Hours: 3 per week

- NSB505 PROFESSIONAL ISSUES IN NURSING 2

The contemporary development of nursing as a profession is closely linked with an increasing focus on theory and theory development in nursing. This unit is designed to facilitate an understanding of the role that nursing theory plays within the discipline. Topics include: nature of nursing theory; the development of theory in nursing, and factors which have been influential in this process; and an overview of nursing theories and models including selected applications to practice.

Courses: NS40, NS48  Credit Points: 8  Contact Hours: 3 per week

- NSB560 CLINICAL PRACTICE 5A/BH
- NSB570 CLINICAL PRACTICE 5A/MH

Provides the opportunity for students to develop a range of clinical skills associated with the Health Strand which was not chosen for study during the second year of the program. Students practise the application of problem-solving skills; selected technical skills; organisational, health education, client advocacy skills in both the University (on-campus) and clinical (off-campus) laboratories. The clinical laboratory experiences in this unit are undertaken in settings which include hospitals and palliative care facilities or psychiatric-mental health facilities.

Course: NS40  Co-requisites: NSB214, NSB215  Credit Points: 8  Contact Hours: 3 per week

- NSB561 CLINICAL PRACTICE 5B/BH
- NSB571 CLINICAL PRACTICE 5B/MH

Provides students with the opportunity to consolidate skills which they have acquired in previous units, particularly NSB560/NSB570. It aims at the achievement of an increasing level of competence in clinical situations. The learning experiences are conducted in
clinical (off-campus) laboratories, and the settings are as described for the preceding clinical practice units.

Course: NS60 Co-requisites: NS85 or NSB570
Contact Hours: 60 per 2 week block following semester
Credit Points: 8

- **NSB601 RESEARCH IN NURSING PRACTICE**
  An understanding of components of the research process is essential in the development of an informed approach to contemporary nursing practice; topics include: significance of research in nursing; process of research; and appraisal of research reports.
  Courses: NS40, NS48
  Credit Points: 8  Contact Hours: 3 per week

- **NSB660 CLINICAL PRACTICE 6A/BH**
- **NSB661 CLINICAL PRACTICE 6B/BH**
- **NSB670 CLINICAL PRACTICE 6A/MH**
  Provides students with the opportunity to develop further clinical skills associated with the Health Strand studied in the third year of the program. Students practice the application of problem-solving skills; selected technical skills; and, organising, health education, advocacy and counselling skills in both the University (on-campus) and clinical (off-campus) laboratories. The clinical laboratory experiences in this unit are undertaken in settings which include hospitals, palliative care facilities and/or psychiatric – mental health facilities.
  Course: NS40  Co-requisites: NS214, NS215
  Credit Points: 8  Contact Hours: 3 per week

- **NSB671 CLINICAL PRACTICE 6B/MH**
  See NSB215.
  Course: NS40  Co-requisite: NSB614
  Contact Hours: 60 per 2 week block following semester
  Credit Points: 8

- **NSN102 CONCEPTS FOR ADVANCED CLINICAL NURSING**
  In recent years there has been significant development in the role of the professional nurse as an advanced-level planner and provider of care. At this level, it is expected that nurses show a high degree of competence with an independent problem-solving approach to client care and are able to interact widely on intra-, inter- and extra-professional levels. Therefore, this unit is designed to enhance knowledge and skills involved in the selection, provision and communication of contemporary nursing care.
  Course: NS62
  Credit Points: 12  Contact Hours: 3 per week

- **NSN103 RESEARCH METHODS IN NURSING**
  Students develop skills in research design and data collection processes related to clinical phenomena. The data analysis component emphasises statistical techniques applicable to nursing research design.
  Courses: NS62, NS85
  Credit Points: 12  Contact Hours: 3 per week

- **NSN104 PROFESSIONAL ISSUES IN NURSING**
  Students expand their concept of the social significance of nursing as well as analyse the profession’s accountability and responsibility to health care at local, national and international levels. Major topics include: theoretical and ideological perspectives of professional regulation; nursing’s approach to professionalisation and the involvement of national and international nursing organisations in health policy formulation. Students are given the opportunity to consider the influence of other disciplines and the historical environment on the development of ideas in nursing theory.
  Course: NS62
  Credit Points: 12  Contact Hours: 3 per week

- **NSN105 MEDICAL/SURGICAL NURSING 1**
  Advanced specialisation in medical-surgical nursing requires the ability to deal critically and effectively with particular clinical phenomena so that the health of the individual, family or community is promoted; focuses on the individual as client, provides opportunities for students to enhance previous clinical knowledge and skills so that excellence in nursing care may be realised.
  Courses: NS62, NS85
  Credit Points: 12  Contact Hours: 3 per week

- **NSN106 MEDICAL/SURGICAL NURSING 2**
  Advanced specialisation in medical-surgical nursing requires the ability to deal critically and effectively with particular clinical phenomena so that the health of the individual, family or community is promoted; adds a family focus to that of the individual. It provides opportunities for students to enhance previous clinical knowledge and skills so that excellence in nursing care may be realised.
  Courses: NS62, NS85
  Credit Points: 12  Contact Hours: 3 per week

- **NSN108 PRIMARY HEALTH CARE NURSING 1**
  Advanced specialisation in primary health care nursing requires the ability to critically analyse issues and trends affecting the health and lifestyle of individuals, families and communities; focuses on the individual as client and provides the foundation for the primary health care nursing stream by exploring a broad range of factors which together define the parameters of primary health care practice.
  Courses: NS62, NS85
  Credit Points: 12  Contact Hours: 3 per week

- **NSN109 PRIMARY HEALTH CARE NURSING 2**
  Advanced specialisation in primary health care nursing requires the ability to critically analyse issues and trends affecting the health and lifestyle of individuals, families and communities; focuses on family as client and provides opportunities to enhance previous clinical knowledge and skills through application and evaluation of appropriate health education strategies.
  Courses: NS62, NS85
  Credit Points: 12  Contact Hours: 3 per week

- **NSN111 PSYCHIATRIC/MENTAL HEALTH CARE NURSING 1**
  Advanced clinical practice in psychiatric-mental health nursing requires the ability to deal critically and effectively with interpersonal processes and strategic therapeutic use of self to restore, maintain, promote and prevent mental and psychiatric disability. Particular attention is given to interpersonal dynamics and behaviour as basic processes by which nursing assessment and intervention occur; focuses on the individual as client, provides opportunities to enhance clinical knowledge and skills through the application and testing of interpersonal theory and therapeutics.
  Courses: NS62, NS85
  Credit Points: 12  Contact Hours: 3 per week
• **NSN112 PSYCHIATRIC/MENTAL HEALTH NURSING 2**
  Particular attention is given to family dynamics and behaviour as basic processes by which nursing assessment and intervention occur. By focusing on the family as client, students enhance previous clinical knowledge and skills through the application and testing of family theory and therapeutics.

  **Courses:** NS62, NS85  
  **Credit Points:** 12  
  **Contact Hours:** 3 per week

• **NSN114 MIDWIFERY 1**
  Philosophies of advanced midwifery practice; the role of the midwife; formal and informal structures that influence the practice of midwifery; strategies that facilitate the role of the midwife; family theory and concepts related to the community.

  **Courses:** NS62, NS85  
  **Credit Points:** 12  
  **Contact Hours:** 3 per week

• **NSN115 MIDWIFERY 2**
  The individual and family during child-bearing processes; the human and social sciences that form the basis of normal child-bearing processes; theoretical framework for health promotion and maintenance; the relationship between psycho-physiological phenomena, its effect on individual and family functioning; advanced midwifery practice.

  **Courses:** NS62, NS85  
  **Credit Points:** 12  
  **Contact Hours:** 3 per week

• **NSN117 GERONTOLOGICAL NURSING 1**
  The individual and particularly the biological issues of ageing, both normal and abnormal; the clinical component emphasises the delivery of individualised nursing care which maximises the control and independence of the elderly person; genetic and non-genetic biological theories of ageing; epidemiological issues of age; selected acute or chronic health deviations common to ageing; nursing assessment, care planning and care delivery with the elderly client and approaches and technologies for maximising the independence of elderly people.

  **Courses:** NS62, NS85  
  **Credit Points:** 12  
  **Contact Hours:** 3 per week

• **NSN118 GERONTOLOGICAL NURSING 2**
  The family and the roles and relationships within families with elderly members; the psychological theories of later life; theories of adjustment to ageing; roles and relationships of families with elderly members; role of carers in families with a highly dependent elderly member and the assessment and selection of nursing interventions to be used with elderly clients and their families.

  **Courses:** NS62, NS85  
  **Credit Points:** 12  
  **Contact Hours:** 3 per week

• **NSN120 CHILD & ADOLESCENT NURSING 1**
  The role of the nurse who practises with children, adolescents and child rearing families within various health care systems, the factors that impinge on or facilitate the provision of care. Theoretical frameworks are utilised and a philosophy of advanced nursing practice is formulated.

  **Courses:** NS62, NS85  
  **Credit Points:** 12  
  **Contact Hours:** 3 per week

• **NSN121 CHILD & ADOLESCENT NURSING 2**
  Primary prevention strategies for health of children, adolescents and child rearing families; theoretical framework for health promotion and maintenance.

  **Courses:** NS62, NS85  
  **Credit Points:** 12  
  **Contact Hours:** 3 per week

• **NSN206 INDEPENDENT STUDY**
  Increases flexibility and provides opportunity for in-depth study in approved area of interest to meet the diverse needs and interests of practising registered nurses. Students may work within the School of Nursing or with acknowledged external experts.

  **Courses:** NS62, NS85  
  **Credit Points:** 12

• **NSN301 ADVANCED NURSING EDUCATION 1**
  Designed to increase students' knowledge of the theoretical bases of teaching and learning in order to promote and facilitate learning. Students from various disciplines on campus can be accommodated within this unit. Students of nursing focus on the professional practice of that discipline.

  **Courses:** NS62, NS85  
  **Credit Points:** 12  
  **Contact Hours:** 3 per week

• **NSN302 ADVANCED NURSING EDUCATION 2**
  Provides opportunities for students to view measurement and evaluation as essential components of sound educational decision making. Students from various disciplines on campus are able to be accommodated within this unit. Students of nursing focus on the professional practice of that discipline.

  **Course:** NS85  
  **Prerequisite:** NSN301  
  **Credit Points:** 12  
  **Contact Hours:** 3 per week

• **NSN304 ADVANCED NURSING MANAGEMENT 1**
  Provides opportunities for students to examine the organisation context of nursing and health care from a number of theoretical perspectives and to enable them to contribute effectively to debate the nature of nursing and health care organisation.

  **Courses:** NS62, NS85  
  **Credit Points:** 12  
  **Contact Hours:** 3 per week

• **NSN305 ADVANCED NURSING MANAGEMENT 2**
  Provides an opportunity for students to examine management processes of nursing divisions within health care organisations enabling them to have creative input into the nursing environment.

  **Course:** NS85  
  **Prerequisite:** NSN301  
  **Credit Points:** 12  
  **Contact Hours:** 3 per week

• **NSN405 QUALITATIVE RESEARCH**
  Addresses qualitative methodologies and methods pertinent to research in the health sciences.

  **Courses:** HL88, NS62, NS85  
  **Credit Points:** 12  
  **Contact Hours:** 3 per week

• **NSN406 DISSERTATION**
  This study represents an independent piece of research completed with the guidance of a supervisor. The dissertation provides an opportunity for coursework conducted in the area of specialisation to be applied in a practical manner reflecting the student's specific interest in nursing. The third of three step-locked dissertation units in the Master of Nursing.

  **Course:** NS85  
  **Credit Points:** 24  
  **Contact Hours:** 3 per week

• **NSN411 RESEARCH SEMINAR**
  This unit has been developed as the first of three step-locked dissertation units. It provides the student with the opportunity to produce a well researched and
Students design and implement research and gather data. The second of three step-locked dissertation units in the Master of Nursing.

Course: OPB412 
Co-requisites: OPB508, OPB509, 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 
Prerequisite: OPB412, OPB401 
Co-requisites: OPB508, OPB509, 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, OPB509, OPB527 
Credit Points: 18 
Contact Hours: 9 per week

■ OPB527 DISEASES OF THE EYE 5
The detection, diagnosis, referral and management of ocular disease. General pathological considerations. The writing of reports, referral letters and referral procedures. The nature, aetiology and management of congenital, developmental, dystrophic and degenerative anomalies of the external and internal ocular structures and ocular adnexae. The ocular manifestation of systemic disease including cardiovascular, metabolic, endocrine, central nervous system and malnourishment disorders.

Course: OP42 
Prerequisites: LSB491, OPB401, LSB491 
Co-requisites: OPB508, OPB509, OPB509 
Credit Points: 8 
Contact Hours: 3 per week

■ OPB605 CLINICAL OPTOMETRY 6
The continuation of OPB505. The clinical application of techniques learnt in OPB509 and OPB609 (studied concurrently) in the management of patients presenting for eye examinations.

Course: OP42 
Prerequisite: OPB505 
Co-requisites: OPB608, OPB609, OPB627 
Credit Points: 8 
Contact Hours: 4 per week

■ OPB608 OCULAR PHARMACOLOGY
General pharmacological principles are presented as background to a study of pharmacological profiles of ophthalmic preparations; both diagnostic and topical therapeutic agents are considered. Particular emphasis is placed on those ophthalmic drugs used to facilitate an eye examination.

Course: OP42 
Prerequisites: OPB508, OPB509 
Co-requisites: OPB605, OPB609, OPB627, OPB617 
Credit Points: 6 
Contact Hours: 3 per week

■ OPB609 OPTOMETRY 6
This unit is a continuation of the theory and practice of routine and advanced clinical procedures which are used when conducting a complete eye examination. Areas include the management of binocular vision anomalies, methods of examining the visual fields and the measurement of intra-ocular pressure.

Course: OP42 
Prerequisites: OPB508, OPB509 
Co-requisites: OPB608, OPB609, 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, OPB609, OPB617
Credit Points: 8  Contact Hours: 4 per week

OPB705 CLINICAL OPTOMETRY 7
This is the clinical application of the procedures studied in OPB609 and OPB709, and includes the management of patients in the clinical situation.
Course: OP42
Prerequisite: OPB605
Co-requisites: OPB709, OPB717, OPB750
Credit Points: 24  Contact Hours: 13 per week

OPB709 OPTOMETRY 7
This unit is a continuation of OPB609 and provides knowledge and understanding of the theory and clinical procedures involved in paediatric optometry, low vision, colour vision and anisoeinopia.
Course: OP42
Prerequisites: OPB609, OPB750
Co-requisites: OPB705, OPB717
Credit Points: 10  Contact Hours: 5 per week

OPB717 CONTACT LENS STUDIES 7
A series of lectures and practical sessions in advanced aspects of contact lens practice. The unit includes topics such as the physiological consequences of contact lens wear, management of contact lens patients, and fitting of lenses for keratoconus, extended wear and presbyopia. Practical sessions provide training in advanced diagnostic and fitting techniques.
Course: OP42
Prerequisite: OPB717
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) decides on the experimental hypotheses, plan and execute the experiment, analyse the results and write a report in manuscript form which it is hoped will be suitable for publication in the open literature. Oral presentations are given by each group to their peers, third year students and staff, as part of a formal Year 4, Semester 2 colloquium.
Course: OP42
Prerequisites: OPB709, MAB528, 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, radiations 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, OPB803
Co-requisites: OPB709, OPB717, OPB709
Credit Points: 32  Contact Hours: 17 per week

OPB807 PRACTICE MANAGEMENT
Optometry's role in health care; professional and ethical behaviour; relevant State and Federal Acts; professional associations; types of practice; optometric practice and the law.
Course: OP42
Credit Points: 4  Contact Hours: 2 per week

OPN601 ADVANCED CONTACT LENS STUDIES
This unit contains instruction in specialised fitting techniques, including keratoconus, scleral lenses and prosthetics. There is also an emphasis on the design, manufacture and modification of lenses. The physiology and pathology associated with contact lens wear is also covered in detail.
Course: HL88
Credit Points: 12  Contact Hours: 3 per week

OPN602 ADVANCED CLINICAL METHODS
This unit explores techniques for the examination of the eye and visual function. Topics include: visual fields; static automated perimetry; screening versus threshold methods and their interpretation, modelling and trend analysis of visual field data; the visual field in glaucoma; contrast sensitivity function; alternative tests and their interpretation; clinical applications of contrast sensitivity function testing; colour vision; current research in congenital and acquired disorders; clinical tests, their application and interpretation; the design of colour vision screening procedures; entoptic phenomena and their application as diagnostic tools; advanced slit lamp biomicroscopy, gonioscopy, photography and fundus examination; other advanced methods of examination such as ultrasonography, dark adaptation, motion sensitivity, eye movement studies and electro-physiology.
Course: HL88
Credit Points: 12  Contact Hours: 3 per week

OPN603 ADVANCED OCULAR PHARMACOLOGY
This unit explores the use of drugs for the treatment of eye diseases. The unit does not seek to qualify optometrists to use these drugs, nor to impart the clinical skills or procedures necessary for such a scope of practice; instead, it will supply the background knowledge and understanding of current theoretical and practical research concepts in therapeutics so essential to complement this evolution in health care. Topics include: the anatomy, physiology and pathology of tissue changes in relevant eye diseases; neurohumoral transmission - current concepts in receptor dynamics; the actions of systemic drugs; including antihypertensive, antiarrhythmic, asthmatic, 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 PEDIATRIC 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 pediatric patient; multidisciplinary approach to management of the learning disabled child. Assessment is by research project.
Course: HL88
Credit Points: 12  Contact Hours: 3 per week

PHB001 INTRODUCTORY PHYSICS
Gives students without senior physics a basic grounding. Topics include: kinematics, mechanics, electricity and magnetism.
Course: SC30
Incompatible with: Sound Achievement or better in senior physics.
Credit Points: 6  Contact Hours: 3 per week

PHB111 PHYSICS 1B
A course of lectures and laboratory work on AC and DC circuit theory, electronics, vibrations and waves, sound, geometrical optics.
Course: PE38
Prerequisite: Sound Achievement - Senior Physics.
Co-requisite: PHB001 unless Senior Physics has been undertaken.
Credit Points: 8  Contact Hours: 3 per week

PHB122 PHYSICS 1
A course of lectures and laboratory work on data analysis, kinematics and mechanics, DC and AC circuit theory, electronics, vibrations and waves, sound, geometrical optics and physical optics.
Courses: CH32, ED50, OP42, SC30
Prerequisite: Sound Achievement - Senior Physics
Co-requisite: PHB001 or Sound Achievement - Senior Physics
Credit Points: 12  Contact Hours: 5 per week

PHB132 ENGINEERING PHYSICS 1A
A basic unit in the physics of waves and optics; moving and stationary waves in various media, interference of waves, beats acoustics and shock waves and measurement of sound; geometrical and physical optics including reflection, refraction, dispersion, interference and diffraction, polarisation, optical instruments, design and resolution, and photometry.
Courses: CE42, EE43, EE44, IF23, IF53, ME23, ME45, ME46
Credit Points: 6  Contact Hours: 3 per week

PHB144 APPLIED SCIENCE FOR DESIGNERS 1
Physics for environmental design: light and colour; heat and energy transfer, solar energy physics, sound and acoustics, electricity, magnetism and electronics for the built environment.
Courses: BN30, PU49
Credit Points: 6  Contact Hours: 3 per week

PHB150 PHYSICS 1H
Basic physical measurements; mechanics; fluids; heat; vacuum physics; waves, acoustics, ultrasonics and optics, and the instrumentation used to measure biological parameters.
Courses: LS36, PU42, PU44, PU45, SC30
Credit Points: 12  Contact Hours: 6 per week

PHB170 PHYSICS FOR SURVEYORS
Mechanics; geometrical optics; physical optics; quantum optics; physics of materials; physics of the lower atmosphere; sound; electromagnetic fields; electronics.
Courses: IF52, SV34
Credit Points: 12  Contact Hours: 6 per week

PHB172 PHYSICS FOR SURVEYORS
Mechanics; physics of materials; physics of the lower atmosphere; sound; electromagnetic fields; topics in electronics.
Courses: IF54, PS47
Credit Points: 6  Contact Hours: 3 per week

PHB178 PRINCIPLES OF MEDICAL RADIATIONS
Principles of medical imaging and methods of detection, diagnosis and treatment of cancer.
Course: PH38
Credit Points: 10  Contact Hours: 5 per week

PHB222 PHYSICS 2
A course of lectures and laboratory work on mechanical properties of matter, fluids, gravitational fields, electromagnetic fields, thermal physics and quantum radiation physics.
Courses: ED50, OP42, SC30
Prerequisite: Sound Achievement - Senior Physics
Co-requisite: PHB001 unless Sound Achievement - Senior Physics
Credit Points: 12  Contact Hours: 5 per week

PHB232 ENGINEERING PHYSICS 2A
The physics of heat and properties of matter, including the kinetic theory of gases, temperature scales and thermometers, heat and heat measurement, thermodynamics and the molecular properties of matter; gravitational fields; basic radiation physics.
Courses: CE42, EE43, EE44, IF23
Credit Points: 6  Contact Hours: 5 per week

PHB240 OPTICS 2
The principles of geometrical optics as they apply to rectilinear propagation, reflection and refraction for paraxial rays for monochromatic light for single surfaces, thin lenses, cylindrical, spherocylindrical and toric lenses, lens systems in air, the eye and a selection of optical instruments; study of the optics of monochromatic and chromatic aberrations and of photometry and colour.
Course: OP42
Prerequisite: PHB150
Co-requisite: OPB132
Credit Points: 12  Contact Hours: 7 per week

PHB252 KINESIOLOGY & BIOMECHANICS
Principles, methods and interpretation of measurement of human movement, particularly associated with the lower limb; principles of lower limb function (standing, walking and running).
Course: PU45
Credit Points: 8  Contact Hours: 2 per week

PHB262 PHYSICS 2L
Extension of PHB150 including a.c., d.c. circuit theory, with emphasis on electronics and instrumentation, fields, modern and nuclear physics.
Course: LS36
Credit Points: 8  Contact Hours: 4 per week

PHB263 PHYSICS 2E
Extension of PHB150 including AC, DC circuit theory, with emphasis on electronics and instrumentation, fields, modern and nuclear physics. Fluids.
Courses: PU42, PU44, PU45, SC30
Credit Points: 12  Contact Hours: 6 per week
Electrostatics, electromagnetism, the production of X-rays and their interaction with matter.

Course: PH38
Credit Points: 12  Contact Hours: 5 per week

PHB275 PROCESSING TECHNOLOGY
A study of the processes involved in the production of a visible image in radiography, including: latent image formation, processing, techniques and equipment relevant to radiography.

Course: PH38
Credit Points: 4  Contact Hours: 2 per week

PHB276 GENERAL RADIOGRAPHY 1
A program of lectures and practical sessions relating to radiography of the skeletal system.

Course: PH38  Prerequisites: LSB141, PHB178
Co-requisite: LSB241
Credit Points: 14  Contact Hours: 7 per week

PHB279 CLINICAL RADIOGRAPHY 1
Practical programs carried out in approved clinical departments. Related to topics introduced in PHB276.

Course: PH38
Credit Points: 4  Contact Hours: 2 per week

PHB285 TREATMENT PLANNING 1
Introduction to the techniques of radiotherapy treatment planning.

Course: PH38
Credit Points: 12  Contact Hours: 6 per week

PHB286 MEGAVOLTAGE THERAPY 1
Introduction to the basic techniques of radiotherapy including beam direction and defining devices.

Course: PH38  Prerequisites: PHB125, PHB178
Credit Points: 6  Contact Hours: 3 per week

PHB287 CLINICAL RADIOGRAPHY 1
Clinical experiences in radiographic examinations in approved clinical departments.

Course: PH38
Credit Points: 12  Contact Hours: 5 per week

PHB289 CLINICAL RADIOGRAPHY 2
Clinical experiences in radiographic examinations in approved clinical departments.

Course: PH38
Credit Points: 10  Contact Hours: 5 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

PHB332 PHYSICS 3A
Laplace Transforms; SHM; damped harmonic motion; forced oscillations; coupled oscillations; wave transmission and reflection; wave systems; AC circuit analysis; power; network analysis; resonance; AC measurements.

Courses: ED50, SC30  Co-requisite: MAB432
Prerequisites: MAB222, PHB122, PHB222
Credit Points: 12  Contact Hours: 5 per week

PHB332 PHYSICS 3B
Covers any two of the following: optics, electronics, materials, experimental physics.

Courses: ED50, SC30  Prerequisites: PHB122, PHB222 and (MAB212 or MAB222)
Credit Points: 12  Contact Hours: 5 per week

PHB340 OPTICS 3
The application of geometrical optics to selected aspects of optometry including lens form and thickness, contact lenses, spectacle lens design and 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
Credit Points: 12  Contact Hours: 6 per week

PHB342 PHYSICS 3C
See PH332

Courses: ED50, SC30  Prerequisites: PHB122, PHB222 and (MAB212 or MAB222)
Credit Points: 10  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 1
An extension of topics introduced in PHB276 to include more advanced techniques of nuclear radiography, ward and operating theatre radiography, and examinations using contrast media.

Course: PH38  Prerequisites: LSB241, PHB276, PHB279
Credit Points: 12  Contact Hours: 7 per week

PHB379 CLINICAL RADIOGRAPHY 2
Clinical experiences in radiographic examinations introduced in PHB276 and PHB376. Experience is obtained in approved clinical departments.

Course: PH38  Prerequisites: LSB242, PHB276, PHB279
Credit Points: 10  Contact Hours: 5 per week

PHB382 RADIOTHERAPY PHYSICS 1
A study of the design, physical aspects and operating characteristics of megavoltage and telecurie units.

Course: PH38  Prerequisite: PHB272
Credit Points: 4  Contact Hours: 2 per week

PHB386 TREATMENT PLANNING 2
An extension of the study of treatment planning introduced in PHB286 to the planning of complex techniques of photon therapy and electron therapy.

Course: PH38
Credit Points: 8  Contact Hours: 4 per week

PHB387 MEGAVOLTAGE THERAPY 2
The principles and applications of megavoltage therapy including techniques for specific sites.

Course: PH38  Prerequisites: LSB241, PHB287
Credit Points: 10  Contact Hours: 5 per week

PHB389 CLINICAL RADIOThERAPY 2
Practical exercises in megavoltage therapy related to topics introduced in PHB287 and PHB387. The programs are carried out in clinical departments.

Course: PH38  Prerequisites: LSB241, PHB289  Co-requisite: PHB387
Credit Points: 10  Contact Hours: 5 per week

PHB404 SAFETY TECHNOLOGY 2
Vibration and noise, electrical hazards, sources and hazards of ionising and non-ionising radiation.

Course: PU44  Prerequisite: PHB250 or PHB262
Credit Points: 12  Contact Hours: 6 per week
PHB422 PHYSICS 4A
Any two of the following: thermodynamics and statistics, mechanics, radiation physics, astronomy and astrophysics, relativity and fluids, electronics.
Courses: ED50, SC30
Prerequisites: PHB122, PHB222 and (MAB212 or MAB222)
Credit Points: 12 Contact Hours: 5 per week

PHB432 PHYSICS 4B
See PHB422.
Courses: ED50, SC30
Prerequisites: PHB122, PHB222 and (MAB212 or MAB222)
Credit Points: 12 Contact Hours: 5 per week

PHB462 EXPERIMENTAL PHYSICS 4
Experimental method and design; electronics; preparation and presentation of reports; group project.
Course: SC30
Prerequisite: At least two level 2 Physics units including electronics module
Credit Points: 12 Contact Hours: 5 per week

PHB471 RADIATION PHYSICS 2
A study of the philosophy and protocol of radiation protection. The question of protection is treated in a manner which brings into perspective the details of protection dealt with in other units of the course.
Courses: PH38, PH90
Credit Points: 4 Contact Hours: 2 per week

PHB473 MEDICAL ULTRASOUND
The physical principles and application of ultrasound.
Courses: PH38, PH90
Credit Points: 4 Contact Hours: 2 per week

PHB474 RADIOGRAPHIC EQUIPMENT 2
A study of the equipment used in specialised radiography; including mobiles, tomographic units, skull tables and mammography units.
Course: PH38
Credit Points: 4 Contact Hours: 2 per week

PHB475 MEDICAL RADIATION COMPUTING 1
An introduction to the capabilities of computer hardware and software, and image processing.
Courses: PH38, PH90
Credit Points: 8 Contact Hours: 3 per week

PHB476 SPECIAL PROCEDURES
Specialised techniques of radiography: the skull, obstetrics, gynaecology, CNS and paediatrics.
Course: PH38 Prerequisites: PHB376, PHB379
Credit Points: 8 Contact Hours: 3 per week

PHB479 CLINICAL RADIOGRAPHY 3
Clinical experience in approved departments in radiographic examinations discussed in PHB376.
Course: PH38 Prerequisites: PHB376, PHB379
Credit Points: 8 Contact Hours: 4 per week

PHB481 DOSIMETRY
A study of the measurement and dosimetry of external beam X-ray and gamma ray radiotherapy.
Course: PH38
Credit Points: 6 Contact Hours: 3 per week

PHB482 RADIOTherapy PHYSICS 2
A study of radioactivity including methods of radiation detection, radioactive equilibrium and production of radioisotopes, the principles of brachytherapy.
Course: PH38 Prerequisites: 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

PHB489 CLINICAL RADIOTHERAPY 3
Clinical experiences in approved departments in techniques of megavoltage therapy.
Course: PH38 Prerequisites: PHB387, PHB389 Co-requisite: PHB487
Credit Points: 8 Contact Hours: 4 per week

PHB504 INSTRUMENTATION
Transducers, noise, guarding and shielding; signal conditioning; digital filters; intelligent instruments and standard 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
Prerequisite: At least 3 third level Physics units.
Credit Points: 12 Contact Hours: 5 per week

PHB532 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
Course: SC30 Prerequisites: PHB322, MAB452
Credit Points: 12 Contact Hours: 5 per week

PHB542 APPLIED ACOUSTICS
Environmental and occupational noise. Architectural and building acoustics. Generation and detection of ultrasound; applications in medicine and industry fields.
Courses: ED50, SC30
Prerequisite: Second level Acoustics Credit Points: 12 Contact Hours: 5 per week
PHB562 PHYSICAL METHODS OF ANALYSIS
Cours es: ED50, SC30 Prerequisite: PHB342
Credit Points: 12 Contact Hours: 5 per week

PHB570 ADVANCED RADIOGRAPHIC PRACTICE 1
The content of this unit includes topics from a number of areas and is designed to complement the particular background of persons undertaking the conversion program.
Course: PH90 Credit Points: 20

PHB571 QUALITY ASSURANCE IN MEDICAL IMAGING
The principles and techniques used in the quality assurance of medical imaging apparatus and ancillary equipment.
Course: PH90 Credit Points: 6 Contact Hours: 3 per week

PHB572 IMAGE RECORDING & EVALUATION
Lectures and practical exercises on non-film image formation evaluation. Information theory.
Course: PH38 Credit Points: 4 Contact Hours: 2 per week

PHB573 DIGITAL IMAGING MODALITIES
The principles, methods and applications of CT, digital radiography and MR in medical imaging.
Courses: PH38, PH90 Credit Points: 6 Contact Hours: 2 per week

PHB574 QUALITY ASSURANCE IN MEDICAL IMAGING
A study of the principles and techniques used in the quality assurance of medical imaging apparatus and ancillary equipment.
Course: PH38 Credit Points: 6 Contact Hours: 3 per week

PHB575 MEDICAL RADIATION COMPUTING 2
Applications of computers in image processing and radiotherapy.
Course: PH38 Credit Points: 8 Contact Hours: 3 per week

PHB576 ADVANCED RADIOGRAPHIC TECHNIQUE 1
A study of the principles and techniques used in advanced radiographic techniques including angiography, the salivary glands, arthrography, sinography, arteriography and venography.
Course: PH38 Prerequisites: PHB476, PHB479 Co-requisite: PHB578 Credit Points: 12 Contact Hours: 6 per week

PHB578 IMAGE INTERPRETATION 1
Lectures and practical exercises on image interpretation including technical and diagnostic quality.
Courses: PH38, PH90 Credit Points: 4 Contact Hours: 2 per week

PHB579 CLINICAL RADIOGRAPHY 4
Clinical experience in special radiographic procedures as introduced in PHB476.
Course: PH38 Prerequisites: PHB476, PHB479 Credit Points: 8 Contact Hours: 4 per week

PHB583 COMPLEMENTARY & EVOLVING TECHNIQUES
The principles, strengths and stage of development of techniques which are complementary to radiotherapy treatment of cancer including: hyperbaric 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

PHB622 SOLID STATE PHYSICS
Crystal structures and bonding, reciprocal lattice, Brillouin zones; mechanical and thermal properties of solids; free electron and band theory; semiconductors; magnetic properties of solids; dielectric properties of materials; amorphous materials.
Course: SC30 Prerequisites: Second level Materials, PHB422, PHB522 Credit Points: 12 Contact Hours: 5 per week

PHB632 NUCLEAR & PARTICLE PHYSICS
Nuclear reaction, nuclear model, particle physics, particle detectors and accelerators and applications.
Course: SC30 Prerequisites: PHB432, PHB522 Credit Points: 12 Contact Hours: 5 per week

PHB642 APPLIED RADIATION & HEALTH PHYSICS
Lectures and laboratory work on the topics: properties of ionising and non-ionising radiation. Detection and measurement techniques. Radiobiological effects of ionising and non-ionising radiation and health physics. Medical and industrial applications of radiation. Environmental radiation and radioactivity.
Course: SC30 Prerequisite: PHB432 Credit Points: 12 Contact Hours: 5 per week
PHB662 TOPICS IN PHYSICS
The content varies from year to year and is determined by current research advances and availability of staff. No more than four topics are included, so as to allow a reasonable cover of the material. Topics included in recent years: health and medical physics, optoelectronics, geophysics, environmental physics and astrophysics.
Courses: ED50, SC30
Prerequisite: At least 36 credit points in second level physics units
Credit Points: 12 Contact Hours: 5 per week

PHB670 ADVANCED RADIOGRAPHIC PRACTICE 2
See PHB570.
Course: PH90
Credit Points: 20

PHB671 RADIATION BIOLOGY
A study of the biological effects on ionising and non-ionising radiation.
Courses: PH38, PH90
Credit Points: 4 Contact Hours: 2 per week

PHB672 PROJECT
A supervised project involving either application of existing theoretical practical knowledge or a literature survey of a selected relevant topic.
Courses: PH38, PH90
Credit Points: 8 Contact Hours: 3 per week

PHB676 ADVANCED RADIOGRAPHIC TECHNIQUE 2
An extension of topics in advanced radiographic technique introduced in PHB576 to include mammography, techniques for examination of the lymphatic system, and emerging techniques.
Course: PH38 Prerequisite: PHB576, PHB579
Co-requisite: PHB678
Credit Points: 8 Contact Hours: 3 per week

PHB679 CLINICAL RADIOGRAPHY 5
Clinical experience in advanced radiographic techniques introduced in PHB576.
Courses: PH38, PH90
Prerequisites: PHB576, PHB579
Credit Points: 14 Contact Hours: 6 per week

PHB680 NUCLEAR MEDICINE IMAGING 2
Lectures, practical exercises and clinical experiences in nuclear medicine imaging. This unit expands on topics introduced in PHB373 and provides an in-depth study of nuclear medicine imaging techniques.
Courses: PH38, PH90 Prerequisite: PHB373
Credit Points: 10 Contact Hours: 5 per week

PHB681 COMPUTED TOMOGRAPHY IMAGING
Lectures, practical exercises and clinical experiences in CT imaging; expands on topics introduced in PHB573; indepth study of CT imaging techniques.
Courses: PH38, PH90 Prerequisite: PHB573
Credit Points: 10 Contact Hours: 5 per week

PHB683 ONCOLOGICAL IMAGING
Principles and techniques of medical imaging used in the detection of cancer: CT, MRI, US and NM.
Courses: PH38, PH90
Credit Points: 6 Contact Hours: 3 per week

PHB685 COMPUTER ASSISTED TREATMENT PLANNING 2
The use of computers in the planning of non-standard and complex radiotherapy treatment including arc and rotation techniques, irregular field techniques, three-dimensional plans.
Courses: PH38, PH90
Credit Points: 8 Contact Hours: 4 per week

PHB687 SPECIALISED RADIOTherapy Technique
Specialised radiotherapy techniques including techniques applicable to the child patient and patients with communicable disease, theatre procedures, total body photon and electron therapy.
Courses: PH38, PH90
Credit Points: 10 Contact Hours: 4 per week

PHB689 CLINICAL RADIOTherapy 5
Clinical experience in specialised radiotherapy treatment techniques.
Course: PH38
Prerequisite: PHB589 Co-requisite: PHB687
Credit Points: 8 Contact Hours: 4 per week

PHB705 PROJECT (PHYSICS MAJOR)
A research project in which the student will initiate and undertake an investigation of some magnitude and originality. Topics will be related to research interests in the Centre for Medical and Health Physics.
Course: SC50
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: SC50
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: SC50
Credit Points: 12 Contact Hours: 4 per week

PHB708 ADVANCED TOPICS IN PHYSICS
No more than three topics will be included. The content will be determined by current research advances, availability of appropriate staff, visiting academics etc and may vary from year to year.
Course: SC50
Credit Points: 12 Contact Hours: 4 per week

PHB789 ADVANCED RADIOTHERAPEUTIC PRACTICE 1
The content of this unit includes topics from a number of areas and is designed to complement the particular background of persons undertaking the conversion program.
Course: PH90
Credit Points: 20

PHB889 ADVANCED RADIOTHERAPEUTIC PRACTICE 2
See PHB789.
Course: PH90
Credit Points: 20

PHN112 MEDICAL IMAGING SCIENCE
Introduction to the "C" programming language; programming techniques and algorithms; numerical analysis; data structures; interfacing techniques; sampling of analogue signals; Fourier analysis; design of digital filters. This unit is designed to give students an
understanding of the techniques pertaining to digital data processing and digital image processing.

Course: PHN80
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: PHN80
Credit Points: 12  Contact Hours: 4 per week

PHN114 MICROPROCESSORS & INSTRUMENTATION
The capabilities and limitations of a given instrument; design of interfaces between microcomputers and transducers and conditioning circuits for data acquisition.

Course: PHN80
Credit Points: 12  Contact Hours: 4 per week

PHN115 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: PHN80
Credit Points: 6  Contact Hours: 2 per week

PHN116 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: PHN80
Co-requisite: PHN154
Credit Points: 6  Contact Hours: 2 per week

PHN117 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: PHN80
Credit Points: 12  Contact Hours: 4 per week

PHN118 PRINCIPLES OF MEDICAL IMAGE PROCESSING
The principles of image data acquisition in digital imaging modalities including nuclear medicine; magnetic resonance; digital subtraction angiography and computed tomography. Convolution theorem; image enhancement techniques; image reconstruction; three dimensional image techniques.

Course: PHN80
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: PHN80
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; biorecognition of radiopharmaceuticals; dose calculations; safety considerations.

Course: PHN80
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: PHN80
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: PHN80
Credit Points: 12

PHN211 MEDICAL IMAGING
The physical principles involved in the production of the radiographic, ultrasonic and nuclear medicine images; quality control protocols.

Course: PHN80
Credit Points: 12  Contact Hours: 4 per week

PHN212 RADIOTHERAPY
Overview of the application of physics to radiotherapy; theoretical and practical aspects of the major topics in radiotherapy physics.

Course: PHN80
Credit Points: 12  Contact Hours: 4 per week

PHN213 BIOMECHANICS/PHYSIOLOGICAL MEASUREMENT
The basic concepts and principles of measurement in dynamic physiological systems; principles of design, construction and operation of transducers, electrodes and other instrumentation.

Course: PHN80
Credit Points: 12  Contact Hours: 4 per week

PHN214 HEALTH & OCCUPATIONAL PHYSICS
The philosophy, protocols and practices of safety in the medical and industrial fields; minimisation of hazards associated with radiation, electrical, mechanical and biological techniques.

Credit Points: 12  Contact Hours: 4 per week

PHN216 MEDICAL & HEALTH TECHNOLOGY MANAGEMENT
The organisational culture and funding structures within the medical and health industry; basic manage-
ment skills, the interface between health and technology management.

Course: PH80
Credit Points: 6 Contact Hours: 2 per week

PHN217 RESEARCH METHODOLOGY

Course: PH80
Credit Points: 6 Contact Hours: 2 per week

PHN271 PRINCIPLES OF ONCOLOGY

Course: PH80
Credit Points: 12 Contact Hours: 4 per week

PHN272 BRACHYTHERAPY

Course: PH80
Co-requisites: LSN159, PHN271
Credit Points: 6 Contact Hours: 2 per week

PHN273 ADVANCED COMPUTER PLANNING

Course: PH80
Co-requisites: PHN171, LSN159
Credit Points: 6 Contact Hours: 2 per week

PHN281 MAGNETIC RESONANCE IMAGING

Course: PH80
Co-requisites: LSN159, PHN271
Credit Points: 6 Contact Hours: 2 per week

PHN282 DIGITAL SUBTRACTION ANGIOGRAPHY

Course: PH80
Credit Points: 6 Contact Hours: 2 per week

PHN291 MEDICAL DIAGNOSIS

Course: PH80
Credit Points: 6 Contact Hours: 2 per week

PHN297 CLINICAL ATTACHMENT 2

Course: PH80
Credit Points: 12

PHN351 ULTRASONIC EQUIPMENT 2

Course: PH80
Prerequisite: PHN153
Credit Points: 6 Contact Hours: 2 per week

PHN352 ULTRASONIC EXAMINATION IN CARDIOLOGY

Course: PH80
Credit Points: 6 Contact Hours: 2 per week

PHN353 ULTRASONIC IN MEDICAL DIAGNOSIS

Course: PH80
Credit Points: 6 Contact Hours: 2 per week

PHN354 ULTRASONIC EXAMINATIONS OF THE HEAD, NECK & PERIPHERAL ORGANS

Course: PH80
Prerequisite: PHN257
Credit Points: 6 Contact Hours: 2 per week

PHN355 CARDIOVASCULAR ULTRASOUND

Course: PH80
Credit Points: 12 Contact Hours: 4 per week

PHN357 CLINICAL ULTRASOUND 3

Course: PH80
Credit Points: 12

PHN397 CLINICAL ATTACHMENT 3

Course: PH80
Credit Points: 12

PHN520 PROJECT

Course: PH80
Contact Hours: 18 (FT) and 9 (PT) per week
Credit Points: 48 (FT) and 24 (PT) per semester

PHN715 ADVANCED TOPICS IN PHYSICS 1

Course: SC30
Credit Points: 8
PHN716 ADVANCED TOPICS IN PHYSICS 2
See PHN715.
Course: SC30
Credit Points: 12

PHS021 INTRODUCTORY PHYSICS
Intended to give a grounding in basic physics topics selected from the following areas: mechanics, heat, electricity, and magnetism and light. Note: This unit is not compatible with Senior Physics.
Course: BN10
Credit Points: 6
Contact Hours: 3 per week

PSB010 INTRODUCTORY DESIGN 1
See ARB140.
Course: BN30
Credit Points: 12
Contact Hours: 6 per week

PSB011 INTRODUCTORY DESIGN 2
Studio work; simple three dimensional design tasks at a variety of scales, and illustrating tasks associated with the relevant professions. Workshop and field work related to studio exercises. Techniques of oral and written presentation, report writing, use of English as applicable to the relevant professions.
Course: BN30
Prerequisite: PSB010
Credit Points: 20
Contact Hours: 10 per week

PSB012 PLANNING & LANDSCAPE DESIGN 1
Site planning and problem solving theory; studio exercises developing the capacity to analyse the nature and use of spaces and to understand the role of creative expression in design; formal oral presentation techniques (informal and persuasive) including meetings, conferences, interviews and speeches.
Course: BN30
Prerequisites: ARB140 or PSB010, ARB141 or PSB011, PSB050, PSB054, PSB056
Credit Points: 21
Contact Hours: 9 per week

PSB013 PLANNING & LANDSCAPE DESIGN 2
Site planning techniques. The studio exercises link work commenced in site planning theory and site planning techniques; integrates issues covered in PSB012 with the technical and practical aspects of site planning and design.
Course: BN30
Prerequisites: PSB012, PSB052
Credit Points: 20
Contact Hours: 6 per week

PSB014 PLANNING & LANDSCAPE DESIGN 3
This unit aims to confirm the student’s appreciation of the coherence of the design process by a single integrated semester long project. Secondly, the exercise focuses on interdisciplinary skills by undertaking joint work with the architecture students.
Course: BN30
Prerequisites: PSB013, PSB072, PSB058
Credit Points: 20
Contact Hours: 6 per week

PSB015 PLANNING & LANDSCAPE DESIGN 4
Expansion of students’ planning and design skills by increasing the complexity and scale of projects and introducing problems requiring knowledge and skills drawn from the human environment, natural environment and technology study areas. The three projects for the semester focus on the development of a significant urban area.
Course: BN30
Prerequisites: PSB013, PSB058, PSB059, PSB072, PSB275
Credit Points: 20
Contact Hours: 6 per week

PSB016 HISTORY OF THE BUILT ENVIRONMENT 1
The development of man’s artificial environment and its relationship to ideas, technology, and the fine arts from the earliest times to the seventeenth century.
Course: BN30
Credit Points: 6
Contact Hours: 3 per week

PSB017 HISTORY OF THE BUILT ENVIRONMENT 2
See ARB241.
Course: BN30
Credit Points: 8
Contact Hours: 3 per week

PSB018 LAND USE GENERATION
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 plant spaces, gardens and broadscale regeneration and stabilisation.
Course: BN30
Prerequisite: PSB057
Credit Points: 3
Contact Hours: 1 per week

PSB020 LAND USE POLICIES
Review of the Government structure as applied to urban areas and regions. The levels of urban planning. How urban policies are made. Organisations as policy makers and policy implementors. Areas of conflict and their resolution. The various levels and types of land use planning. Major land uses and activities; work, housing, recreation, transport and welfare.
Course: BN30, PS47
Prerequisite: PSB018
Credit Points: 4
Contact Hours: 2 per week

PSB021 CONSERVATION THEORY
Introduction to the concepts of conservation and preservation. The structure of conservation legislation and responsibility in Australia. ICOMOS and the Burra Charter. The particular requirements of places, landscapes and precincts in mixed or public ownership. Application of conservation concepts and their use in the National Listings process.
Courses: BN30, PS47
Credit Points: 2
Contact Hours: 1 per week

PSB030 INTRODUCTION TO THE PROFESSIONS
The concept of professionalism and contemporary social expectations of the environmental design professions. Current issues and controversies in environmental design and planning in Australia. Organisation and activities of the professional institutes, Powers, responsibilities and day-to-day activities of landscape architects and urban and regional planners.
Course: BN30
Credit Points: 3
Contact Hours: 1 per week
PSB032 ISSUES & ETHICS
Course: BN30, PS47
Prerequisites: Completion of years 1 and 2
Credit Points: 2
Contact Hours: 1 per week

PSB040 GRAPHIC COMMUNICATION
A practice-based program with specialised, formal lecture inputs related to the development of methodologies. The program concentrates on the achievement of a professional standard in basic techniques of production documentation.
Course: BN30 Prerequisites: ARB140, PSB011
Credit Points: 6
Contact Hours: 3 per week

PSB041 REPORT PREPARATION
Formal writing techniques, including reports, instructions, proposals, specifications, correspondence and essay 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: BN30 Prerequisites: COB163, PSB400
Credit Points: 2
Contact Hours: 1 per week

PSB050 THE HUMAN ENVIRONMENT 1
See ARB141.
Course: BN30
Credit Points: 4
Contact Hours: 2 per week

PSB051 THE HUMAN ENVIRONMENT 2
Basic research principles, perception, learning processes, motivation and problem solving. Communication, characteristics and dynamics of group and interpersonal interactions. Stress and anxiety management. The role of the self-concept and locus of control in transactions with the world in general.
Course: BN30
Credit Points: 6
Contact Hours: 2 per week

PSB052 THE HUMAN ENVIRONMENT 3
Role of social, cultural, and historical variables in human-environment interactions. Social and cultural development of Australian urban environments. Theory: privacy, personal space, territoriality, environmental meaning and cognition, cognitive maps and wayfinding, intercultural and intracultural differences.
Course: BN30
Prerequisite: PSB051
Credit Points: 6
Contact Hours: 3 per week

PSB053 THE HUMAN ENVIRONMENT 4
Directing society; the roles of government and private enterprise; theories of power in society. The Australian example: three tiers of government; Australian constitution; Parliamentary democracy. Queensland State administration; role of local government, quangos and statutory authorities; pressure groups and lobby groups and their influence in the built environment arena.
Course: BN30
Prerequisite: PSB052
Credit Points: 4
Contact Hours: 2 per week

PSB054 ENVIRONMENTAL SCIENCE
Atmospheric process including climate; air pollution and smog; water cycles. Sea level changes and water pollution as a global issue; carbon, nitrogen and phosphorus cycling. Introduction to human population and demographic trends. Distribution and trade in renewable and non-renewable resources; trends in the use of land; the city as an ecosystem; natural resource management and conservation.
Courses: BN30, PS47
Credit Points: 4
Contact Hours: 2 per week

PSB056 APPLIED LAND SCIENCE FOR DESIGNERS
This unit is concerned with establishing the foundations of a scientific understanding of the earth's surface. It includes earth science and climatology for environmental design; land forms and their origins; introduction to the physical properties and behaviour of soils and rocks in relation to the design professions.
Course: BN30
Credit Points: 4
Contact Hours: 1 per week

PSB057 LANDSCAPE ECOLOGY 1
Concepts of plant science and ecology which form the basic understanding necessary for design in dynamic biophysical environments; the biological world, at whatever scale of analysis we use - individual, species, population or community - is responsive in its form and function to the influences of the environment in which it lives. Through understanding the processes which regulate the impact of environment it is possible to interpret patterns in the landscape, predict change and design form and function.
Course: BN30
Credit Points: 8
Contact Hours: 4 per week

PSB058 LANDSCAPE ECOLOGY 2
The broad division of the earth in relation to climate and soils; the ecosystem concept and its development and application at various geographic scales; concept of community ecophysiology and growth equations; ecological biogeography of Australian vegetation; classification of landscape; concepts of biogeographic regions; landscape structure: patches and corridors and the ideas of matrix and network; analysis of landscape structure and function.
Course: BN30
Credit Points: 8
Contact Hours: 3 per week

PSB059 POPULATION & URBAN STUDIES
Topics include: aspects of urban structure including size/function relationships, concentric zone theory, Hoyt's settlement patterns and problems of rural settlements. The dynamics of urban areas: the relationships and requirements of urban activities (especially residential, work and leisure activities); theories of city form and change; the problems of the CBD; the CBD fringe, and the urban/rural fringe. Case studies of Australian settlements.
Courses: BN30, PS47, PS67
Credit Points: 6
Contact Hours: 2 per week

PSB060 INTRODUCTION TO ECONOMICS
Introduction to the basic economic problem of scarcity. Production possibilities are outlined together with various types of economic regimes. A simple macroeconomic circular flow model is introduced. The second part of the unit deals with microeconomic concepts. The market system and associated concepts of demand, supply and price equilibrium.
Courses: BN30, CN32
Credit Points: 2
Contact Hours: 1 per week

PSB061 IMPACTS & ASSESSMENT
Forms of impact assessment and analysis considering ecological, social and economic issues; various statutory systems. An analysis of the ecological
processes as a background to assessing impact of human activities: urbanisation, resource exploitation, mining and other forms of landscape change.

Courses: BN30, PS47
Prerequisites: PSB058, PSB059
Credit Points: 5
Contact Hours: 2 per week

- **PSB062 ECONOMICS OF TOWN PLANNING**

This unit is essentially microeconomic; introduces urban economics and the economic aspects of town planning issues; provides techniques for economic analysis suited to planning studies; illustrates interactions between employment, industry, population and urban studies at the economic interface.

Course: BN30
Credit Points: 5
Contact Hours: 2 per week

- **PSB063 HOUSING & COMMUNITY SERVICES**

Population change and households formation. Housing conditions and preference surveys; housing issues and policies. The economics of the building and land development industries. The physical place of educational institutions in communities. Shared use of facilities. Location and space standards. Social and welfare services and their role in the community.

Courses: BN30, PS47
Credit Points: 5
Contact Hours: 2 per week

- **PSB070 MAP & AIR PHOTO INTERPRETATION**

Types, sources, uses and availability of maps and air photos, map reading, understanding of contours, land forms and use of sections; methods and techniques of map production; introduction to photogrammetry and use of stereoscopes; introduction to remote sensing.

Course: BN30
Credit Points: 2
Contact Hours: 1 per week

- **PSB071 SITE MEASUREMENT**

Introduction to basic equipment for site measurement: levels, staffs, chains and tapes, the prismatic compass, optical prism, clinometer, range poles and their use in horizontal and vertical measurement. Introduction to recording of field data and the preparation of measured site drawings from recorded data.

Course: BN30
Credit Points: 4
Contact Hours: 1 per week

- **PSB072 DESIGN SCIENCE**

The quantity and quality of light and daylight in buildings; macro and micro climatic conditions; students are given the opportunity to conduct experiments and test models.

Course: BN30
Prerequisites: ARB140, CHB204, PHB144, PSB011, PSB056
Credit Points: 4
Contact Hours: 2 per week

- **PSB073 COMPUTER TECHNIQUES**

Development of understanding, awareness, and appreciation of computers as aids in data analysis and presentation, and of basic skills to input, manipulate, and analyse output; for statistical analysis of data in decision making; the range of information systems; as a tool in landscape architecture and planning.

Course: BN30
Prerequisites: MAB195, MAB196
Credit Points: 4
Contact Hours: 2 per week

- **PSB074 LAND DEVELOPMENT**

The political, economic and physical contexts of land development; environmental services and utilities at the broad scale; the necessary design criteria for these services. Topics include: characteristics of land development projects; structure and operation of approval authorities; design considerations; impacts of electricity and gas systems on the natural environment; transport systems planning.

Course: BN30
Credit Points: 8
Contact Hours: 3 per week

- **PSB077 TRANSPORT PLANNING**

Studies include alternative modes of transport; economic methods for predicting future urban transport patterns; and to techniques of transport planning and management. It covers movement and its alternative modes. The origin and destination approach to traffic management; interchange studies. Inter-urban traffic and regional transport planning. The relationship between land use and traffic generation.

Courses: BN30, PS67
Credit Points: 6
Contact Hours: 2 per week

- **PSB078 URBAN LAND DEVELOPMENT**

Continuation of PLB546. Land development projects, their financial, marketing and local authority requirements; the housing industry, firm and industry developments and current trends; the requirements of community, public and utility services.

Courses: BN30, PS57
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: 6
Contact Hours: 2 per week

- **PSB244 LANDSCAPE GRAPHICS**

Combined application of freehand, drafting and colour techniques. The selection of colour, theme and emphasis in graphic packages. Realism, abstraction and symbolism in landscape communication. Monochromatic graphics for simple reproduction. Integration of various graphic techniques and media. Efficient processes for production and reproduction.

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

- **PSB275 LANDSCAPE CONSTRUCTION 1**

Materials and methods of construction; skills in detailing and preparation of documents. Topics include: the common building materials; foundation soils; site stormwater drainage, water and electrical services; applied systems, including paving, etc.

Course: BN30
Prerequisite: PSB071
Credit Points: 6
Contact Hours: 3 per week

- **PSB276 LANDSCAPE CONSTRUCTION 2**

Techniques of land surface manipulation including construction of platforms for building, carparks, sports ovals etc. and associated provision of surface drainage. Lectures are accompanied by skill develop-
credit exercises in a grading workbook concluding with the preparation of two set grading plans.
Course: BN30 Credit Points: 4 Contact Hours: 2 per week

**PSB280 ELECTIVE UNIT (LANDSCAPE ARCHITECTURE)**
Final year students are required to undertake a minimum of two hours of elective units. The elective unit may be taken in either semester or spread across both semesters depending on unit choice.
Course: BN30 Prerequisites: Completion of years 1 and 2 Credit Points: 4 Contact Hours: 2 per week

**PSB303 ANALYSIS OF SPATIAL MEASUREMENT 1**
Surveying measurements and their assessment, propagation of variances, pre-analysis of survey tasks, least squares adjustment methods for various functional and stochastic models.
Course: PS47 Credit Points: 6 Contact Hours: 3 per week

**PSB304 ANALYSIS OF SPATIAL MEASUREMENT 2**
Generalised Least Squares, linearised observation equations approach to more extensive horizontal and 3-D networks including GPS data; reliability of solutions and design of networks; detection and treatment of systematic and gross errors.
Course: PS47 Credit Points: 6 Contact Hours: 3 per week

**PSB306 CARTOGRAPHY 1**
Freehand Drawing: field sketching; base materials: drawing instruments for survey drafting; 3-D representation: relief shading, contour interpolation; precision plotting: earth's co-ordinate system; construction of map projections both manual and computer assisted; the cadastral: an introduction to its history and implications for society if the cadastral is not maintained; specifications for cadastral plan preparation; cadastral plan registering authorities requirements; simple subdivision plans; plan reproduction techniques: electrostatic digitizing.
Course: PS47 Credit Points: 8 Contact Hours: 3 per week

**PSB307 CARTOGRAPHY 2**
Preparation of cadastral plans for survey actions over multiple amalgamations; building units and group titles; background tenures, mining tenures; detail survey plans: long and cross sections for engineering projects; digital data acquisition: types of digitisers and scanners; raster/vector conversions; digitising techniques; scanning problems; output devices; printers, plotters, scanner plotters, image setters.
Course: PS47 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.
Course: PS47, SV34 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; Munsel, Ostwald, CIE, colour in cartographic design.
Course: PS47 Co-requisites: 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 ephemerides; orbital characteristics for communication, remote sensing and position fixing satellites; the GPS system, configuration, availability, reliability, ephemerides, error sources and error budgets; GPS receivers and software; GPS applications in point positioning, differential and kinematic mode; non-satellite applications.
Course: PS47 Co-requisites: PSB346, PSB329 Prerequisites: PHB172, MEB221, PSB327, MAB498 Credit Points: 6 Contact Hours: 3 per week

**PSB311 GEODESY 2**
Further work on spherical and ellipsoidal harmonics; Gauss' and Green's formulae; geodetic 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: VLBI, 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 Co-requisite: PSB310 Credit Points: 6 Contact Hours: 3 per week

**PSB315 LAND ADMINISTRATION 1**
Introduction to the nature of politics, political concepts and culture, and public policy; constitutional development in terms of its English origins, evolution of colonial self-government, federalism, and the Australian Constitution with particular reference to the effects on laws relating to land; the roles of parliament, executive government, the judiciary, the public service, local government; the exercise of political influence through pressure groups, political parties, the mass media, and issues of freedom of information; the purpose and aims of resource policy and the role of property rights in resource management.
Courses: PS47, SV34 Credit Points: 6 Contact Hours: 3 per week

**PSB316 LAND ADMINISTRATION 2**
An historical study of the development of land policy in Australia, highlighting the conflicts that have arisen from differing philosophies of land use and owner-
ship; introduction to the elements of the law; the sources of the law, legal systems, the judicial hierarchy, rules of precedents, law reports, where to find the law; the basic principles and objectives of the Torrens system of land titling; concepts of government, guarantee and indefeasibility; concepts of Estate, Tenure, Interests; the operation of the Torrens system in Queensland; Certificates of Title, easements, caveats, mortgages, dealings, transfers, lease, etc.

Course: PSB317
Credit Points: 8
Contact Hours: 3 per week

PSB318 LAND ADMINISTRATION 3

Course: PSB318
Prerequisite: PSB316
Credit Points: 8
Contact Hours: 3 per week

PSB319 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: PSB319
Prerequisites: PSB319, PSB323
Credit Points: 6
Contact Hours: 3 per week

PSB320 LAND ADMINISTRATION 5
The role of organisation, learning as a function of time, tendencies towards specialisation, the concept of synergy problems of co-ordinating activities, the organisation of information and the significance of rule governed behaviour; economic, sociological, administrative, political and sociological perspectives on organisation; systems and cybernetic approaches to organisation; the individual as a system, social systems, and adaptive systems; applications in personal psychology and development, the business firm, professional and industry organisations, government and social controls, legal institutions and public policy, land information systems.

Course: PSB320
Prerequisites: PSB315, PSB323, PSB318
Credit Points: 6
Contact Hours: 3 per week

PSB321 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, site evaluation, GIS application; the site in its broader context; spatial models; models for levels of activity and location of activities, optimising models.

Course: PSB321
Prerequisites: MAB498, PSB504, PSB324, PSB342
Co-requisites: CEB464, PSB317
Credit Points: 8
Contact Hours: 3 per week

PSB322 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; preparation for Court, precedents.

Course: PSB322
Prerequisites: CEB464, PSB317, PSB318, PSB320
Co-requisite: CEB564
Credit Points: 8
Contact Hours: 3 per week

PSB323 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: PSB323
Prerequisites: CEB564, PSB321, PSB324
Credit Points: 16
Contact Hours: 6 per week

PSB324 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 economies; consideration of economic efficiency, productivity, technological change and economic growth.

Course: PSB324
Credit Points: 6
Contact Hours: 3 per week

PSB325 LAND STUDIES 2
Concepts of value, purposes of valuation; general and statutory definitions; general principles of valuation; methods of valuation, preparation and presentation of valuation reports; valuation of improvements to land; valuation methods and techniques applicable to the valuation of residential, retail, commercial and industrial property; valuation of other rights in land, easements, licences, life interests, reversions, remainders and fractional interests; strata title; effect of statutory town planning schemes on land valuation; land valuation and land administration; legislation affecting land valuation practice including the Valuation of Land Acts, Valuers Registration Act, Auctioneer’s Commission Agents Act, Sale of Land Act; Law reports on valuation cases; reports of recent Royal Commissions and Committees of Inquiry dealing with land valuation; duties and liabilities of a valuer.

Course: PSB325
Prerequisites: PSB316, PSB323, PSB328
Credit Points: 6
Contact Hours: 3 per week

PSB326 LAND SURVEYING 1
General introduction to the profession and to position fixing methods ("absolute" and relative). Elementary treatment of errors - systematic and random; accuracy and precision. Working from 'whole to part'; horizontal and vertical control, PSMs, level datum(s), BMs,
MSL, AHD. Types and purposes of surveys; tapes and chains, formulae (sans derivations) for slope, temperature, sag and tension correction; chaining techniques; simple trigonometric and differential heighting; introductory principles and use of EDM; calcs; close and Bowditch adjustment; areas and volumes. Introduction to mapping; map numbering system used in Queensland; interpretation of cadastral boundaries, 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

PSB326 LAND SURVEYING 2
Cals; missing element closes; horizontal curves (simple, compound, reverse); cutting off areas; ‘Horner type’ plane calcs; earth work estimation; errors; further work on random errors; measures of precision, errors and residuals; simple propagations; theory, tests and adjustments of optical theodolites; 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 co-ordination with Physics). Traversing and further non-Least Square adjustments; investigation and detail surveys. Longitude and cross-sections; theory and practice of barometric and hydrostatic levelling. Further work on contours and contouring.
Course: PS47
Prerequisite: PSB325
Co-requisite: PHB172
Credit Points: 8
Contact Hours: 3 per week

PSB327 LAND SURVEYING 3
Position fixing and resection; contour and detail surveys, specifications, performance and assessment of DTM's; horizontal and vertical alignment for route surveys; areas, volumes and earthworks. Field astronomy theory.
Course: PS47
Credit Points: 10
Contact Hours: 3 hours

PSB328 LAND SURVEYING 4
Land Title Systems, Reinstitution: an explanation of the options of land title systems, with particular reference to Customary Land Tenure, Private Deeds registration, Public Deeds Registration, and Registration of Title; an analysis of the literature and case law relevant to the reinstatement of property boundaries as applicable to Queensland; an analysis of legislation, subordinate legislation and case law that impinges on the reinstatement process; a comparative rendering of spatial relationships. Field survey to reinstate the boundaries of a section in the Brisbane Metropolitan area.
Course: PS47
Prerequisite: PSB317
Co-requisite: PSB316, PSB325
Credit Points: 8
Contact Hours: 3 per week

PSB329 LAND SURVEYING 5
Reconnaissance for geodetic surveys; geodetic observation techniques and reduction of observations. The three classical methods of geodetic surveying, triangulation, traverse and trilateration; precision levelling including the Princeton Test; satellite surveying using GPS technology; the undertaking of a geodetic survey in accordance with Surveyors Board requirements for Registration as a Surveyor.
Course: PS47
Prerequisite: PSB327
Credit Points: 8
Contact Hours: 3 per week

PSB330 LAND SURVEYING 6
Field surveys for DTM's, as-constructed surveys, associated specifications and standards; more complex setting out, control and monitoring for structures, mining surveying for surface and below surface mining activities; hydrographic surveying for exploration and port management.
Course: PS47
Credit Points: 8
Contact Hours: 3 per week

PSB331 LAND SURVEYING 7
The need for control in the use of resources; property rights as a method of resource control. Creating and maintaining knowledge of property rights; including issues concerned with parcel identifiers, land tenure, land boundaries, land subdivision, land registration, changing rights through statutory changes, attitudes and responses of the public; evidence of property rights, evolution from customary land tenures to land registration systems; factors leading to breakdown of systems. Effects of technological change on land use, evolving property rights and obligations, and on information technology on land use controls; the Mabo case.
Course: PS47
Credit Points: 8
Contact Hours: 3 per week

PSB332 LAND SURVEYING 8
Procedures of the various departments including but not confined to the Department of Lands, Resources Industries; plan registration, road closure, resumption surveys, conversion of mining tenure to freehold, conversion of pastoral tenures to freehold, exxion for and of reserves of various kinds. The undertaking of a cadastral survey of moderate complexity in accordance with Surveyors' Board’s requirements for registration as a surveyor.
Course: PS47
Prerequisite: PSB328
Credit Points: 8
Contact Hours: 3 per week

PSB333 MAP PROJECTIONS
Mapping terms and definitions; the mapping problem. Distortion, linear, angular and areal. Tessor’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; spherical projection. The polar stereographic, Lambert’s polar conformal, Mercator and Transverse Mercator projections. The UTM system. Computations on the AMG. Line scale factor and (t - T) for short and long lines. Mutual transformation of polar and AMG coordinates.
Course: PS47
Co-requisites: PSB306, PSB346
Prerequisite: MAB497
Credit Points: 6
Contact Hours: 3 per week

PSB334 PHOTOGRAMMETRY 1
Foundations of photogrammetry; history, products, applications; elements of photogrammetric optics: lenses and filters; aerial cameras; aerial photography; factors affecting the photographic mission; acquisition of photography. Photographic materials and processing; photographic materials and their properties; the aerial photographic image; planning and executing the photogrammetric project. Field surveys for photogrammetry; introduction to basic mathematics of photogrammetry; geometry and use of a stereo model. Introduction to remote sensing: propagation of electromagnetic waves; general descrip-
Course: PS47  
Credit Points: 6  
Contact Hours: 3 per week

**PSB335 PHOTOGRAMMETRY 2**

Basic mathematics of photogrammetry: coordinate systems; elements of interior and exterior orientation; image forming equations of the central projection; fundamental rotation matrices. Space resection of a single photograph; formation of a stereo model: on a stereoplotter; numerically; axontriangulation: introduction; historical development; methods; instrumentation. Block triangulation with independent models: three-dimensional transformation of unit models; separation of planimetric and height computations; corrections for image errors and instrumental errors: image deformation; physical effects; accuracy of block adjustment: planimetry; height.

Course: PS47  
Co-requisites: PSB304, MAB795  
Prerequisites: MAB497, MAB498, PSB334  
Credit Points: 8  
Contact Hours: 3 per week

**PSB336 PHOTOGRAMMETRY 3**

Principles of Plotting with a Stereoplotter: analogue plotters; analytical plotters. Rectification of photographs: perspective relationship between planes; differential rectification of photographs (orthophotos); data acquisition: digital elevation model; acquisition of height points; accuracy assessment; close range photogrammetry: introduction; overview; applications. Digital mapping and its relationship to geographic information systems and remote sensing: general process; attribute encoding of cartographic information; geographic information systems.

Course: PS47  
Prerequisites: MAB497, MAB498, PSB303, PSB334, PSB335  
Credit Points: 8  
Contact Hours: 3 per week

**PSB337 PHOTOGRAMMETRY 4**

Introduction to digital photogrammetry: digital photogrammetry; digital image fundamentals; all digital photogrammetry and remote sensing: image sampling and resampling; digital image correlation: theory of digital correlation; computational methods in digital correlation; some strategies of computation in correlation: corrected by least squares; multi-point and feature-based matching. Digital geometric processing of images: projective transformation equations; effect of terrain undulations; digital differential rectification; processing of image grey levels: image transformation; image enhancement; image restoration.

Course: PS47  
Prerequisites: MAB498, MAB795, PSB303, PSB304, PSB335, PSB336  
Credit Points: 6  
Contact Hours: 3 per week

**PSB338 PROFESSIONAL PRACTICE**

Definitions and characteristics of a profession: principles of ethical behaviour, codes of ethics, the Code of Ethics of ISA; professionalism and statutory regulations; current issues in professionalism; professional organisations; professional heritage. The Surveyor's 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: PS47  
Prerequisites: COB163, PSB317 and completion of at least 240 course credit points  
Credit Points: 6  
Contact Hours: 3 per week

**PSB339 PROJECT**

Each student is to research and report on a topic germane to surveying and mapping that will demonstrate a capacity to satisfy the objectives of this subject. A 20-25 minute seminar will be given by each student in both semesters on the topic of the project, or other approved subject.

Course: PS47  
Prerequisites: BNBO01 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 assessment; image display; image classification: informational classes and spectral classes; supervised classification: supervised classification; other classifications; applications in the earth sciences; land use and land cover remote sensing and geographic information systems.

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

**PSB341 REMOTE SENSING 2**

Review of aspects from PSB340; image interpretation: activities of image interpretation; elements of image interpretation: techniques of image interpretation; visual requirements of image interpretation; image processing and image classification; cartographic presentation of remote sensing data: fundamentals of cartographic presentation; approaches to cartographic presentation: rectification; applications; environmental terrain and minerals: assessment and evaluation. Forest lands: inventory and assessment; water resources assessment; the marine environment. Weather and climate: measurement and analysis; crops and soils: urban environments: inventory and analysis; regional analysis.

Course: PS47  
Prerequisite: PSB340  
Credit Points: 8  
Contact Hours: 3 per week

**PSB342 SPATIAL INFORMATION SCIENCE 1**

Introduction: what is spatial information science; maps and map analysis; raster SIS; vector SIS; digital elevation models; spatial data bases: spatial objects and data base models; relationships among spatial objects; data base concepts; data acquisition: sampling; data input; coordinate systems; map projections; transformations; georeferencing: Using spatial information systems: spatial analysis; output; graphic output design issues; modes of user/SIS interaction.

Course: PS47  
Credit Points: 8  
Contact Hours: 3 per week

**PSB343 SPATIAL INFORMATION SCIENCE 2**

Coordinate systems and geocoding: common coordinate systems; map projections; transformations.
Vector data structures and algorithms: storage of complex spatial objects; storage of lines; algorithms: polygon overlay operation; raster data structures and algorithms: raster storage; hierarchical data structures; quadtree algorithms and spatial indices; data structure and algorithms for surfaces, volumes and time; digital elevation models; spatial interpolation; temporal and 3-D data bases; data bases for spatial information systems; concepts; error modelling and data uncertainty: accuracy of spatial data bases; managing errors; line generalisation; visualisation: visualisation of spatial data; colour theory.

Prerequisites: PSB306, PSB326, PSB334, PSB342
Credit Points: 8
Contact Hours: 3 per week

PSB344 SPATIAL INFORMATION SCIENCE 3
Spatial information science application areas: application areas; resource management; urban and rural planning; cadastral administration; facilities management; system planning; system planning overview; functional requirements analysis; system evaluation; benchmarking; system implementation: database creation; implementation issues; implementation strategies; other aspects: standards; legal issues; knowledge based techniques.
Course: PS47
Prerequisite: PSB343
Credit Points: 8
Contact Hours: 3 per week

PSB345 SPATIAL INFORMATION SCIENCE 4
Spatial information application area: decision making in spatial information systems; spatial information planning: system planning; system building; system evaluation: costs and benefits.
Course: PS47
Prerequisite: PSB344
Credit Points: 8
Contact Hours: 3 per week

PSB346 SPHEROIDAL COMPUTATIONS
Properties of the meridian ellipse. Radii of curvature, meridian arc. Spheroid as a geodetic reference surface, latitude, longitude, geoid separation and ellipsoidal height. Mutual conversion of geodetic and cartesian co-ordinates. Seven parameter co-ordinate transformations; least squares parameter estimation; Point-to-point computation on the spheroid, Robbin's long line and simplified formulae. Approximate methods; setting out parallels and meridians.
Course: PS47
Prerequisites: MAB497, PSB303
Credit Points: 6
Contact Hours: 3 per week

PSB347 TOPICS IN ENGINEERING SURVEYING
Deformation surveys, design and analysis for structures and subsidence. Large scale metrology, measurement methods and geometric shape fitting; tunnelling surveys; high rise buildings.
Course: 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, office hierarchies, 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
Courses: CN31, CN32, CN33, PU42
Credit Points: 4
Contact Hours: 2 per week

PSB904 SURVEYING & MEASURING
Basic concepts, applications of surveying, relationship with architecture and building; instrumentation; setting out of procedures, plotting survey data, computations, cadastral systems, land tenure systems; Titles Office procedures, searching, identification, types of surveys, easements, encroachments, interpretation of survey plans.
Courses: CN31, CN32, CN33, PU42
Credit Points: 4
Contact Hours: 2 per week

PSB905 PROJECT SURVEY
Two surveys of a building site; chain survey with reduced levels taken on a grid; survey done by theodolite traverse.
Course: CN31
Prerequisite: PSB904
Credit Points: 4
Contact Hours: 2 per week

PSB907 SURVEYING
Introductory surveying methods, instrumentation; use of level and theodolite for gathering and setting out data points, distance measurement, circular curves, areas of volumes; introductory photogrammetry and digital terrain models.
Course: CE42
Credit Points: 8
Contact Hours: 3 per week

PSN001 APPLIED RESEARCH TECHNIQUES
Research techniques, including surveys of various types, statistical analysis, remote sensing and others.
Courses: BN73, PS69
Credit Points: 6
Contact Hours: 2 per week

PSN002 CONCENTRATION STUDIES A
Students, in conjunction with and with the approval of the course coordinator elect studies to improve basic knowledge in identified areas of deficiency. Such study may be taken in defined units offered outside the major or a specified reading/research program under tutorial guidance.
Courses: BN73, PS69
Credit Points: 4
Contact Hours: 1 per week

PSN003 CONCENTRATION STUDIES B
Each student undertakes approved study to develop more specialised knowledge and skills related to their specific focus of study or dissertation topic. Study may be taken within the student's own major through specialist studies offered by staff in their areas of expertise, from other majors in the course, or from other advanced studies in the University.
Courses: BN73, PS69
Credit Points: 8
Contact Hours: 2 per week
PSN004 APPLIED RESEARCH TECHNIQUES
Research techniques, including surveys of various types, statistical analysis, remote sensing and others.
Course: BN73
Credit Points: 4  Contact Hours: 1 per week

PSN099 DISSERTATION
Provides the opportunity to pursue in depth and with innovation an issue or problem within the chosen focus of study. This may be achieved through emphasis on either design or process. The balance between theory and design application may vary; however, a dissertation which focuses on a specific design must be supported by a theoretical basis and analysis sufficient to define the problem and to explain how the design satisfies the conditions for a solution. Conversely, a dissertation which focuses on the development of a theory must illustrate the practical implications of the theory for the relevant classes of design.
Course: BN73
Credit Points: 24  Contact Hours: 1 per week

PSN111 COMPARATIVE PLANNING THEORY
Roles of planners: statutory, pluralist, advocate, consultant; 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 issues and regional planning issues in Australia.
Course: BN73
Credit Points: 6  Contact Hours: 2 per week

PSN112 CONCENTRATION STUDIES
In consultation with the course coordinator, and the approval of the Head of School, each student undertakes an agreed program of study which may involve taking selected courses from outside the urban and regional planning curriculum, focusing on a particular aspect of urban and regional planning which relates to the student’s thesis topic. Students prepare a draft outline of the thesis and write a preliminary chapter or discussion paper which normally deals with the theoretical background or broad context of the topic selected for study.
Course: BN73
Credit Points: 12  Contact Hours: 2.5 per week

PSN113 OPTION PROJECTS
Working in small groups, students undertake projects which broadly relate to their thesis topics. Projects may relate to topics such as urban development and design, regional development planning and management, recreation and tourism planning, and planning in developing countries.
Course: BN73
Credit Points: 12  Contact Hours: 2 per week

PSN114 METROPOLITAN PLANNING PRACTICE & LAW
Growth and changes in metropolitan areas with particular reference to Australia; urban sprawl or urban consolidation; the future of metropolitan Brisbane; the current planning and legislative framework; suggestions for reform; group project on an aspect of metropolitan planning, normally in Brisbane.
Course: BN73
Credit Points: 12  Contact Hours: 2 per week

PSN121 PLANNING PROJECT
The thesis is normally required to be 30-50,000 words in length, and is related to the Concentration Studies and Option Project chosen by the student. The precise subject and objectives are chosen in consultation with an appropriate tutor. Field work is usually a necessary component of the research required in the production of the Planning Thesis which should make an original contribution to knowledge in the field of urban and regional planning to a closely related area.
Course: BN73
Credit Points: 24  Contact Hours: 1 per week

PSN122 PROFESSIONAL SEMINARS
Contributions by local and visiting speakers with specialist expertise or knowledge of specific issues or projects related to the work and interests of the built environment professions. Master of Built Environment students are expected to attend and to participate fully in the discussions.
Course: BN73
Credit Points: 6  Contact Hours: 2 per week

PSN123 PLANNING IN DEVELOPING COUNTRIES
The concept of the Third World: characteristics and setting; theories of national development relevant to the Third World; the roles of international agencies, governments, expatriate urban and regional planners, local expertise and the international community; the problems of rapid social and cultural change; the role of nationalism. Urban issues: rapid urbanisation, dual economies, the provision of shelter, squatters, social and physical infrastructure. Rural issues: definitions and theories of development; rural development schemes and case studies: capital land and labour intensive schemes; economic transformations; the future of urban-rural relations in developing countries.
Course: BN73
Credit Points: 6  Contact Hours: 2 per week

PSN124 OPTION COURSE
This course is developed by senior academic staff in response to matters of current significance; there are also opportunities to select appropriate elective courses from elsewhere within and outside QUT.
Course: BN73
Credit Points: 12  Contact Hours: 2 per week

PSN201 MASTERS STUDIO
Students select a specific studio related to the proposed focus of study. Studios are organised on a thematic rather than a purely disciplinary basis and projects will involve members of several disciplines in schemes of varying scales. Advanced problem solving and interactive skills are required. Emphasis is placed on coordinated and managed group activity and resulting high levels of team output are expected. Professional aspects of project activities are supported by input on advanced aspects and concepts.
Course: BN73
Credit Points: 12  Contact Hours: 3 per week

PSN202 ADVANCED PRACTICE 1
Presumes prerequisite understanding of practice relationships and processes. Emphasis is on the establishment and development of new markets and appropriate methodologies.
Course: BN73
Credit Points: 4  Contact Hours: 1 per week

PSN203 ADVANCED PRACTICE 2
See PSN202.
Course: BN73
Credit Points: 8  Contact Hours: 2 per week
**PSN204 PRACTICE SEMINAR**
Students are required to prepare and present a formal seminar on a professional topical subject and to participate in those presented by fellow students.
Course: BN73
Credit Points: 4  Contact Hours: 1 per week

**PSN205 PROFESSIONAL SEMINARS**
This unit provides a forum for interdisciplinary discussion. Local and visiting speakers contribute specialist expertise and knowledge of specific issues or projects related to the work and interests of the contributing majors.
Course: BN73
Credit Points: 8  Contact Hours: 2 per week

**PSN206 RESEARCH METHOD**
Students are introduced to issues related to the purpose, organisation, and conduct of research and to a range of appropriate techniques for the collection and analysis of information relating to their dissertation topics. The current state of research and publication in the profession is highlighted.
Course: BN73
Credit Points: 4  Contact Hours: 1 per week

**PSP001 ENVIRONMENTAL IMPACTS**
Applied studies in ecological systems. The influence of these systems collectively and separately on environmental design decisions. Environmental impact studies and assessment techniques; statutory assessment systems.
Course: PS67
Credit Points: 6  Contact Hours: 2 per week

**PSP002 HISTORY OF PLANNING**
Links between society, ideas and urban form. Urban evolution from ancient to modern times in Africa, Asia, Europe, America and Australasia. The Industrial revolution and its effect on urban form and on planning of Australian urban history and the development of environmental management and town planning in Australia.
Course: PS67
Credit Points: 4  Contact Hours: 1 per week

**PSP003 ECONOMICS OF TOWN PLANNING**
Course: PS67
Credit Points: 6  Contact Hours: 2 per week

**PSP011 CONSERVATION THEORY**
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 broadscale regeneration.
Course: PS67
Credit Points: 12  Contact Hours: 4 per week

**PSP059 POPULATION & URBAN STUDIES**
Basic urban definitions, spread and characteristics of urbanisation, structure of cities, economic and social processes at work within cities, particular aspects such as housing and gentrification, basic concepts of population and demography, recent and historical analyses of the Australian population, familiarisation with the role of ABS and with statistical and data analysis of population, world demographic trends.
Courses: BN30, HL88, PS67
Credit Points: 6  Contact Hours: 2 per week

**PSP060 SCHOOL FIELD TRIP**
One field course of approximately seven to ten days duration to provide a comparative dimension to students' studies and to develop skills in observation, data collection, recording and interpretation.
Course: PS67
Credit Points: 4  Contact Hours: 7-10 days

**PSP063 HOUSING & COMMUNITY SERVICES**
Social justice in the provision of Housing and Community Services. Demographic change; household formation and characteristics; projection of housing stock, tenure, and roles of providers. Significant problems such as homelessness, housing related poverty and the special housing needs of vulnerable groups. Case study examples from interstate and overseas.
Courses: HL88, PS67
Credit Points: 6  Contact Hours: 2 per week

**PSP077 TRANSPORT PLANNING**
Movement and its alternative modes: foot, cycle, car, bus, train, plane, pipeline, inland waterway and marine modes. The origin and destination approach to traffic management interchange studies. Inter-urban traffic and regional transport planning. This relationship between land use and traffic generation.
Courses: BN30, PS67
Credit Points: 6  Contact Hours: 2 per week

**PSP078 URBAN LAND DEVELOPMENT**
Structural and engineering design requirements in urban development - local physical services, roads and drainage, sewers, water, gas, electricity and Telecom service. Design and control systems, design standards, the effects of standardised requirements and alternative approaches. The roles of statutory authorities - gas, electricity, water, telephone, public transport, railways, waterways, road construction authorities. Development teams - the roles of associated disciplines - civil, municipal and transport engineers, earth and environmental scientist, and others. The role of the private developer.
Courses: BN30, PS67
Credit Points: 4  Contact Hours: 1 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
\section*{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. 
\textbf{Course:} PS67  
\textbf{Credit Points:} 4  \textbf{Contact Hours:} 1 per week

\section*{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. 
\textbf{Course:} PS67  
\textbf{Credit Points:} 4  \textbf{Contact Hours:} 1 per week

\section*{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 measuring from air photos. Introduction to various types of remote sensing imagery available to planners. 
\textbf{Course:} PS67  
\textbf{Credit Points:} 4  \textbf{Contact Hours:} 1 per week

\section*{PSP115 Planning Processes}
\textbf{Course:} PS67  
\textbf{Credit Points:} 8  \textbf{Contact Hours:} 2 per week

\section*{PSP120 Urban Design Practice}
Projects involving individual and group work focussing on practical planning and design in a specific urban community. Practical residential subdivision. 
\textbf{Course:} PS67  
\textbf{Credit Points:} 12  \textbf{Contact Hours:} 3 per week

\section*{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. 
\textbf{Course:} PS67  
\textbf{Credit Points:} 4  \textbf{Contact Hours:} 1 per week

\section*{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. 
\textbf{Course:} PS67  
\textbf{Credit Points:} 12  \textbf{Contact Hours:} 4 per week

\section*{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. 
\textbf{Course:} PS67  
\textbf{Credit Points:} 4  \textbf{Contact Hours:} 1 per week

\section*{PSP134 Theories for Planning}
The locus and exercise of power in society, structure of society with particular reference to Australia. The structure of the Australian federal system of government and the impact of this on the way cities are governed. An investigation of organisational culture and change, organisational structures, inter-organisational relations, and approaches to improving organisational performance. Ideas and theories in planning; theory as a basis for practice. The political and philosophical determinant of land use planning. Values in planning, models of human nature and planning’s relationship to important value traditions; liberalism, utilitarianism, empiricism, idealism, socialism, conservatism. The concepts of the public interest, social justice and public intervention. 
\textbf{Course:} PS67  
\textbf{Credit Points:} 12  \textbf{Contact Hours:} 3 per week

\section*{PSP136 Regional Planning Methods}
\textbf{Course:} PS67  
\textbf{Credit Points:} 6  \textbf{Contact Hours:} 2 per week

\section*{PSP137 Resource Management}
Aims and processes of resource management; alternative approaches and techniques, resource inventories and evaluations. Environmental impact analysis and statements, statutory requirements. Multi-purpose schemes and planning and management of regional landscapes in Australia and overseas. Policy studies of land and resource management schemes. 
\textbf{Course:} PS67  
\textbf{Credit Points:} 8  \textbf{Contact Hours:} 2 per week

\section*{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. 
\textbf{Course:} PS67  
\textbf{Credit Points:} 6  \textbf{Contact Hours:} 2 per week

\section*{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. 
\textbf{Course:} PS67  
\textbf{Credit Points:} 12  \textbf{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: PS66
Credit Points: 12
Contact Hours: 6 per week

- **PSP123 SITE PLANNING**

Theory: processes of site planning and detailed site design; survey and analysis phases; information required; processing of data; data analysis; generation of solutions in conceptual form as basis for strategic planning; Studio: application of theory, principles, and techniques at all scales; site utilisation and selection; environmental and social implications of design decisions; siting and integrating activities, structures, and services; land form manipulation.

Course: PS66
Prerequisite: PSP212
Credit Points: 12
Contact Hours: 4 per week

- **PSP124 RESIDENTIAL LANDSCAPE DESIGN**

Theory: introduction to the range of housing and subdivision types; consequences for design; controls, by-laws, standards, and regulations; relevant overseas, Australian, and local examples; residents' expectations and development of attitudes to suburban and urban living; design considerations. Studio: intensive program requiring group and individual work; critique; subdivision layouts; detailed setting/use design within specific development type.

Course: PS66
Prerequisite: PSP213
Credit Points: 12
Contact Hours: 3 per week

- **PSP125 URBAN LANDSCAPE DESIGN**

Theory: client and user analysis, data gathering and information requirements, programming of work for site planning and detailed design services, programming of implementation; user/function analysis and site capacity considerations; preparation of a project brief; space theory and principles of spatial design. Studio: a medium scale intensive/multiple use project which demands re-design and rehabilitation; project site 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
Prerequisite: PSP213
Credit Points: 12
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 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
tation at broad scale: contextual concepts; detailed resolution; professional communication.
Course: PS66  Prerequisite: PSP214, PSP215
Credit Points: 18  Contact Hours: 5 per week

PSP220 INTRODUCTION TO PRACTICE 1
Concept of professionalism; current issues and controversies; roles and ranges of employment; the professional Institute; private and public practice responsibilities and activities; opportunities and potentials; associated professions; review of relevant laws, regulations, and their interpretation; overview of other aspects of "environmental law"; formal writing techniques (reports, instructions, proposals (plus CV/folio), correspondence, text for publication); report structuring; complementary use of graphic material.
Course: PS66  Credit Points: 6  Contact Hours: 3 per week

PSP221 INTRODUCTION TO PRACTICE 2
Professional liability, design registration, copyrights: formal oral communication techniques (meetings, conferences, interviews, presentations); time and percentage measurement and costing of relevant professional services; units of management and costing of broad development types; techniques of cost control.
Course: PS66  Prerequisite: PSP220
Credit Points: 6  Contact Hours: 3 per week

PSP222 LANDSCAPE PRACTICE 1
Contracts: principles of contract law; forms of contract; standard conditions of contract and engagement; specific requirements of contract documents.
Forum/Workshop: discussion of topical issues as debates, panels, or seminars involving visiting specialists and/or participants.
Course: PS66  Prerequisite: PSP221
Credit Points: 6  Contact Hours: 3 per week

PSP223 LANDSCAPE PRACTICE 2
Practical experience: minimum of three weeks in approved landscape architectural office. Contracts; contract administration; case studies; professional presentation.
Course: PS66  Prerequisite: PSP222
Credit Points: 3  Contact Hours: 2 per week

PSP230 LANDSCAPE ECOLOGY 1
Plant science: plant systematics and taxonomy; classification; identification including field methods and keys; familiarisation with commonly used species; physiological processes related to growth, stress, and diseases. Plant ecology: the organism as an ecological unit; concept of species; functional ecological units; populations; limiting factors; niche; resources, competition, and dynamics of plant communities; introduction to ecosystems and energy flows.
Course: PS66  Credit Points: 6  Contact Hours: 4 per week

PSP232 LANDSCAPE ECODLOGY 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.
Course: PS66  Credit Points: 9  Contact Hours: 5 per week

PSP233 IMPACTS & ASSESSMENT
Decision-making and conflict resolution techniques relevant to land and other natural resource planning and management; analysis of ecological processes as background to assessing impact of human activities or urbanisation, resource exploitation, mining, and other landscape changes; statutory assessment systems especially those pertaining to Queensland and under Federal legislation.
Course: PS66  Prerequisite: PSP230
Credit Points: 3  Contact Hours: 2 per week

PSP234 LANDSCAPE MANAGEMENT A
Horticulture, urban horticulture, arboriculture, plantscapes: production of plant material; standards; site preparation; planting and establishment (including grasses); plant management; bushland management; regeneration techniques; pests, diseases, and their control; monitoring and maintenance programming. Relationship between management and construction: created/dependent and constructed landscapes; specifying and programming construction and management as part of design implementation; specialisations and appropriate case studies.
Course: PS66  Credit Points: 6  Contact Hours: 4 per week

PSP235 LANDSCAPE MANAGEMENT B
Landcape Assessment: visual and scenic quality assessment; EIA components; current procedures and applications. Computer Techniques: types of GIS; potential problems, current issues; computerised three-dimensional modelling. Advanced Landscape Ecology: human settlement impact on structures; interactions; connectivity and dispersal; landscape and vegetation dynamics; conservation evaluation; habitat reconstruction. Rural Land Use: issues and systems; characteristics of rural settlement; catchment management; ecosystem protection. Resource Management: issues and systems; inventories and evaluation; conflict resolution; concept of sustainable development; conservation strategies; resource management policies.
Course: PS66  Co-requisite: PSP216
Credit Points: 6  Contact Hours: 4 per week

PSP240 LANDSCAPE GRAPHICS 1
Lettering, layout, and visual themes in display communication; scale, emphasis, readability, and organisation of various types of information: photos, diagrams, text, plans, etc.; use of diagrams as major tools to explore and to communicate information from concepts through to physical relationships; range of sketch types and appropriateness to different types of work such as exploration of form, analysis, and communication of concepts.
Course: PS66  Credit Points: 6  Contact Hours: 3 per week

PSP241 LANDSCAPE GRAPHICS 2
Combined application of freehand, drafting and colour techniques. The selection of colour, theme and emphasis in graphics packages. Realism, abstraction and symbolism in landscape communication. Monochromatic graphics for simple reproduction. In-
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.
ment of ground targets and photo identification of ground points; aero triangulation, stereo plotting, map production and digital data aspects; planning, costing and preparation of specifications for comprehensive mapping task; GPS theory and practical application; LIS/GIS technology and its practical application.

**Course:** PS68  
**Credit Points:** 8  
**Contact Hours:** 6 per week

■ **PSP322 ENGINEERING SURVEYING**  
Assessment of available technology, configuration of measuring systems and recording of data; project definition, preparation of specifications including field documentation, documentation requirements of field records, determination and assessment of results; management of engineering survey projects, including costing, submissions, working with other professionals, dealing with on-site variations; long-line survey control; road surveys; flood surveys; curves, batter staking, other marking for construction and road design.

**Course:** PS68  
**Credit Points:** 12  
**Contact Hours:** 9 per week

■ **PSP323 PROJECT SITE SURVEYS**  
Detail surveying; methods, equipment, data requirements and data transfer; specifications and estimate of costs; field detail survey; processing of field data, report and plan presentation; types of construction and building control surveys; preparation of plans and specifications; building construction site inspection; instructions, documentation and communication with contractors; high precision survey and error adjustment techniques involved with construction and building control surveys; construction site set out calculations.

**Course:** PS68  
**Credit Points:** 8  
**Contact Hours:** 6 per week

■ **PSP324 BOUNDARY DEFINITION SURVEYS 2**  
Complex and difficult reinstatement exercises; field survey project work associated with difficult boundary definition; field survey project work associated with boundary definition for easement surveys and mining lease surveys.

**Course:** PS68  
**Credit Points:** 12  
**Contact Hours:** 9 per week

■ **PSP325 PROPERTY MANAGEMENT SURVEYS**  
Requirements for survey and registration of plans in various Government Acts relating to surveying; easements for transmission lines; easement surveys; dealing with client, proposal, costing and submission, field survey and plan preparation; road closures, location certificates and lease surveys; Cadastre 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.

**Course:** BN73, PS69  
**Credit Points:** 12  
**Contact Hours:** 3 per week

■ **PSP402 URBAN DESIGN CONTEXT STUDIO**  
Students undertake studies typically from a community participation project, a sense of place project, a conservation and infill project for the redevelopment/rehabilitation of urban precincts or residential areas. Techniques of guidance and control: the use of regulations, ratios, and performance standards. Positive planning and the use of incentives for good design: bonuses, transferable rights, advance publication of permissible development, rapid decisions, early dissemination of information. Work in other units of study will be related to this unit.

**Courses:** BN73, PS69  
**Credit Points:** 12  
**Contact Hours:** 3 per week

■ **PSP403 URBAN DESIGN CONJECTURE STUDIO**  
Identification and classification of approaches to urban design. The setting of objectives, the adoption of a method and the testing of implications for a particular urban design problem type. Students are required to undertake studies typically from: local area, precinct, part of the city, the city as a whole. Where applicable, work in other units of study will be incorporated into this unit.

**Courses:** BN73, PS69  
**Credit Points:** 12  
**Contact Hours:** 3 per week

■ **PSP405 URBAN DESIGN FIELD STUDIES**  
This unit consists of a field trip of approximately ten days duration. Visits to successful and unsuccessful examples of urban design and to design offices in the eastern states and the Australian Capital Territory. Students analyse existing and proposed examples in the context of their original design criteria including cultural, social, political, economic and physical aspects to understand the applicable design rules. Examples are reviewed through site visits, discussion and seminars with designers and users.

**Courses:** BN73, PS69  
**Credit Points:** 4  
**Contact Hours:** 10 days

■ **PSP411 ENVIRONMENTAL PSYCHOLOGY**  
The social and cultural development of Australian urban environments, with particular reference to the local built environment. The study of human functioning in urban environments. Theory: privacy, person space, territoriality, environmental meaning and cognition, cognitive ways and wayfinding, intercultural and intracultural differences. Application via examination and analysis of an urban environment or an artefact with respect to its sociocultural function.

**Courses:** BN73, PS69  
**Credit Points:** 4  
**Contact Hours:** 2 per week

■ **PSP416 COMPUTER AIDED DATA ANALYSIS**  
The development of skills and application of computer aided data analysis in landscape architecture. The emphasis is on building graphical data and attribute data skills; database management software; input and manipulation of data; development of graphic skills using the Autocad system.

**Courses:** BN73, BN75, PS69  
**Credit Points:** 2  
**Contact Hours:** 1 per week

■ **PSP421 HISTORY OF URBAN SYSTEMS**  
Analysis of urban forms and systems in the pre-industrial, industrial and post-industrial periods. Specific topics include urban activities: commerce, manufacture, administration, dwelling, recreation and culture; urban services: water supply, transportation, defence and public order, fire control, sewerage and waste disposal; fuel and power, public information; urban form: planning for intelligibility, planning for propriety and symbolism, planning for delight.

**Courses:** BN73, PS69  
**Credit Points:** 4  
**Contact Hours:** 1 per week
PSP424 URBAN DESIGN THEORY & CRITICISM

The characteristics of good theory in the field of urban design in relation to the work of a number of theoretical writers and schools. Specific topics include theoretical writing on urban design before 1800, theory and practice in the nineteenth century, the kunstlerischen 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 intelligible city, the work of Lynch and Appleyead, Rapoport on urban meaning, Habraken, Rowe and the city as independent artefact, Canter, Relph and Tuan on the phenomenology of the city, Matlland’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, roofs, overhead structures, services, features, finishes. Natural elements and their nurture within urban areas: vegetation species, groupings, their requirements, streets, plazas, forecourts, roofs, urban forests, natural areas; water bodies and their conservation as healthy features; urban wildlife; habitats and contribution to the urban experience; landscape conservation techniques in urban areas.

Courses: BN73, PS69
Credit Points: 4
Contact Hours: 1 per week

PSP434 URBAN SERVICES & FUNCTIONS

Urban services: functional services of power, telephone, gas, water, stormwater and sewerage reticulation; controlling authorities, planning requirements and controls relevant to urban design. Community services related to health, safety, and welfare: such as medical, fire, emergency services, libraries, police, community participatory groups; controlling authorities, extent of services provided and controls relevant to urban design. Origins and destinations of traffic movements. The road hierarchy and its characteristics. Features of major terminals, car parks, pedestrian and cycle networks. Modes of travel and transport systems, railway and light rail, water, evaluation of comparative system. Major traffic generators: airports, terminals, CBD circulation. Related environmental and design issues: noise, atmospheric pollution, physical and visual impacts of different systems and traffic channels. Future trends in transport and movement systems and related issues.

Courses: BN73, PS69
Credit Points: 4
Contact Hours: 1 per week

PSP441 COMPUTER APPLICATIONS IN URBAN DESIGN

The use of computers to analyse and solve urban design problems and communicate solutions. Feasibility studies; land use studies; generation of envelope and space layouts; environmental and service systems analysis; development control testing; data handling and manipulation; computer graphics; interactive integrated design systems.

Courses: BN73, PS69
Credit Points: 4
Contact Hours: 1 per week

PSP442 LAW & LEGISLATION IN URBAN DESIGN

Legislative controls and law reform related to urban design and the development process with specific reference to Queensland. Topics include the potential range of legislative controls, principal relevant legislation in Queensland and its impacts on urban design, the development control authority, arbitration processes of the State Government and influence of additional legislation (eg. Group Title, Heritage Acts, pedestrian malls) on the urban design process.

Courses: BN73, PS69
Credit Points: 4
Contact Hours: 1 per week

PST901 ENGINEERING SURVEYING

Fundamental survey concepts, coordinate systems, differential and simple ingeometric levelling, angular measurements; bearing and azimuth; linear measurements by steel tape and stadia.

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

PUB109 INTRODUCTION TO ENVIRONMENTAL HEALTH

Students are introduced to a brief history of environmental health in Queensland. The current issues of environmental health within the public health agencies at all levels of government and the principal public health legislation in this state is reviewed. Students develop an understanding of the complexity of environmental systems, the effects of pollutants on such systems and the interdisciplinary approaches needed to address these problems.

Courses: NS40, NS48
Credit Points: 8
Contact Hours: 3 per week

PUB120 AUSTRALIAN HEALTH INDUSTRY

A broad overview of the systems of health care in Australia and their methods of operation. The public and private health and medical care sectors are discussed. The political environment, health care institutions, community health, public health, and the problems of coordination and integration of health services are also studied.

Course: PU48
Credit Points: 12
Contact Hours: 3 per week

PUB207 INTRODUCTION TO ENVIRONMENTAL HEALTH

A brief history of environmental health in Queensland; the current role of environmental health officers within the public health agencies at all levels of government and the principal public health legislation in this State; development of an understanding of introductory law and environmental law, the complexity of environmental systems, the effects of pollutants on such systems and the interdisciplinary approaches needed to address these problems; aspects of professional communications and report writing.

Course: PU42
Credit Points: 12
Contact Hours: 4 per week

PUB210 OCCUPATIONAL HEALTH & SAFETY 1

Introduces students to the basic concepts of occupational health and safety, such that they can identify health and safety problems in the workplace; strategies for dealing with such problems, and the legislation, government agencies and health personnel associated with the working environment. Topics covered include the physical, chemical and biological working environments and temporal work patterns.

Courses: ME46, PU42
Credit Points: 8
Contact Hours: 4 per week
PUB211 OCCUPATIONAL HEALTH & SAFETY 2
Develops further the principles covered in PUB210 and PUB212 and highlights their practical application to the workplace. Students also develop knowledge and skills associated with the actual measurement of the physical and chemical working environment, physiological effects on humans in the workplace and evaluation of the data collected.
Courses: MB46, PU42
Prerequisite: PUB210 or PUB212
Credit Points: 8
Contact Hours: 4 per week

PUB212 OCCUPATIONAL HEALTH & SAFETY 1
The basic concepts and theoretical framework of occupational health and safety as noted in PUB210; introduces students to the communication skills and devices relevant to the profession. Students participate in single and group activities to develop English expression, public speaking, debating and discussion group skills.
Courses: PU44, PU48
Credit Points: 12
Contact Hours: 4 per week

PUB220 MEDICAL TERMINOLOGY
The language of medicine, and the analysis of medical terms into Latin and Greek roots, prefixes, suffixes, combining forms; define, spell, pronounce and use terms related to the diseases and systems of the human body; expand and use abbreviations and symbols in medicine; interpret and explain abstracts from patient records in non-technical language.
Course: PU48
Credit Points: 12
Contact Hours: 3 per week

PUB233 INFORMATION, EDUCATION & COMMUNICATION FOR HEALTH
A study of the processes of communication in the health fields. It covers person-to-person communication such as patient-professional communication; communication in small groups; public education for health; diffusion and adoption of new health-related behaviours; the role of information; the use of mass media; communication within health organisations.
Courses: HM42, PU48
Credit Points: 12
Contact Hours: 3 per week

PUB241 HEALTH STUDIES 1
Overview the nature of health in Australian society; serves as the foundation study in this minor from which a number of separate, more detailed studies emerge in level 2 and 3 units; an understanding of broad health issues and problems is essential to equipping health educators for their roles in promoting optimal health of Australians, viz, addressing prevention of major risk factors, and developing a commitment to promoting healthy lifestyles.
Course: ED41
Credit Points: 8
Contact Hours: 3 per week

PUB251 INTRODUCTION TO PUBLIC HEALTH
Introduction to the philosophy and approach of public health; the traditional public health process; the multidisciplinary nature of public health; health policy and its impact on public health; some recent reformulations of traditional public health approaches including: health promotion, intersectoral action for health and healthy public policy. The measurement of public health in Australia and overseas, its main components and some of the constraints faced by public health.
Course: PU48
Credit Points: 12
Contact Hours: 3 per week

PUB272 HOME ECONOMICS 2
The place of the consumer in the Australian economy; the consumer in the market place; alternatives to mass consumption; legal procedures; legal requirements regarding business transactions and business organisations; consumer protection; family and the law.
Course: PU49
Credit Points: 12
Contact Hours: 4 per week

PUB274 HOME ECONOMICS SOCIAL ISSUES
Introduction to the nature of sociology and psychology; social image; social control; deviance; environmental planning and human behaviour; family patterns; gender roles and relationships; work and unemployment in relations to home economics.
Course: PU49
Credit Points: 12
Contact Hours: 4 per week

PUB276 HOME ECONOMICS 1
Art elements and principles; qualities of natural and non-natural materials; design process; design presentation; effects of changing technology on form and construction; ergonomics.
Course: PU49
Credit Points: 12
Contact Hours: 4 per week

PUB299 HEALTH INFORMATION MANAGEMENT 1
An introduction to the principles of health record management and their application in hospitals; presents an overview of the interrelationships between the various processes of the medical record department and functionally related areas in health care facilities. Topics include: the structure, format and use of medical records, the function of medical record departments, quantitative analysis of medical records, and health information collection and retrieval systems, both manual and computerised.
Course: PU48
Credit Points: 12
Contact Hours: 5 per week

PUB300 POLLUTION SCIENCE 1
The causes, effects, control measures, standards and legislation relating to land contamination and solid waste management.
Course: PU42
Prerequisites: CHB242, PHB250
Credit Points: 8
Contact Hours: 4 per week

PUB302 PODIATRIC MEDICINE 1
The health, social and economic implications of podiatric care in the general population with particular reference to specialised groups, eg, children, diabetics, the aged and sports patients. It also provides foundation studies essential to the pre-clinical student in the diagnosis and treatment of conditions commonly manifest in the foot.
Course: PU45
Co-requisite: PUB303
Credit Points: 8
Contact Hours: 4 per week

PUB303 CLINICAL SCIENCE 1
On completion, students should be able to demonstrate competent operating skills; expertise in clinical observation of the patient and the elicitation of an accurate medical record; recognise common clinical entities and implement appropriate treatment and develop a professional attitude towards patients, clinical teaching and care of equipment.
Course: PU45
Prerequisite: MEB031
Co-requisite: PUB302
Credit Points: 12
Contact Hours: 6 per week
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PUB304 PHYSICAL MEDICINE
Introduction to a wide range of diagnostic and physical treatment modalities used in modern podiatric practice. On completion, students should be able to understand the uses, applications, contra indications and limitations of each modality studied in direct connection with ongoing clinical studies and the theoretical component of podiatric medicine lectures.
Course: PUB304
Prerequisite: PUB312
Credit Points: 12 Contact Hours: 6 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: PUB306
Prerequisite: PUB304, PUB410
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: PUB312
Prerequisite: 48 credit points in relevant discipline area.
Credit Points: 12 Contact Hours: 3 per week

PUB313 DESIGN
Design has a relevance to both the teaching and learning process and the discipline of home economics. In the areas of textiles, food and shelter there is a role for the application of design as well as critical evaluation and communication of the products of design; provides students with generic design knowledge as well as experience in the application of this knowledge in the specific areas of home economics.
Course: PUB313
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: PUB317
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: PUB319
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: PUB321
Credit Points: 12 Contact Hours: 6 per week

PUB322 HOME ECONOMICS CURRICULUM STUDIES 2
Encourages students to make independent judgements about Home Economics curriculum decision-making, within syllabus guidelines and broader systems policies concomitant with national and international trends in education and society. Students are given the opportunity to explore current issues and emerging and future trends in Home Economics and to develop a confident approach to school-based curriculum development. Advanced teaching strategies and current assessment procedures will be developed.
Course: PUB322
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: PUB323
Credit Points: 12 Contact Hours: 3 per week

PUB325 SHELTER STUDIES
Critical aspects of shelter as a fulfillment of people's basic needs; design, technology and legislation linked to decisions afflicting provision of shelter for the differing needs of individuals and families.
Course: PUB325
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: PUB327, PUB328
Credit Points: 12 Contact Hours: 3 per week

PUB328 CONTEMPORARY INFLUENCES ON HEALTH STATUS
Concept of contemporary social, economic and political influences on well-being; major, contemporary health concerns resulting from these influences.
Courses: PUB328, PUB329
Credit Points: 12 Contact Hours: 3 per week

PUB329 FOUNDATIONS OF HEALTH STUDIES & HEALTH BEHAVIOUR
The foundations of the discipline of health education, its theoretical framework and concepts of models of health, health education and health promotion.
Course: PUB329
Prerequisites: PUB327, PUB328
Credit Points: 12 Contact Hours: 3 per week

PUB331 SHELTER STUDIES 2
The linking of human physical and psycho-social needs, environmental and technological issues and design aspects to the effective provision of shelter, with emphasis being placed on the development of advanced skills and knowledge; environmental and
PUB333 SHELTER: CULTURAL & HISTORICAL CONTEXTS
Investigation of shelter decisions based on historical and cultural factors, integrating the effect technological advances have had on this. It considers possible future shelter options given the impact of historical and cultural factors.
Courses: PUB49, ED50
Prerequisites: PUB325, PUB372 or equivalent
Credit Points: 12 Contact Hours: 4 per week

PUB334 FOOD FOR HEALTH
Exploration of concepts which impinge on food-related behaviours and develop concomitant cognitive competencies. Students are encouraged to recognise that their own personal pro-active stance in relation to food-related health issues can contribute to better health for all Australians.
Course: ED50
Credit Points: 12 Contact Hours: 3 per week

PUB335 OCCUPATIONAL & ENVIRONMENTAL HEALTH
Study of environmental and occupational health issues in their broadest context and their impact on individual health.
Course: ED50
Credit Points: 12 Contact Hours: 3 per week

PUB336 WOMEN'S HEALTH
Exploration of the data and health issues related to women's health and critically evaluates health-related policies, systems and practices in terms of their impact on women's health.
Course: ED50
Credit Points: 12 Contact Hours: 3 per week

PUB337 HEALTH NEEDS OF SPECIFIC POPULATIONS
The health needs of a range of specific population groups and considers the broad picture of actual differences in health status among population groups.
Course: ED50
Prerequisite: PUB327
Credit Points: 12 Contact Hours: 3 per week

PUB338 SUBSTANCE USE IN CONTEMPORARY SOCIETY
An introduction to analytical models, statistical evidence and health education and health promotion strategies applicable to substance use and abuse, to familiarise students with the contemporary nature and extent of substance use in Australia and examines models and strategies to address these issues.
Course: ED50
Credit Points: 12 Contact Hours: 3 per week

PUB345 FAMILY RELATIONSHIPS
Prepares teachers for the teaching of the Family Studies component of Home Economics. Drawing from the psychological and sociological disciplines, it examines such issues as power, dominance and submission that occur in families and society and dynamics which operate between individuals.
Course: ED50
Prerequisite: PUB323
Credit Points: 12 Contact Hours: 4 per week

PUB347 FAMILIES IN OTHER CULTURES
Individuals, the structured elements within families and the relationship of families to society; kinship, family structures, mate selection practices, legitimacy and illegitimacy, contemporary family issues.
Courses: PUB49, ED50
Credit Points: 12 Contact Hours: 4 per week

PUB349 FAMILIES & HOUSEHOLDS IN AUSTRALIA
The unit examines the emphasis of the family in home economics. Perspectives considered include: structural functionalist, symbolic interactional, conflict and feminist, whether the family provides an appropriate orientation for home economics.
Course: ED50
Credit Points: 12 Contact Hours: 4 per week

PUB353 CONSUMER FOOD
The role of the food industry in relation to lifestyles in modern societies; the scientific principles and operations involved in the preservation and manufacturing of foods; the composition, the ingredients, the labelling and marketing methods of a representative range of commercial foods; current consumer issues such as the safety of food additives, food irradiation, consumer protection, new product development, food regulations and future trends in our food supply.
Courses: ED50, SC30
Prerequisite: Any Level 1 Science unit
Credit Points: 12 Contact Hours: 4 per week

PUB355 FOOD SERVICE MANAGEMENT
The use of relevant management principles, safe and hygienic work practices, effective communication skills, sound nutrition and mastery of techniques in food production and presentation.
Courses: PUB49, ED50
Prerequisites: PUB474, COB160 or equivalent
Credit Points: 12 Contact Hours: 4 per week

PUB356 CLINICAL CLASSIFICATION 1
Development of skills in one of the major specialties of health information management: clinical classification of diseases and procedures using the International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM). Clinical classification responds to internal and external demands for medical information, for example, in-house research and education, ABS hospital morbidity data collections, and casemix information systems. (Not offered in 1994).
Course: PUB321
Prerequisite: PUB210
Credit Points: 12 Contact Hours: 4 per week

PUB357 NUTRITION ISSUES IN AUSTRALIA
A background study into the nutritional issues which are impacting on the quality of Australian lives. These issues are considered in two broad frameworks: (1) the nutritional needs throughout the lifecycle and the environmental factors which impinge on realisation of these needs and (2) the aetiology, incidence, outcomes and management of diet-related disorders.
Course: ED50
Prerequisite: PUB319 Co-requisite: PUB334
Credit Points: 12 Contact Hours: 4 per week

PUB361 TEXTILES 2
Continuation of PUB321. An understanding of textile consumer issues is developed by a study of relevant commercial enterprises and the implications for the consumer. Creativity is encouraged by students com-
bining skills in pattern development with advanced
techniques in constructing textile articles.

Courses: ED50
Credit Points: 12
Contact Hours: 4 per week

■ PUB363 CONSUMER TEXTILES

Technological advances in the production of textiles
with particular reference to fibres, yarns, fabric,
finishing and dyeing; consumer protection legislative
and regulatory framework with particular reference to
textile products; textile performance requirements of
these major consumer textile end-uses; experimental
evaluation of textiles for suitability of purpose;
development of problem identification and solution
skills in consumer textiles through a major project-
based assignment.

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

■ PUB365 EVOLUTION OF WESTERN
DRESS

Evaluation of western fashionable dress from ancient
times to the present; the relationship between costume
and the environment; influencing factors: social, aeth­
etic, political, economic, geographic, spiritual, technolog­
ical; 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 correspond­
ing commercial production.

Courses: ED50, PU49
Prerequisite: PUB321 or PUB472 or equivalent
Credit Points: 12
Contact Hours: 3 per week

■ PUB372 SHELTER STUDIES 1

Housing tenure: advantages and disadvantages of
ownership/tenancy; housing finance; housing for spe­
cial groups; special needs in housing; interior environ­
ment; housing heritage.

Course: PU49
Prerequisite: PUB276, SSB000 or equivalent
Credit Points: 12
Contact Hours: 4 per week

■ PUB374 FAMILY STUDIES

Definitions of the family; the family and society;
social class and geographical differences in family
patterns; influence of changing social conditions;
socialisation and child rearing patterns; families in a
multicultural society.

Course: PU49
Prerequisite: SSB000, SSB912 or equivalent
Credit Points: 12
Contact Hours: 4 per week

■ PUB381 INTRODUCTION TO APPAREL
DESIGN & PRODUCTION

Offers students an insight into the fashion industry. It
also offers an opportunity for students to develop
expertise in the area of women's fashion design. Students
implement the design process through the
production of apparel items. Emphasis is placed on
production techniques used in cottage industry.

Course: ED50
Prerequisite: PUB361
Credit Points: 12
Contact Hours: 4 per week

■ PUB399 HEALTH INFORMATION
MANAGEMENT 2

Continuation of PUB299. Emphasis on analysis and
improvement of health information management
throughout hospitals; health information services out­
side medical record departments of hospitals, wards,
bed allocation and admission offices, accident and
emergency departments, outpatient and allied health
services, and other specialised hospital services such as
radiology, pharmacy and pathology.

Course: PU48
Prerequisite: PUB299
Credit Points: 12
Contact Hours: 4 per week

■ PUB404 CLINICAL SCIENCE 2

At this stage students will be able to follow cases
through to observe the short-term effect of therapy
and are expected to commence case studies to develop
comparative and recording skills. Students should
now be adopting the standard medical terminology
and abbreviations used in clinical situations.

Course: PU45
Prerequisite: PUB303
Co-requisite: PUB303
Credit Points: 12
Contact Hours: 9 per week

■ PUB405 HUMAN NUTRITION

Human nutrition provides a solid basis of nutrition
knowledge upon which studies in nutrition may be
built. It examines the sociology of food in providing
required nutrients, and gives an indepth explanation,
at a biochemical level, of the role of nutrients. At least
one semester of biochemistry is assumed.

Course: PU49, SC30
Prerequisite: LSB305 or LSB308
Credit Points: 12
Contact Hours: 5 per week

■ PUB410 MEDICINE

Following completion of this subject students should
be able to recognise and understand the clinical fea­
tures, pathogenesis and significance of common con­
ditions 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 signi­
ficance. Medical conditions with manifestations in
the feet are given particular attention.

Course: PU45
Prerequisite: 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 condi­
tions which have an effect on the lower limbs and the
surgical treatment of systemic conditions as seen by
the podiatrist, ie. diabetes; provides an understanding
of the special problems associated with children and
specific lower limb conditions with emphasis on the
surgical techniques used in their treatment.

Course: PU45
Prerequisite: PUB505
Co-requisite: PUB303
Credit Points: 8
Contact Hours: 3 per week

■ PUB414 HOME ECONOMICS APPLIED
CURRICULUM

Issues relating to home economics education; bases
for curriculum decision making; nature and structure
of home economics; syllabus implementation; in­
novation; issues that affect home economics.

Course: ED26
Prerequisite: CUB410 or equivalent and curriculum
implementation studies at Diploma of Teaching level.
Credit Points: 12
Contact Hours: 3 per week


**PUB421 PODIATRIC MEDICINE 2**

The foundation for study in the role of therapeutics in patient management including short-term and long-term management of conditions. It expands the range of understanding of the wide variety of conditions presenting to the podiatrist. On completion, students should be able to develop an understanding of the biomechanical principles affecting the joints of the foot and the structural and functional consequences presenting in podiatric practice.

Course: PUB421
Prerequisite: PUB302, PUB404
Credit Points: 12
Contact Hours: 6 per week

**PUB442 PODIATRIC ANAESTHESIOLOGY**

Designed to provide a sound understanding of the science of anaesthesiology 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: PUB442
Prerequisite: PUB421, PUB410
Credit Points: 8
Contact Hours: 2 per week

**PUB423 FOOD & NUTRITION**

Nutrition is an important factor in the provision of health, and prevention and management of many disease states. This unit provides an overview of concepts fundamental to an appreciation of the role of nutrition in health care. Topics include: the chemical nature, digestion, absorption and assimilation of nutrients; nutrients provided by the five food groups; food selection for a healthy diet; nutrient requirements in particular clinical situations.

Courses: NS40, NS48
Prerequisites: Physiology and Pharmacology
Credit Points: 8
Contact Hours: 3 per week

**PUB430 APPLIED HEALTH CARE ANALYSIS**

An introduction to epidemiology and biostatistics. Descriptive and analytical epidemiological methods used in the study of acute and chronic disease and in health services planning are studied. The statistical techniques appropriate to public health problems are included at an introductory level.

Course: PUB430
Prerequisite: EPB163
Credit Points: 12
Contact Hours: 3 per week

**PUB431 ECONOMIC EVALUATION OF HEALTH SERVICES**

Economic evaluation of health services; the application of cost analysis, cost effectiveness analysis, cost utility analysis and cost benefit analysis to health programs; problem identification and definition, identifying and valuing costs and benefits, externalities, decision rules and reporting.

Course: PUB431
Credit Points: 12 per week

**PUB440 CLOTHING DESIGN**

Clothing design offers an opportunity for teachers to study in this area at a greater depth than that available in the pre-service units. It allows for critical evaluation of influences of the fashion industry, pattern making, clothing construction and the teaching strategies and resources available.

Course: ED26
Credit Points: 12
Contact Hours: 3 per week

**PUB441 NUTRITION EDUCATION**

Biochemical approaches to nutrition; history and evolution of nutrition; popular nutrition literature; development of a philosophy of nutrition.

Courses: ED26, ED50, PUB49
Credit Points: 12
Contact Hours: 3 per week

**PUB456 CLINICAL CLASSIFICATION 2**

Students will learn to abstract and interpret the information recorded in client/patient medical records. Therefore, students will become well versed in the clinician’s response to various disease processes and how this information presents in the medical record. A significant component of the unit will involve coding from hospital medical records on-site in an acute care setting. Students will become proficient in the art of clinical classification using ICD-9-CM.

Course: PUB456
Prerequisites: LSB242, LSB361, PUB220, PUB356
Credit Points: 12
Contact Hours: 4 per week

**PUB472 TEXTILE SCIENCE & TECHNOLOGY**

Overview of textiles and textile evaluation; fibres; yarns; fabric construction; finishing treatments; colour and its application to textiles; textile care; textile end-use; principles and practice of textile performance evaluation.

Course: PUB472
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: PUB49, PUB50
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: PUB49, PUB50
Prerequisite: LSB301, LSB405 or equivalent
Credit Points: 12
Contact Hours: 5 per week

**PUB481 POLLUTION SCIENCE 2**

The causes, effects, control measures, standards and legislation relating to water, air and noise pollution.

Course: PUB481
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: PUB44
Co-requisite: LSB242
Credit Points: 12
Contact Hours: 5 per week

**PUB483 ERGONOMICS 1**

The structure and function of relevant body systems and the ways in which the work environment and work tasks can impinge on normal functions; occupational biomechanics; biomechanical modelling; anthropometry; manual handling; tool and equipment design; the effects of physical factors such as lighting, temperature and humidity on human performance; ergonomic methodologies.

Course: PUB44
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: PUB44
Prerequisite: CHB242
Credit Points: 12
Contact Hours: 4 per week

PUB499 HEALTH INFORMATION MANAGEMENT 3
Health information systems outside acute care hospitals; special-purpose health record systems, ambulatory health record systems, and those used in health care facilities other than acute care hospitals, systems for the registration and notification of disease and health problems, clinical classification systems other than ICD-9-CM and nomenclatures, which may be used in specialised health settings; concepts and processes of quality assurance in health (e.g. accreditation, criteria audits, etc.).
Course: PUB48
Prerequisite: PUB399
Credit Points: 12
Contact Hours: 4 per week

PUB502 DERMATOLOGY
An appreciation of the many varieties of skin lesions and their particular relevance when found in the lower limbs. The lecture program consists of classification of skin disease, vascular reaction group, 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: PUB45
Prerequisites: PUB410, PUB421, PUB503
Credit Points: 8
Contact Hours: 3 per week

PUB503 PODIATIC 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 podiatriast's role in the health care team across the spectrum of practice.
Course: PUB45
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: PUB45
Prerequisites: PUB404, PUB421
Co-requisite: PUB504
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: PUB45
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: PUB44
Prerequisites: PUB483, SSB914
Credit Points: 12
Contact Hours: 4 per week

PUB513 EPIDEMIOLOGY & DISEASES
Enables students to become familiar with the terminology used in the epidemiology and the study of diseases; includes the conducting of various types of study including the analysis of data in the workplace; topics include: the causative 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: PUB42, PUB44, PUB48
Credit Points: 12
Contact Hours: 4 per week

PUB516 OCCUPATIONAL HEALTH & SAFETY PRACTICE I
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: PUB44
Co-requisite: PUB485
Prerequisites: MEB035, PHB404, PUB483
Credit Points: 12
Contact Hours: 6 per week

PUB518 FOOD HYGIENE STUDIES
The various types of food poisoning; food poisoning investigation techniques; laboratory procedures and interpretation of results.
Course: PUB42
Prerequisites: LSB431, PUB207, PUB478
Credit Points: 8
Contact Hours: 4 per week

PUB520 ENVIRONMENTAL HEALTH MANAGEMENT I
Management of an environmental health unit; legal and professional procedures associated with the duties of environmental health officers.
Course: PUB42
Prerequisites: PUB207, PUB481
Credit Points: 12
Contact Hours: 5 per week

PUB528 HEALTH ADMINISTRATION PROJECT
Enables students to do follow-up work of a practical nature in an area of interest to them. Before being admitted to this unit, students must have completed all the required coursework in the discipline area of the proposed project. Projects may be undertaken in any of the discipline areas covered by the degree, e.g. health economics, law, health finance, health information management, health management, statistics, epidemiology, either individually or in small groups. Projects must have prior approval and will be closely supervised. Being of a practical nature, projects are undertaken in a health or medical care delivery setting, e.g. hospital medical record department; group practice; local authority health department; State health department.
Course: PUB44
Credit Points: 12
Contact Hours: 3 per week
PUB529 HEALTH PLANNING & EVALUATION I
The concept and processes of program management; health planning in a program management context; issues relating to community participation in health planning, planning for accountability, planning for future evaluation, as well as the steps in program planning; resources management and health resource inventories; the rudiments of evaluation research applied to health programs. (Not offered in 1994.)
Course: PU48
Credit Points: 12  Contact Hours: 3 per week

PUB531 HEALTH CARE ECONOMICS I
Application of economic analysis to the health care industry; an examination of the demand for health care, the supply of and market for health care.
Course: PU48  Prerequisite: EPB150
Credit Points: 12  Contact Hours: 3 per week

PUB533 INTERNATIONAL HEALTH CARE SYSTEMS
Makes students aware of how different countries have organised their health delivery systems. The comparisons are historical and economic. An analysis is made of the growth of the welfare state in a number of countries, eg. United Kingdom, USA, Sweden, Canada, with particular reference to the organisation and delivery of health services. International organisations working in health are studied. Students are introduced to the distribution of diseases in both the West and the Third World; the distribution of health and material resources; international agencies; aid programs and their roles; functions, effectiveness and coordination problems.
Course: PU48
Credit Points: 12  Contact Hours: 3 per week

PUB535 HEALTH CARE ECONOMICS
The definition and determination of health from an economics perspective; factors affecting the demand for and supply of health and medical services; market structure in the health industry, distribution of health sector output; and measures of efficiency and equity in health care in Australia. (Not offered in 1994.)
Course: PU48
Credit Points: 12  Contact Hours: 3 per week

PUB540 THE HOME ECONOMIST AS A COUNSELLOR
The counselling process; major approaches to counselling; models of helping and the helping relationship; communication skills; the home economist as counsellor; moral, ethical and legal responsibility of the home economist as a helping professional.
Course: PU49
Prerequisite: PUB574, SSB000, or equivalent
Credit Points: 12  Contact Hours: 3 per week

PUB552 NUTRITION ISSUES IN AUSTRALIA
Evaluation of nutritional information; psychology of food; methods of assessing nutritional status; nutritional disorders; community, remedial and nutrition education programs.
Courses: ED50, PU49
Prerequisite: PUB319, PUB405, or equivalent
Credit Points: 12  Contact Hours: 4 per week

PUB556 FOOD PRESENTATION & PROMOTION
Advanced techniques and complex skills of food production and presentation; commercial production and presentation of food; production and presentation of food for photography or display purposes; food demonstrations; special occasion cookery.
Course: PU49  Prerequisite: PUB474
Credit Points: 12  Contact Hours: 6 per week

PUB572 APPAREL DESIGN I
Factors influencing garment and household goods designs; design development; yarn structure; techniques of fabric construction and decoration; the textile industry.
Course: PU49  Prerequisite: PUB272 or equivalent
Credit Points: 12  Contact Hours: 5 per week

PUB574 HOME ECONOMICS 3
The family as a social system; resources and constraints related to the life cycle; management in the family context; the family in Australia; managing finance.
Course: PU49  Prerequisite: PUB272 or equivalent
Credit Points: 12  Contact Hours: 3 per week

PUB575 HOME ECONOMICS PRACTICUM
Experience in working in industry, commerce or government; placement in a number of organisations for 10 weeks.
Course: PU49
Prerequisite: COB160 or equivalent
Credit Points: 12

PUB580 HEALTH ADMINISTRATION FINANCE
Fund/accrual accounting; financial administration in Commonwealth and State Government; financial management in the health industry; financial analysis; planning and budgeting, working capital management in the health industry; health care performance and evaluation.
Course: PU48  Prerequisite: AYB104 or AYB110
Credit Points: 12  Contact Hours: 3 per week

PUB582 APPAREL DESIGN 2
The design and production of a range of apparel suitable for a specific client group for example: corporate wear; department store; large mass market; detailed research of client needs, textile specification and evaluation and costing; develops to an advanced level knowledge, understanding and processes established in PUB572.
Course: PU49  Prerequisite: PUB572
Credit Points: 12  Contact Hours: 4 per week

PUB585 OCCUPATIONAL HYGIENE 2
Continuation of PUB495; concentrates on the application of the principles to which the student has already been introduced; extends the student’s ability to recognise, evaluate and suggest the most efficient control strategies for physical and chemical hazards in the working environment; examines the elements of successful monitoring programs in the workplace.
Course: PU44
Prerequisites: CHB411, LSB431, PUB482, PUB483
Credit Points: 12  Contact Hours: 6 per week

PUB590 PRODUCT DEVELOPMENT & MARKETING
The consumer market; product development; critical path analysis and network planning; idea generation and product evaluation; feasibility study and product cost analysis; quality assurance; the production and marketing of products; career prospects.
Course: PU49
Prerequisite: PUB478 or equivalent
Credit Points: 12  Contact Hours: 3 per week
Credit Points: 12 Contact Hours: 1 per week

■ PUB606 HEALTH MANAGEMENT 1
A problem-solving approach which relates the science of management to decision making and control in health services administration. Management science (operations research) techniques are learned and applied in case studies from the health industry.
Course: PUB606
Prerequisite: PUB503, PUB410
Credit Points: 8 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: PUB45
Prerequisites: PUB503, PUB410
Co-requisite: PUB411
Credit Points: 12 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: PUB45
Credit Points: 8 Contact Hours: 3 per week

■ PUB605 HEALTH MANAGEMENT 2
Involves a problem-solving approach to decision making and strategic management in health services administration. Case studies and projects are used to allow students to apply theory to practical situations. Specific management techniques and current health management issues are explored.
Course: PUB48
Prerequisite: PUB600
Credit Points: 12 Contact Hours: 3 per week

■ PUB610 PROJECT & PROFESSIONAL MANAGEMENT
This unit explains firstly how a professional practice may be set up and how a small practice can operate as a business enterprise. Methods of budgeting, finance and control are explained. Secondly it aims to develop an interest in podiatry research using scientific methods employed to meet user needs, structure in an overall information system, the technology which makes it operative, the data base, and the various ways in which information is transferred and used in health facilities.
Course: PUB45
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: PUB44
Prerequisite: PUB404
Credit Points: 12 Contact Hours: 6 per week

■ PUB612 HEALTH PROMOTION & EDUCATION
The scope and nature of health promotion; use of resources for such activities; planning, conduct and evaluation of health promotion programs; adult learning principles; training needs analysis; training program development and evaluation; specific training methods.
Course: PUB44
Prerequisite: PUB516
Credit Points: 8 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: PUB44
Prerequisite: PUB516
Credit Points: 8 Contact Hours: 4 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: PUB44
Prerequisite: PUB516
Credit Points: 12 Contact Hours: 4 per week

■ PUB615 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: PUB44
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 in which information is transferred and used in health facilities.
Course: PUB48
Prerequisite: PUB499, PUB456
Credit Points: 12 Contact Hours: 4 per week

■ PUB619 HEALTH INFORMATION MANAGEMENT 4
The role and function of the health information manager in the management of health care services; the principles and processes of management as applied to health information services; current issues in health information management.
Course: PUB48
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: PUB42
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: PUB42
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: PUB42
Prerequisites: PUB520, LSB408
Credit Points: 8
Contact Hours: 4 per week

PUB629 HEALTH PLANNING & EVALUATING 2

Continuation of PUB529. The study of resource management and evaluation research. Evaluation concepts and processes, steps in evaluation research, stakeholder analysis, reporting results and replanning with evaluation research results. (Not offered in 1994.)

Course: PUB48
Credit Points: 12
Contact Hours: 3 per week

PUB631 NUTRITIONAL BIOCHEMISTRY

The digestion, absorption and metabolic assimilation of nutrients; hormonal control of metabolism; the role of drugs; genetic and environmental influences; significant parameters measured in clinical laboratories examined in a variety of health and disease states; diet and exercise for health; starvation; obesity; diabetes mellitus; cardiovascular disease; renal disease; liver disease; alcohol consumption; physiological and traumatic stress.

Course: SC30
Prerequisites: LSB408, PUB405
Credit Points: 12
Contact Hours: 5 per week

PUB634 HEALTH SERVICES EVALUATION

A study of process evaluation, program evaluation and evaluation research with applications to the health field; designed for health professionals in both the administration and practice areas. Theory, practice, the utilisation of evaluation results and the administration of evaluation studies are emphasised in this course. Addresses topics such as quality assurance, utilisation, review and accreditation.

Course: PUB48
Prerequisite: PUB646
Credit Points: 12
Contact Hours: 3 per week

PUB646 HEALTH SERVICES PLANNING

The administrator's role in the planning and development of health care facilities and health services; an examination of the reasons for planning, the concepts and principles of planning and the types and categories of planning applied to the health industry.

Course: PUB48
Prerequisites: PUB130, PUB430
Credit Points: 12
Contact Hours: 3 per week

PUB651 CASEMIX MANAGEMENT

History and development of casemix classification systems; structure of AN-DRGs; casemix applications in quality improvement, utilisation review, costing, planning and management; casemix and funding health care services; casemix classification systems for acute in-patients; data quality issues; casemix grouping software; current casemix initiatives and applications.

Course: PUB48
Credit Points: 12
Contact Hours: 3 per week

PUB653 PROFESSIONAL EXPERIENCE

Increase knowledge and level of understanding of health information management in health care facilities through direct observation and participation. The managerial role of the health information services with medical, administrative and allied health professionals; reinforcement of clinical classification skills by coding from medical records.

Course: PUB48
Prerequisites: PUB399, PUB956
Credit Points: 12
Contact Hours: 6 per week

PUB655 HEALTH POLICY

How health policy is created; the role of vested interests; the role of the mass media; an appreciation of the difference between policy in use and espoused policy; analysis of health policy using analytical frameworks; health policy impact; policies pertaining to special groups. (Not offered in 1994.)

Course: PUB48
Credit Points: 12
Contact Hours: 3 per week

PUB672 RESEARCH METHODS

Introduction to research; research in home economics; theoretical elements; research types or settings; sampling and measurement; methods of data collection; analysis and interpretation of data; planning and design of a major research project.

Course: PUB49
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: PUB49
Prerequisite: PUB272 or equivalent
Credit Points: 12
Contact Hours: 3 per week

PUB675 HOME ECONOMICS 4

The conceptual, theoretical and philosophical foundations of home economics; societal issues relating to the provision of food, textiles and shelter; a critical examination of social, economic, technological and ethical issues on individual and family wellbeing.

Course: PUB49
Prerequisite: PUB674
Credit Points: 12
Contact Hours: 3 per week

PUN600 DISSERTATION

Undertaken by full-time Master of Public Health students following successful completion of coursework. This unit is intended as a practicum, offering experience in investigating and/or solving a public health problem.

Course: PUB85
Credit Points: 48

PUN601 CONTEMPORARY HEALTH POLICIES

An examination of the social, political, geographical and economic factors which have shaped the organisation of health care services at local, state, national and/or international levels; funding and resource management; the level and nature of responsibility for health care and health care maintenance; planning for structural change.

Courses: HL88, LS85, NS62, NS85
Credit Points: 12
Contact Hours: 3 per week
PUN602 HEALTH PLANNING, MANAGEMENT & EVALUATION
Application of the theory and principles of planning, management and evaluation to health services; a detailed analysis of health services planning techniques; information requirements and decision making for the strategic management of health services; the principles of financial and personnel management required for the effective development and utilisation of health care; process and program evaluation in health services; the appreciation of evaluation research and cost-effectiveness.
Courses: HL88, LS85, NS85
Credit Points: 12 Contact Hours: 3 per week

PUN607 DISSERTATION
Undertaken by part-time Master of Public Health students following successful completion of coursework. The unit is intended as a practicum, offering experience in investigating and/or solving a public health problem.
Course: PU85
Credit Points: 48

PUN608 ECONOMICS & HEALTH
The role of economics in planning and decision making in health care; application of economic analysis to the health care industry; issues related to the demand for health care; the supply of health care and the market for health care.
Courses: HL88, PU85
Credit Points: 12 Contact Hours: 3 per week

PUN609 HEALTH CARE FINANCE
The financial management aspects of health care delivery in Australia; sources of finance at federal, state and local government levels; priority setting; budgetary processes; responsibilities for provision of various services.
Courses: HL88, PU85
Credit Points: 12 Contact Hours: 3 per week

PUN610 HEALTH SERVICES MANAGEMENT
Evolution and changing status of management in health services; interactions between general managers, doctors and others; power/authority concepts; leadership and leadership styles; principles of motivating people and managing conflict; effective decision making by individuals and groups; theories and methods of effective communication, both verbal and written; performance assessment and outcome measures in health management.
Courses: HL88, NS85, PU85
Credit Points: 12 Contact Hours: 3 per week

PUN611 ADVANCED HEALTH PLANNING
The planning of action programs of prevention, care and cure; students taking this subject will previously have studied the determination of health needs using epidemiological methods. This subject has a bias towards ensuring participation in the planning process by all interests affected by the program.
Course: PU85
Credit Points: 12 Contact Hours: 3 per week

PUN612 ADVANCED HEALTH EVALUATION
A study of evaluation research with applications to the health fields; theory and practice; evaluation results and the administration of evaluation studies.
Course: PU85
Credit Points: 12 Contact Hours: 3 per week

PUN613 PUBLIC HEALTH INTERVENTION: PRINCIPLES & PRACTICES
Prepares students to carry out effective field investigations in preparation for the dissertation. Coursework includes the analysis of the social determinants of public health problems, and theory and practice in health education and health promotion.
Course: PU85
Prerequisites: PUN604, PUN605, PUN606
Credit Points: 12 Contact Hours: 3 per week

PUN617 ENVIRONMENTAL HEALTH MANAGEMENT 1
This unit considers environmental health management as an important component in resolving health threatening hazards in the community. Topics include: history of environmental and community health and the approaches of preventive health including the 'old' and 'new' public health; the concept of environmental health and the reduction of life threatening hazards in the community; the legal system and its approach to environmental legislation and environmental health legislation; a critical review of existing legislation and its effectiveness; the administrative system and political system and the role of government in formulating public health policy and its effect on environmental health decision making; the relevance of the structure and function of the Commonwealth, State and Local Government in Australia for environmental health programs; the professional role of environmental health officers and a detailed analysis of Acts, regulations and policies relevant to environmental health.
Course: HL88
Credit Points: 12 Contact Hours: 3 per week

PUN618 ENVIRONMENTAL HEALTH MANAGEMENT 2
This unit builds on PUB617 and considers other relevant environmental health management issues which are an important component in resolving health threatening hazards in the community. Topics include: management principles, including the functions of planning, leading, controlling and co-ordinating in the environmental health setting; budgeting formats at all levels of government, including fiscal arrangements for public health policy initiatives; assessment of risk and environmental health policy delivery; modelling processes to calculate the best alternative for policy delivery; survey methodology and data collection and presentation to improve decision making in environmental health; a review of computer software to enhance decision making and office management systems and record and monitor legislative requirements in environmental health.
Course: HL88
Credit Points: 12 Contact Hours: 3 per week

PUN619 ENVIRONMENTAL HEALTH 1
Considers land as a major component of the environment and as a finite resource which must be properly managed to ensure continued health and well-being for individuals and communities. Examines land as a resource, management strategies and adverse pressures on this component of the environment. Adverse impacts considered include solid and hazardous waste generation and disposal, land contamination and strategies for prevention and management.
Course: HL88
Credit Points: 12 Contact Hours: 3 per week
- **PUN620 ENVIRONMENTAL HEALTH 2**
  This unit considers water and atmosphere as finite resources which must be properly managed to ensure continued health and well-being for individuals and communities. It examines water and atmosphere as resources, management strategies and adverse pressures on these components of the environment. Adverse impacts resulting from various forms of pollution and use are considered together with strategies for prevention and management of such issues.

  **Course:** HL88
  **Credit Points:** 12  **Contact Hours:** 3 per week

- **PUN622 CLOTHING: THE HUMAN CONSTRUCTED ENVIRONMENT**
  Clothing has physiological, psychological, and sociological connotations that affect the self image and the social relationships of all people. For those who deviate from the norms, the physically disabled, the chronically ill, the mentally handicapped, the visually impaired, and those with extreme problems of weight and stature, these connotations become more important. In this unit of study the requirements and use are considered together with strategies for prevention and management of such issues.

  **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 feminism; feminism in Australia; critique of feminism; which way feminism?; feminism and the family; feminism and home economics; well being of individuals and families - what does it mean?

  **Course:** HL88
  **Credit Points:** 12  **Contact Hours:** 3 per week

- **PUN624 HOME ECONOMICS FOOD & NUTRITION**
  A significant factor influencing food patterns is the changing food market with concomitant political, psycho-social, economic, technical and ethical aspects affecting the supply of food to the consumer. Students will be directed to research nutritional practices, and to uncover the factors influencing such practices. This research will then form the basis for, not only developing strategies for individuals accepting responsibility for their own food-related experiences, but also for examining critically existing nutrition education programs and recommended nutrition goals and guidelines. Topics include: the individual; the food supply; nutritional science; nutrition education.

  **Course:** HL88
  **Credit Points:** 12  **Contact Hours:** 3 per week

- **PUN625 HOME ECONOMICS PHILOSOPHICAL FOUNDATIONS**
  This unit entails a critical examination of relevant political, social, economic, technological and ethical issues which influence well-being of individuals and families. Topics include: what is home economics?; societal issues; implications for home economics praxis; developing a personal philosophy of home economics.

  **Course:** HL88
  **Credit Points:** 12  **Contact Hours:** 3 per week

- **PUN626 HOME ECONOMICS FIELD STUDY**
  This unit enables students to develop an area of their own choosing and to explore this in depth. The format and content of the program will be negotiated between student and lecturer. However it is intended that the focus of the study would be investigating Home Economics theory and practice within the school and/or community setting. Possible areas of study might include: education issues for home economics, home economics and feminism, family studies; human development, human relationships, food and nutrition, textiles, shelter, consumerism, management, design, environmental issues, and technology. Areas available will be determined by the expertise and research interests of the staff.

  **Course:** HL88
  **Credit Points:** 12  **Contact Hours:** 3 per week

- **PUN627 ADVANCED PHARMACOLOGY**
  Topics include: an in depth study of drugs relevant to pediatric practice; including their actions, indications, contra-indications, adverse reactions, drug interactions and dosages; indications and contra-indications and adverse effects of the use of antibiotics, sedatives, NSAIDs analgesics, cortico-steroids, epinephrine in relevant local anaesthetics; the actions of systemic drugs on; the nervous system, cardiovascular, endocrine and musculo skeletal systems; prescription writing and drug regulations.

  **Course:** HL88
  **Credit Points:** 12  **Contact Hours:** 3 per week

- **PUN628 CLINICAL PATHOLOGY & DIAGNOSIS**
  This unit provides students with advanced clinical management skills commensurate with the Master's Degree level of education: an important practical adjunct to the theoretical concepts of clinical pathology and associated diagnostic techniques; gives the Podiatrist the opportunity to apply acquired knowledge in a supervised clinical environment, facilitating a comprehensive approach to the evaluation and treatment of foot pathology in the community; students undertaking the management of patients attending the QUT clinical facility.

  **Course:** HL88
  **Credit Points:** 12  **Contact Hours:** 3 per week

- **PUN629 GENERAL MEDICINE**
  This unit provides an advanced level of knowledge necessary for a holistic medical approach to the management of disease processes. The relationship between pathogenesis and advanced therapeutic treatment will be explored; designed to enhance the theoretical and clinical knowledge gained from the advanced pharmacology and clinical pathology/diagnosis subjects. Topics include: haematological and lymphoid system; immune system; endocrine system; musculoskeletal system; hereditary and genetic; nervous system; cardiovascular system; gastrointestinal system; the liver, the biliary tract and the pancreas; respiratory system; the renal system.

  **Course:** HL88
  **Credit Points:** 12  **Contact Hours:** 3 per week

- **PUN630 COMPUTERISED GAIT ANALYSIS**
  Students have the opportunity to further their study and understanding of human movement and gait analysis; and to enhance their clinical biomechanical assessment of a patient, thus allowing for better evaluation and treatment regimes. This will be achieved using computerised video motion assess-
ment and foot force assessment systems. Particular emphasis will be directed to providing the student with the opportunity of applying this information to specialised areas of podiatric sports medicine.

Course: HL88
Credit Points: 12  Contact Hours: 3 per week

PUN631 PODIATRIC SURGERY
Introduction to the role of podiatric surgery. It deals with pre-operative planning of procedures as well as post-operative complications.

By the end of the course students will gain sufficient knowledge to be able to make informed referrals to those qualified to perform appropriate procedures.

Course: HL88
Credit Points: 12  Contact Hours: 3 per week

PUN641 CLINICAL DATA MANAGEMENT
Development of skills in data management systems and techniques used in clinical trials and epidemiological research. Methods of collecting and organising clinical data for research purposes; organisation of clinical trials; protocol design and interpretation; quality control and maintaining the integrity of trials; software applications for clinical data management; presentation skills in data management.

Course: HL88
Credit Points: 12  Contact Hours: 3 per week

PUN642 CLASSIFICATION & CASEMIX IN HEALTH
The use of classification systems in health services and their applications; statistical classifications (such as ICD) and nomenclatures (such as SNOMED); specialist classification systems for different health care settings (e.g. hospitals, ambulatory care, general practice); the development, application and use of casemix classification systems, especially AN-DRGs.

Course: HL88
Credit Points: 12  Contact Hours: 3 per week

PUN643 HEALTH INFORMATICS
The use of information technology in health services; computers, telecommunications and electronic storage systems (such as optical disk); technical, financial, human resource management and legal issues associated with the use of health informatics; applications for health authorities, hospitals, other health institutions and private practice. Field trips will be included.

Course: HL88
Credit Points: 12  Contact Hours: 3 per week

PUN644 CASE STUDIES IN HEALTH INFORMATICS MANAGEMENT
Either individually or in groups students analyse case studies, assess the situation and propose a solution or alternative solutions. The case studies will be based on recent or current situations in local health care settings.

Course: HL88
Credit Points: 12  Contact Hours: 3 per week

PUN692 HEALTH CARE DELIVERY SYSTEMS
The context in which public health operates in Australia; an introduction to the health administration branch of public health; the coordination of human, physical, financial and information resources to solve existing problems, to prevent future problems, and to promote good health.

Course: PU85
Credit Points: 12  Contact Hours: 3 per week

PUP007 SOCIAL & BEHAVIORAL EPIDEMIOLOGY
Introduction to the field of social and behavioral epidemiology. Examines the role of epidemiology in identifying health problems as well as seeking measures to control or prevent the occurrence of illness in human populations.

Courses: HL88, PU69
Credit Points: 12  Contact Hours: 3 per week

PUP010 HEALTH IN AUSTRALIAN SOCIETY
Addresses significant issues associated with the multifactorial relationships between health and social, economic, political and lifestyle factors. Examination of the structure of Australian society as it impacts on health; patterns of mortality and morbidity and the nature and extent of health care delivery systems.

Courses: HL88, PU69
Credit Points: 12  Contact Hours: 3 per week

PUP012 PROGRAM EVALUATION
An introduction to the role of research and evaluation in a broad range of health education and promotion contexts. The unit focuses on the development of skills in program evaluation, research skills to analyse and interpret current research literature and the development of research proposals.

Course: PU69
Credit Points: 12  Contact Hours: 3 per week

PUP014 SCHOOL HEALTH EDUCATION
Introduction to the field of school health education. Focuses on the nature, scope and place of school health education in the total school environment; major issues facing schools and educators involved in developing and implementing school health education; structural and organisational factors impacting on program development.

Courses: HL88, PU69
Credit Points: 12  Contact Hours: 3 per week

PUP018 HEALTH PROMOTION STRATEGIES
Examines and analyses the process of selection and implementation of appropriate educational approaches for health education and health promotion programs; a broad range of theories, methods and strategies for planning educational experiences.

Courses: HL88, PU62, PU69, PU85
Credit Points: 12  Contact Hours: 3 per week

PUP021 CASE STUDIES ON CONTEMPORARY HEALTH ISSUES
Focuses on current issues facing practitioners in health education and promotion. Includes critical analysis of strategies and policies designed to address contemporary health issues and encourages students to become informed and critical practitioners.

Courses: HL88, PU69
Credit Points: 12  Contact Hours: 3 per week

PUP022 HEALTH PROMOTION CONCEPTS & POLICY: A CRITICAL ANALYSIS
Essential advanced study for practitioners engaged in the application of health promotion strategies. It acknowledges the importance of knowledge and skills to reduce behavioral risks, however, it emphasises the significant strategies and policies of health promotion including healthy public policy, social view of health, laws and regulations and leadership and advocacy.

Courses: HL88, PU69
Credit Points: 12  Contact Hours: 3 per week
PUP023 PROGRAM PLANNING IN SCHOOL & COMMUNITY HEALTH
Major components of health education and health promotion - the planning and implementation of intervention strategies and comprehensive programs. Provides a conceptual synthesis of the foundation of health education and promotion and analyses models of program planning and evaluation.
Courses: HL88, PU69
Credit Points: 12  Contact Hours: 3 per week

PUP024 FOUNDATIONS OF HEALTH EDUCATION
Introduction to the theoretical and practical dimensions of health education as a major component of the process of health promotion. Subject introduces knowledge, skills and practices necessary to implement health education strategies.
Courses: HL88, PU69
Credit Points: 12  Contact Hours: 3 per week

PUP025 COMMUNITY HEALTH PROMOTION
The field of health education and health promotion specifically focusing on the nature of the community health education; examines the environmental, social and educational elements supporting and encouraging behaviours conducive to health.
Courses: HL88, PU69
Credit Points: 12  Contact Hours: 3 per week

PUP027 INDEPENDENT STUDY
Research work in an area of personal or professional interest to the student in the health sciences. The focus may be one of specific content area or process in health education or health promotion. Involves liaison with academic adviser.
Course: PU69
Contact Hours: To be negotiated
Credit Points: 12

PUP109 NUTRITION
A comprehensive study of the nutritional sciences building on students' backgrounds in physiology, biochemistry and nutrition. Topics include: food composition databases; food commodities; factors affecting food choice; factors affecting access to food; barriers within Australia; public health nutrition; food grouping systems; dietary guidelines and the food needs of various groups in the community.
Course: PU62
Credit Points: 12  Contact Hours: 5 per week

PUP110 NUTRITIONAL EPIDEMIOLOGY
Statistics; validity; reliability; assessing nutritional studies; data management; interpretation of results. During the semester students have the opportunity to gather data, statistically analyse and assess the data, draw conclusions and construct a written report of the results. Students also learn to use computers to carry out basic statistical and dietary analyses.
Course: PU62
Credit Points: 12  Contact Hours: 5 per week

PUP115 OCCUPATIONAL HEALTH & SAFETY LAW & MANAGEMENT I
Introduces students to basic concepts in occupational health and safety; develops both an understanding of and skills in not only basic management principles as they apply to this discipline but also in the development and delivery of health and safety training programs develops a sound foundation in the principles and practice of health promotion.
Courses: NS62, PU65
Credit Points: 12  Contact Hours: 3 per week

PUP116 ERGONOMICS
The relationship between the worker, the work environment and the workspace. Occupational ill-health and injury arise from a lack of fit between the capabilities of workers and the design of the working environment, the work processes and the physical and mental demands of the task. Insight into ergonomics can assist practitioners to enhance the worker's safety and comfort, improve work efficiency and performance, and optimise work performance. Topics include: basic anatomy and physiology of body systems; occupational biomechanics; psychology.
Courses: HL88, NS62, PU65
Credit Points: 12  Contact Hours: 3 per week

PUP122 PRACTICE IN CLINICAL DIETETICS
Practical experience and seminar presentations relevant to PNP120 conducted in institutions off-campus (40 hours per week for 11 weeks).
Course: PU62
Prerequisites: Completion of all Semester 1 and Semester 2 units.
Credit Points: 24  Contact Hours: 11 weeks

PUP123 PRACTICE IN COMMUNITY NUTRITION
Students gain experience in the nutrition and health care of individuals and groups in the community through off-campus practice (40 hours per week for 3 weeks).
Course: PU62
Prerequisites: Completion of all Semester 1 and Semester 2 units.
Credit Points: 12  Contact Hours: 4 weeks

PUP126 CLINICAL DIETETICS 1
The dietetic process; the gathering of information using dietary histories; anthropometry; biochemical indices. It builds on basic studies in nutrition; biochemistry and physiology; integrates medical, biochemical and dietary aspects of inborn errors of metabolism, energy imbalances, cardiovascular disorders and metabolic disorders. As part of the subject students are required to attend various hospitals and other locations to interact with clients and others.
Course: PU62
Co-requisite: PUP109, PUP110
Credit Points: 12  Contact Hours: 5 per week

PUP127 CLINICAL DIETETICS 2
This is a continuation of PUP126. Topics include: nutritional assessment; the management of disorders of the digestive and immune systems; renal disease; liver disease; paediatric disorders; nutritional support and hypermetabolic conditions. Students are required to undertake various visits to hospitals and other locations to interact with clients and others.
Course: PU62
Prerequisite: PUP126
Co-requisite: PUP128
Credit Points: 12  Contact Hours: 5 per week

PUP128 PRACTICAL DIETITICS
Provides an opportunity to experiment with food commodities and to practise service planning, and food presentation. Examines the ingredient content of commercial foodstuffs. Examines the role of individual ingredients of foodstuffs in the determination of food structure and organoleptic properties.
Course: PU62
Prerequisite: PUP126
Co-requisite: PUP127
Credit Points: 12  Contact Hours: 5 per week
PUP129 FOOD SERVICE & DIETETIC MANAGEMENT
An introduction to the principles of management including general management theory; organising functions; leadership; staffing; management of change; marketing the profession. This is applied to food service management in terms of planning and organising food service; menu planning; kitchen design; food delivery systems; computer assistance and quality assurance. Field trips to visit various food services.
Course: PU62
Credit Points: 12  Contact Hours: 5 per week

PUP132 PRACTICE IN FOOD SERVICE MANAGEMENT
Practical experience and seminar presentations. Conducted in institutions off-campus (40 hours per week for 4 weeks).
Course: PU62
Prerequisites: Completion of all Semester 1 and Semester 2 units.
Credit Points: 12  Contact Hours: 3 weeks

PUP140 COMMUNICATION THEORY & PRACTICE FOR HEALTH PROFESSIONALS
Provides health professionals with skills in communication. Covers communication between clients and health professionals on a one-to-one basis; communication in small groups; public education on health-related matters; diffusion and adoption of health-related behaviours; the role of information; the use of mass media; and communication within health organisations, i.e., between health educators and promoters and other health professionals.
Courses: HL88, PU62
Credit Points: 12  Contact Hours: 3 per week

PUP215 OCCUPATIONAL HEALTH & SAFETY LAW & MANAGEMENT
Students develop an understanding of both the legal framework within which the discipline operates and industrial relations concepts and practices in so far as they impinge upon occupational health and safety. Basic statistical techniques are reviewed as an introduction to the study of concepts of epidemiology applicable to an occupational setting.
Courses: HL88, PU65
Credit Points: 12  Contact Hours: 3 per week

PUP250 OCCUPATIONAL HYGIENE
Lectures, practical work and industrial visits to instruct students so that they may recognise, evaluate and control the physical, biological and chemical environmental factors which can adversely affect the health, safety, comfort and efficiency of workers.
Courses: HL88, NS62, PU65
Credit Points: 12  Contact Hours: 3 per week

PUP301 SAFETY TECHNOLOGY & PRACTICE 2
Risk analysis; occupational health and safety audits; hazard detection and analysis; control strategies; use and limitations of personal protective equipment; safety audits; fire and explosion prevention; safe storage of chemicals; ventilation systems - design and operation; reporting systems and methods.
Courses: HL88, PU65
Credit Points: 12  Contact Hours: 3 per week

PUP415 OCCUPATIONAL HEALTH
This unit explores chemical hazards in the working environment, epidemiological principles and practice, and identification of special risk groups in the workforce. Topics include: the pathological bases of disease in humans; chronic occupational diseases; occupational skin conditions; respiratory diseases; biological hazards in the work environment (bacteria, parasites, viruses, rickettsia and fungi); chemical and physical stresses and their physiological responses; physiological monitoring - principles and practice; special risk groups; epidemiological principles and practice.
Courses: HL88, PU65
Credit Points: 12  Contact Hours: 5 per week

PUP416 OCCUPATIONAL HEALTH & SAFETY PROJECT
This major project gives students an opportunity to research a particular aspect of their theoretical or practical studies, and thereby develop their research techniques, data collection and evaluation skills and ability to work independently under supervision. By submission of a written project report, they will draw upon many of the skills developed in the unit.
Course: PU65
Credit Points: 12

PUP430 HOME ECONOMICS CURRICULUM STUDIES 1
The bases for making decisions about home economics curriculum design and implementation are explored in order for participants to appreciate the complexity of this process and the necessity to clarify their own philosophical base for teaching in the area. The skills appropriate for preparing and implementing sequenced units of work will be developed.
Course: ED37
Credit Points: 12  Contact Hours: 3 per week

PUP431 HOME ECONOMICS CURRICULUM STUDIES 2
Development of further skills in writing programs of work with an emphasis on advanced teaching/learning strategies, assessment and evaluation and the processes of accreditation and certification commensurate with BOSSSSS requirements; current developments in education and implications for Home Economics curriculum; feasible teaching/learning approaches congruent with the needs of specific groups are developed to achieve more equitable education outcomes for all students.
Course: ED37  Prerequisite: PUP420
Credit Points: 12  Contact Hours: 3 per week

SBB230 ENVIRONMENTAL EDUCATION
Designed to assist the beginning teacher to implement the Queensland Department of Education's environmental policy in primary schools; aims to develop expertise in the design and delivery of class programs and activities for children.
Course: ED41  Prerequisites: SBB229, MDB228
Credit Points: 8  Contact Hours: 5 per week

SBB261 SOCIAL SCIENCES 2
Continuation of SBB260. Contemporary problems in the Australian, Asian and Pacific region; pedagogical issues of studying Australia and other countries in their political, cultural, geographical, and economic relationships. Students undertake an independent study of an area applied to an identified curriculum need within the P-10 social education framework.
Course: ED41, ED51  Prerequisite: SBB260
Credit Points: 12  Contact Hours: 3 per week

SBB262 SOCIAL SCIENCES 3
Continuation of SBB261. An introduction to the study of futures is attempted through an analysis of principal
methods and contemporary eminent contributors. Methods and models are applied to the development of futures scenarios and contemporary issues relevant to the region, e.g. population and migration, political institutions and systems, resource allocation and utilisation, sustainable development, environmental issues and structural change. Using their understandings from the above, together with suggestions from the Commission on the Future (Australia), teaching methods and techniques are developed for the P-10 curriculum.

Courses: ED41, ED51  Prerequisite: SBB261  Credit Points: 12  Contact Hours: 3 per week

- SBB325 ACCOUNTING/BUSINESS MANAGEMENT CURRICULUM STUDIES I
   This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
   Course: ED50  Prerequisite: Normally the completion of 48 credit points in each relevant discipline area.
   Credit Points: 12  Contact Hours: 3 per week

- SBB326 ACCOUNTING/BUSINESS MANAGEMENT CURRICULUM STUDIES II
   This unit extends the principles of professional practice established in Curriculum Studies I. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.
   Course: ED50  Prerequisite: SBB325  Credit Points: 12  Contact Hours: 3 per week

- SBB330 ECONOMICS CURRICULUM STUDIES I
   This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
   Course: ED50  Prerequisite: SBB329  Credit Points: 12  Contact Hours: 3 per week

- SBB331 GEOGRAPHY CURRICULUM STUDIES I
   This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
   Course: ED50  Prerequisite: SBB331  Credit Points: 12  Contact Hours: 3 per week

- SBB333 HISTORY CURRICULUM STUDIES I
   This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
   Course: ED50  Prerequisite: SBB333  Credit Points: 12  Contact Hours: 3 per week
SBB334 HISTORY CURRICULUM STUDIES 2
This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.
Course: ED50  
Prerequisite: SBB333  
Credit Points: 12  
Contact Hours: 3 per week

SBB335 LEGAL STUDIES CURRICULUM STUDIES 1
This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
Course: ED50  
Prerequisite: Normally the completion of 48 credit points in each relevant discipline area.
Credit Points: 12  
Contact Hours: 3 per week

SBB336 LEGAL STUDIES CURRICULUM STUDIES 2
This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.
Course: ED50  
Prerequisite: SBB335  
Credit Points: 12  
Contact Hours: 3 per week

SBB337 SOCIAL SCIENCE CURRICULUM STUDIES 1
This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
Course: ED50  
Prerequisite: Normally the completion of 48 credit points in each relevant discipline area.
Credit Points: 12  
Contact Hours: 3 per week

SBB338 SOCIAL SCIENCE CURRICULUM STUDIES 2
This unit extends the principles of professional practice established in Curriculum Studies 1. Content includes: curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.
Course: ED50  
Prerequisite: SBB337  
Credit Points: 12  
Contact Hours: 3 per week

SBB339 CURRICULUM IN SOCIAL EDUCATION
Builds on SBB340 to develop a coherent and balanced understanding of the nature and role of Social Education, the Queensland Primary Schools Social Studies Syllabus, the Queensland Primary Schools Social Studies Syllabus, 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

SBB340 TEACHING SOCIAL EDUCATION
Develops an introductory understanding of the nature and role of Social Education and Queensland Primary Schools Social Studies Syllabus, Guidelines, Workbooks, and the P-10 Social Education Framework. Investigates the various learning styles in the classroom and appropriate teaching strategies to cater for these and especially by processes for individualising instruction via inquiry learning.
Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

SBB341 DIRECTIONS IN SOCIAL EDUCATION
Builds on SBB339 and SBB340 and analyses the contribution to social education in the classroom of areas, themes and topics, such as, teaching for a better world; environmental education; peace and justice; effective citizenship; political literacy; human rights; development education; gender and equity; global education and futures education.
Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

SBB342 SOCIAL & ENVIRONMENTAL FOUNDATIONS
The unit explores from an interdisciplinary perspective a number of thematic questions about teaching: the historical development of social and environmental foundations in the study of society; the current socio-cultural context of social and environmental education; culture and beliefs as an influence on social and environmental studies; the quality of natural and social systems in the world; resources; conservation and development; place and space; continuity and change; key skills and competencies, critical and creative thinking, perceptions, attitudes and values in social and environmental studies.
Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

SBB343 THE AUSTRALIAN LEGACY
This course examines those forces which have shaped contemporary Australia. Through a consideration of this historical legacy it aims to give a better understanding of those social, economic and constitutional developments which are taking place as Australia moves towards the twenty-first century.
Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

SBB344 CONSUMER EDUCATION IN PRIMARY SCHOOLS
This unit provides opportunities for Primary School teachers to gain an awareness of the role and functions of consumers in the Australian economy, and the interrelationship between consumers, business and the government. It discusses consumer protection laws and the need for consumer protection. The subject examines various teaching strategies and teaching resources and assists teachers to plan Consumer Education teaching programs for implementation in primary schools.
Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week
SBB440 ENVIRONMENTAL EDUCATION

Valuable for all educators concerned with communicating environmental knowledge, concepts, skills, attitudes and values in both formal and informal learning situations. Students are encouraged to pursue the objectives of environmental education within their own subject specialisations.

Courses: ED26, NS48
Credit Points: 12  Contact Hours: 3 per week

SBN603 CRITICAL APPROACHES IN SOCIAL EDUCATION

Analysis of emerging fields of social education; including development education, human rights education, global education and futures education; basis in social theory, theories of knowledge and curriculum theories; links with current national and state policy developments; analysis of principles, resources and practices; applying critical approaches in disciplinary fields such as History and Geography, and in integrated studies; evaluating their applicability to various school/age settings.

Courses: ED11, ED13
Credit Points: 12  Contact Hours: 3 per week

SBB410 CONSUMER EDUCATION

Preparation of teachers to teach consumer education at various school levels either as a subject in its own right or as aspects of consumer education within other disciplines. Topics include: consumer education in the school curriculum; content in consumer education; teaching consumer education; curriculum development and innovation.

Courses: ED26, ED69, NS48
Credit Points: 12  Contact Hours: 3 per week

SBB411 SOCIAL EDUCATION CURRICULUM DEVELOPMENT

Designed for teachers wanting to specialise in curriculum planning in primary social studies, secondary economics, history, geography or social science, or TAFE liberal studies; explores recent curriculum movements in social education and relevant curriculum development projects; advanced skills for planning a teaching subject and a work program.

Courses: ED26, NS48
Credit Points: 12  Contact Hours: 3 per week

SBB412 SOCIAL EDUCATION IN THE CURRICULUM

Provides opportunities for teachers of social education at all levels to investigate key issues and debates about social education and to refine their own purpose as social educators; focuses on global challenges to social education, 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
SBP404 ECONOMICS CURRICULUM STUDIES 2
Continuation of SBP403. Curriculum development within the context of contemporary policies, frameworks and agencies; advanced teaching strategies and the use of computers in teaching Economics; unit development; assessment and evaluation in Economics; issues and directions in curriculum development.
Course: ED37  
Prerequisite: SBP403  
Credit Points: 12  
Contact Hours: 3 per week

SBP405 GEOGRAPHY CURRICULUM STUDIES 1
The interpretation of geography syllabi in Queensland; the nature and role of geography in general education; lesson and unit planning; teaching and learning approaches designed to promote different classroom activities and cater for different students needs.
Course: ED37  
Credit Points: 12  
Contact Hours: 3 per week

SBP406 GEOGRAPHY CURRICULUM STUDIES 2
Continuation of SBP405. Examination of the broader issues of geographical education and the roles of the geography teachers in the community and the profession.
Course: ED37  
Prerequisite: SBP405  
Credit Points: 12  
Contact Hours: 3 per week

SBP407 HISTORY CURRICULUM STUDIES 1
Development of a rationale for inquiry-based curriculum in history for secondary schools; application of inquiry-based principles to curriculum development at levels from school programs to individual lessons.
Course: ED37  
Credit Points: 12  
Contact Hours: 3 per week

SBP408 HISTORY CURRICULUM STUDIES 2
Continuation of SBP407. Assessment of principles and practices; evaluation of the potential for history to contribute to emerging fields of social education, including global education and development education.
Course: ED37  
Prerequisite: SBP407  
Credit Points: 12  
Contact Hours: 3 per week

SBP409 LEGAL STUDIES CURRICULUM STUDIES 1
Legal studies in the school curriculum; socially-critical approach to the teaching of Legal Studies; overview of the Legal Studies course in Queensland; lesson and curriculum unit planning activities; basic teaching strategies to promote a range of learning experience in Legal Studies; developing basic teaching skills related to the first teaching practice session.
Course: ED37  
Credit Points: 12  
Contact Hours: 3 per week

SBP410 LEGAL STUDIES CURRICULUM STUDIES 2
Continuation of SBP409. Curriculum development within the context of contemporary principles; advanced strategies to further promote a range of learning experiences; assessment and evaluation techniques; assessment programs and teaching packages in Legal Studies; issues and directions in curriculum development.
Course: ED37  
Prerequisite: SBP409  
Credit Points: 12  
Contact Hours: 3 per week

SBP411 OFFICE COMMUNICATIONS TECHNOLOGY CURRICULUM STUDIES 1
The nature of office communications technology, its role in the general curriculum; introduction to relevant syllabuses and curriculum documents; basic teaching strategies (including microteaching), and resources designed to motivate students and promote a range of participative learning experiences.
Course: ED37  
Credit Points: 12  
Contact Hours: 3 per week

SBP412 OFFICE COMMUNICATIONS TECHNOLOGY CURRICULUM STUDIES 2
Continuation of SBP411. Curriculum development within the context of contemporary policies; advanced teaching strategies; unit development; general principles of measurement, assessment and evaluation; issues and directions in curriculum development which are pertinent to office communications technology; opportunities to assist students reflect on their own professional development, as they prepare for teaching career.
Course: ED37  
Prerequisite: SBP411  
Credit Points: 12  
Contact Hours: 3 per week

SBP500 CURRICULUM ISSUES IN ENVIRONMENTAL EDUCATION 1
The nature of environmental education, environmental ethics; theoretical and practical appreciation of the issues and problems facing environmental education curriculum planners.
Course: ED22  
Credit Points: 12  
Contact Hours: 3 per week

SBP501 CURRICULUM ISSUES IN ENVIRONMENTAL EDUCATION 2
A theoretical appreciation of, and practical exposure to, the design of environmental teaching experiences in formal and non-formal settings within subject areas; builds upon SBP500.
Course: ED22  
Prerequisite: SBP500  
Credit Points: 12  
Contact Hours: 3 per week

SBP502 ETHICS & ECONOMICS IN ENVIRONMENTAL EDUCATION
Development of an understanding of the nature of environmental economics and different philosophies, ideologies and cultural views towards the environment; development of teaching strategies and resources for teaching environmental economics and ethics.
Course: ED22  
Credit Points: 12  
Contact Hours: 3 per week

SBP503 NATURAL ENVIRONMENTAL EDUCATION ISSUES
Relationship between human beings and their natural environment; historical development of environmental ethics; studies of current human impacts on vegetation, animal life, soils, waters, geomorphological processes and climate and implications of these for current notions of sustainability.
Course: ED22  
Credit Points: 12  
Contact Hours: 3 per week

SBP504 PRACTICAL & FIELDWORK IN ENVIRONMENTAL EDUCATION
Development of a range of practical and technological skills and a variety of field-based experiences to enable students to reflect on and refine their attitudes and perceptions about environmental education. Studies include rural and urban field activities.
Course: ED22  
Credit Points: 12  
Contact Hours: 3 per week
SBP505 SOCIAL ENVIRONMENTAL EDUCATION ISSUES

Development of an understanding of people’s responses to their urban environment; opportunities for decision-making about the effective and sustainable use of urban environments; strategies to promote effective practices in the urban environment.

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

SBP506 CURRICULUM ISSUES IN BUSINESS EDUCATION

The nature and scope of business education; business education curricular developments; projections and implications of social economic and demographic changes for business education; technology in business education; catering for special needs students in business; integrating business into the lower school curriculum; linkage of business and industry with education; implications of change for effective teaching; promotion of business educators; innovation in the business education area.

Courses: ED22, ED69
Credit Points: 12 Contact Hours: 3 per week

SBP507 BUSINESS ORGANISATION & MANAGEMENT EDUCATION 1

Development of the business organisation and management curriculum; comparison with curricula in other states; rationale; nature and aims of business organisation and management; learning experiences appropriate to business organisation and management; examination of curriculum content in the area of business organisation and management.

Courses: ED22, ED69
Credit Points: 12 Contact Hours: 3 per week

SBP508 BUSINESS ORGANISATION & MANAGEMENT EDUCATION 2

Learning experiences for business organisation and management; resources for teaching business organisation and management; technology in business organisation and management; development of extension studies; language education in business organisation and management; values and educational equity in business organisation and management; assessment and evaluation in business management.

Courses: ED22, ED69
Credit Points: 12 Contact Hours: 3 per week

SBP509 ISSUES IN LEGAL EDUCATION

Nature and scope of legal education; development of legal education curriculum in Australia; comparisons with overseas programs; nature and scope of legal studies in Queensland; development of relevant teaching strategies within a socially-critical framework; optional studies for legal studies.

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

SBP510 ISSUES IN OFFICE COMMUNICATION TECHNOLOGY EDUCATION

Role of office communication technology in a changing social world; impact of office communication technology on the teaching-learning process; enquiry and process in office communication technology education; implementing office communication technology education in primary and lower secondary curriculum; values and educational equity in office communication technology education; applications of office communication technology in teaching and learning; curriculum development and change management in office communication technology education; assessment and evaluation in office communication technology education.

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

SBP511 ISSUES IN ACCOUNTING EDUCATION

Curriculum development in accounting; use of computers in teaching and learning accounting; integration of language education into the accounting curriculum; critical examination of teaching strategies; assessment and evaluation in accounting; other issues.

Courses: ED22, ED69
Credit Points: 12 Contact Hours: 3 per week

SCB001 LEARNING AT UNIVERSITY

Aims to develop students’ awareness and use of learning processes necessary for quality learning at university. It encourages a more meaningful approach to learning through the development of active learning strategies effective in scientific study. The content is closely allied to other first year units. Classes have an interactive format which require active student involvement and participation.

Course: SC30
Credit Points: 2 Contact Hours: 1 per week

SCB100 COOPERATIVE EDUCATION

Ten to 12 months placement in paid employment related to their course, in a commercial environment under the joint supervision of an industry supervisor and an academic adviser. An academic adviser obtains reports from the student and their work supervisor at regular intervals. The student is required to complete a progressive assessment program. Results are determined on the basis of reports, continuous assessment, and the employer’s report.

Courses: CH32, MA34, SC30
Prerequisite: Completion of 4 semesters of standard full-time degree-level course, normally with a GPA of not less than 4.5 overall.

SCB202 SCIENCE, TECHNOLOGY & SOCIETY

The origins of modern science and technology in a social and historical context leading to the study of their role and impact in contemporary society; includes case studies of the development of particular concepts, issues and science and technology-based industries. Topics include: the study of the nature of science and technology; the sociological functioning of the scientific enterprise – its norms and values; the nature of scientific knowledge – objectivity and epistemological issues; the future of science and technology – policy and influences.

Courses: ED50
Credit Points: 12 Contact Hours: 2 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: 2 per week
**SSB010 INTRODUCTION TO QUALITY MANAGEMENT**
Management: concepts, systems, costs and total quality management. Improvement: techniques and procedures.
Course: SS30
Prerequisite(s): MAB237 or MAB347 and successful completion of at least 192 credit points.
Credit Points: 12 Contact Hours: 4 per week

**SSB020 AUSTRALIAN SOCIETY: INTRODUCTION TO SOCIOLOGY**
An introduction to sociology; basic sociological concepts and theories will be introduced and applied in an analysis of the key institutions and structures in Australian society. Students will be exposed to a number of important debates concerning the nature of, and future prospects for, Australian society.
Courses: PU49, SS07
Credit Points: 12 Contact Hours: 3 per week

**SSB036 HUMAN DEVELOPMENT I**
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

**SSB007 CHILD & FAMILY SERVICES II**
The history of child and family services in Australia; an overview of the major service agencies; legislation; causes of family breakdown; family assessment
Course: SS07
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 I**
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

**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

**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
Prerequisite: SSB003
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
Prerequisite: SSB003
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
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 valuation, 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 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 their knowledge of service networks through a series of interview role plays; introduction to statistics (from electronic and print resources) in service planning and submission writing.
Course: SS07 Prerequisite: SSB010
Credit Points: 12 Contact Hours: 3 per week

SSB020 CHILD & FAMILY SERVICES 2
An overview of the frameworks, assessments and intervention skills necessary for human service work with children in the following contexts: child protection, alternative care, domestic violence, divorce, juvenile justice and chemical dependency.
Course: SS07 Prerequisite: SSB011
Credit Points: 12 Contact Hours: 3 per week

SSB021 DISABILITY SERVICES 2
Major life domains of home, work, education, leisure, relationships as they relate to people with a disability. Contemporary service responses to these life domains, impact of specific disabling conditions: intellectual, physical, sensory and psychiatric.
Course: SS07 Prerequisite: SSB012
Credit Points: 12 Contact Hours: 3 per week

SSB022 CORRECTIVE SERVICES 2
Criminological theory and research; correctional policy and practice; empirical data on criminality; major theoretical paradigms of criminality; social location and extent of crime; the costs of crime; individual and community attitudes towards crime and criminals.
Course: SS07

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: SSB013
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: SSB014
Credit Points: 12 Contact Hours: 3 per week

SSB025 YOUTH SERVICES 2
The way gender, ethnicity, class, geographical locations and disability affect the experience of young people as described through various forms of social commentary and research; current and emerging intervention strategies; their assumptions, strengths and limitations.
Course: SS07 Prerequisite: SSB015
Credit Points: 12 Contact Hours: 3 per week

SSB026 FIELDWORK PRACTICE 1
A two-stage program of pre-placement tutorials, a ten-week block placement (or negotiated equivalent) in a human service setting offering a professionally supervised, contracted learning experience of human service work. Students acquire and integrate critical human service competencies, attitudes and knowledge. Note: Students who fail to achieve a satisfactory standard of performance on placement are liable to exclusion from the course.
Course: SS07 Prerequisites: Enrolment in the Bachelor of Social Science (Human Services). All preceding subjects are prerequisites/co-requisites at the discretion of the course coordinator and field education coordinator.
Contact Hours: 360 hours over 10 weeks
SSB027 COMMUNITY WORK
Community work as a distinct intervention skill: the background to community work in Australia; models of community work; basic skills and techniques are developed: entering a community; building community involvement; developing community action; managing common problems.
Course: S007
Credit Points: 12 Contact Hours: 3 per week

SSB028 AUSTRALIAN POLITICAL STRUCTURES & INSTITUTIONS
The application of a contemporary human services framework to Australian political structures and institutions; social policy development with reference to the delivery of human services; aspects of the Australian economy and industrial system relevant to the human services practitioner.
Course: S007 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: S007 Prerequisite: SSB020
Credit Points: 12 Contact Hours: 3 per week

SSB031 DISABILITY SERVICES 3
Policies, legislation and programs which impact upon people with a disability reviewed at Federal, State and Local government levels; analysis of international influences on the Australian scene; policy areas on disability, income maintenance, housing, education, transport, employment, etc.
Course: S007 Prerequisite: SSB021
Credit Points: 12 Contact Hours: 3 per week

SSB032 CORRECTIONAL SERVICES 3
The Queensland Corrective Services Commission: social and political influences on correctional policy; statutory responsibilities and limitations of correction; communication and organisational change.
Course: S007 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: S007 Prerequisite: SSB023
Credit Points: 12 Contact Hours: 3 per week

SSB034 MULTICULTURAL SERVICES 3
This unit aims to develop the students' ability to critically evaluate Australia's social institutions for their relevance and fairness to ethnic minorities. It explores contemporary principles which direct service delivery as it relates to ethnic minorities and evaluate current promotion methods employed.
Course: S007 Prerequisite: SSB024
Credit Points: 12 Contact Hours: 3 per week

SSB035 YOUTH SERVICES 3
The nature and implications of youth work within various contexts; different settings, eg. statutory and non-statutory, government and non-government; focuses on youth policy development and analysis; contemporary policy and practice issues relating to the juvenile justice system.
Course: S007 Prerequisite: SSB025
Credit Points: 12 Contact Hours: 3 per week

SSB036 FIELDWORK PRACTICE 2
A two-stage program of pre-placement tutorials, a ten week block placement (or negotiated equivalent) in a human service setting offering a professionally supervised, contracted learning experience of human service work. Students consolidate and extend critical human service competencies, attitudes and knowledge. Note: Students who fail to achieve a satisfactory standard of performance on placement are liable to exclusion from the course.
Course: S007
Credit Points: 12 Contact Hours: 3 per week

SSB037 STUDIES IN HUMAN RIGHTS 3
Examines notions of collective or solidarity rights; applying to linguistic, religious, legal, social, and political issues relating to ethnic minorities and indigenous peoples; explores the inter-relationship between human rights and global issues including peace, international security, sustainable development, environmental degradation and the national right to economic, social and cultural development.
Courses: HU20, S007 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: S007
Credit Points: 12 Contact Hours: 3 per week

SSB039 CONTEMPORARY SOCIAL POLICIES
The major debates in Social Policy will be explored. Analyses of Australia's response and the impact on redistribution in the Welfare State. Current analyses of health, housing, income security, legal, immigration and family policies at Federal, State and Local government level.
Course: S007
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: S007
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: S007 Prerequisite: 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
Courses:

- **SSB890** TECHNOLOGY & CULTURE
  - Investigates the social and cultural aspects of technology-practice; the relationship between social and cultural organisation and behaviour, and the technical aspects of human development; historical, anthropological, sociological and cultural perspectives are used to analyse the relationship between technology and culture.
  - Course: ED26
  - Credit Points: 12
  - Contact Hours: 3 per week

- **SSB803** SOCIAL PSYCHOLOGY
  - General study of applied social psychology and its relevance to a variety of professional roles and work environments; group dynamics and related concepts; analysing small group development; behaviours affected by stress or pressure, health, environmental design and work space.
  - Course: PU49
  - Credit Points: 12
  - Contact Hours: 3 per week

- **SSB804** PSYCHOLOGY & GENDER
  - Theories of gender; male and female; masculine and feminine; roles vs power; counselling issues; old and new paradigms; history of psychology of gender; sexuality; mothers and fathers; “psychology constructs the female”; psychology in patriarchal discourse; family therapy theory and feminist critiques; psychological constructs and the media; film and media; psychology of gender and power.
  - Course: SS07
  - Prerequisite: SSB003 or SSB912
  - Co-requisites: SSB903 and SSB907
  - Credit Points: 12
  - Contact Hours: 3 per week

- **SSB906** INTERPERSONAL & GROUP PROCESSES
  - Understanding relationships and small group dynamics with emphasis on skill development in listening, helpful responding, assertion, conflict resolution, disclosure, feedback; models of group development and roles lead to facilitation and leadership skills. Skills are applied and analysed outside the class.
  - Course: ED50
  - Credit Points: 12
  - Contact Hours: 3 per week

- **SSB807** HUMAN SEXUALITY
  - Sexuality; model strategies for dealing appropriately with sensitive, value-laden issues; personal comfort in discussion of sexual matters; aspects of sexuality relevant to the student’s own development; the sexual development of adolescents; issues of social concern such as sexual abuse of children.
  - Course: ED50
  - Credit Points: 12
  - Contact Hours: 3 per week

- **SSB909** 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 key implications of changing the behaviour of others; use skills necessary for starting a successful small business.
  - Course: PU45
  - Credit Points: 8
  - Contact Hours: 3 per week

- **SSB903** SOCIOLOGY FOR HEALTH PROFESSIONALS
  - An examination of sociology’s origins, theories, perspectives and methodologies with reference to health and wellness, illness and premature mortality; empirical data on mortality and morbidity in contemporary Australia are presented and subjected to sociological analyses to indicate social patterns, processes promoting or constraining levels of health.
  - Course: PU42
  - Credit Points: 6
  - Contact Hours: 3 per week

- **SSB904** SOCIOLOGY OF HEALTH & ILLNESS
  - This unit analyses in detail the statement that: “The major determinants of health and illness are social, cultural, behavioural, occupational, regional, environmental and parental.” Indigenous, migrant and rural health determinants in Australia are investigated. The importance of a social and cultural approach to environmental health issues is highlighted.
  - Course: PU42
  - Prerequisite: SSB903
  - Credit Points: 6
  - Contact Hours: 3 per week

- **SSB905** PSYCHOLOGY FOR HEALTH PROFESSIONALS
  - This unit presents particular aspects of the theories, skills and approaches of interpersonal, social and organisational psychology which are relevant to nursing practice. Topics include: humanistic, cognitive, behavioural and social models for understanding the individual; communication processes; self-concept and self-esteem; protection of the ego; the impact of emotions and beliefs on health behaviour; and interpersonal communication skills.
  - Courses: NS40, NS48
  - Credit Points: 8
  - Contact Hours: 3 per week

- **SSB906** SOCIOLOGY FOR HEALTH PROFESSIONALS
  - Sociological theories and methods are studied to identify and analyse social relationships, social processes and social patterns relating to the social origins of illness and wellness; analysis trends in morbidity and mortality in society which are not randomly distributed but associated with social structural variables such as ethnicity, gender, social class, age and geographical location; examines the health care system internally and in relation to its public use and its effectiveness in addressing contemporary health issues in Australia.
  - Courses: NS40, NS48
  - Credit Points: 8
  - Contact Hours: 3 per week

- **SSB907** PSYCHOLOGY FOR ENGINEERS
  - Introductory psychology; basic elements of transactional analysis and their application to work settings; self-concept and its relationship to socially effective behaviour; attitudes and attitude change; the dynamics of supervision in the work place.
  - Courses: ME44, ME45
  - Credit Points: 4
  - Contact Hours: 2 per week

- **SSB908** BEHAVIOURAL SCIENCE
  - An introduction to perception, motivation, individual personality, social attitudes, group interaction and dynamics; social motives and the sources and resolution of conflict; the practical application and limitations of behavioural studies; readings and case studies drawn from the building industry; the job and responsibilities of management; the functions and role of the manager including planning, organisation, control, budgeting and decision-making; styles of leadership;
employee selection training, appraising and promotion; worker efficiency and working conditions.

Courses: CN31, CN32
Credit Points: 6
Contact Hours: 3 per week

SSB910 INTRODUCTORY PSYCHOLOGY FOR HEALTH PROFESSIONALS

A course of lectures and tutorials on psychology as a science and interpersonal behaviour and skills and its relevance to the radiographer.

Course: PF38
Credit Points: 4
Contact Hours: 2 per week

SSB911 GENERAL PSYCHOLOGY

This course is designed to give optometry students an ability to demonstrate effective interpersonal skills in relation to patients and other health professionals; indicate bases of individual differences; diagnose patient needs and respond appropriately; state causes of stress, effects on health, and indicate appropriate techniques to reduce stress; indicate techniques that may be used to modify patient attitudes.

Course: OP42
Credit Points: 4
Contact Hours: 3 per week

SSB912 PSYCHOLOGY

An introduction to general psychology providing limited skills training in some areas for personal development; research approaches; learning and motivation; individuals and groups; the development of groups and the assessment of individuals within groups; perception, human development, and stress management, individual differences, psychological testing and personality.

Courses: PU49, SS08
Credit Points: 12
Contact Hours: 3 per week

SSB913 DEVELOPMENTAL PSYCHOLOGY

A basis for the study of the promotion of psychological health of individuals at differing developmental stages; psychological adjustment, developmental theories, developmental aspects of childhood, adolescence, middle and old age and specific areas such as sexual development, death and dying; relationships to work and professional environments.

Course: SS07
Incompatible with: SSB001 and SSB005
Credit Points: 12
Contact Hours: 3 per week

SSB914 PSYCHOLOGY

Students are taught to critically evaluate statements about behaviour; state and give examples of higher order motives, and apply this knowledge to work and interpersonal situations; understand factors which cause us to misperceive others, and explain how to minimise misperceptions; use effective social skills in interpersonal and group settings; understand theories of attitude, change and know implications for changing the attitudes of other persons; know theories of behaviour change and understand implications for changing the behaviour of others; use skills to reduce interpersonal stress; emphasis is on the role of environmental health officers and occupational safety and health professionals.

Courses: PU42, PU44, PU45
Credit Points: 8
Contact Hours: 3 per week

SSB915 SOCIAL PSYCHOLOGY

Philosophy of social science; historical perspective; social and self and personal space; social perception; research methods and the assessment of individuals; stereotypes and prejudice; conformity; persuasion; attraction and intimacy; help seeking and giving; aggression; leadership.

Course: SSO7
Prerequisite: SSB003 or SSB912
Credit Points: 12
Contact Hours: 3 per week

SSB917 PHYSIOLOGICAL & HEALTH PSYCHOLOGY

The physiological and cognitive bases to human behaviour; the nervous and endocrine systems of the body, the brain and its functioning; consciousness and altered states of consciousness; hormones and drugs and their effects on emotional expression; the relation of physiological and cognitive factors to motivation and behaviour.

Course: SSB917
Incompatible with: SSB934
Prerequisite: SSB912 or 96 credit points of approved study.
Credit Points: 12
Contact Hours: 3 per week

SSB918 COUNSELLING FOR HEALTH PROFESSIONALS

A study of the psychology of illness and the counselling process for advanced radiographers.

Course: PF38
Credit Points: 4
Contact Hours: 2 per week

SSB921 COUNSELLING & CRISIS MANAGEMENT

The basic theories and principles of crisis intervention methodology; the roles of nurses in counselling clients who are currently experiencing difficulties; appropriate interpersonal and specific counselling skills to assist with this therapeutic communication process; short term strategies in crisis management.

Course: NS48
Credit Points: 8
Contact Hours: 3 per week

SSB922 SOCIAL & CULTURAL ASPECTS OF HEALTH

A broad overview of the key theoretical and practical questions currently being addressed in the field of the sociology of health and illness and provides a framework for individuals wishing to develop professional skills in health education.

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

SSB930 PSYCHOLOGICAL RESEARCH METHODS

An overview of the purposes and strategies of research; elementary research design; operationalising variables; descriptive statistics; distributions; measures of central tendency and spread; standard scores and percentiles; comparing variables through correlation will be addressed; using the computer.

Course: SS07
Credit Points: 12
Contact Hours: 3 per week

SSB933 COGNITIVE PSYCHOLOGY

History and development of cognitive psychology and cognitive science; the bases of cognition; perception; representation of knowledge; memory; the development of expertise, problem-solving and reasoning; cognitive development; computer models of cognition; applications of cognitive psychology.

Course: SSB933
Prerequisite: SSB003 or SSB912
Incompatible with: SSB937
Credit Points: 12
Contact Hours: 3 per week

SSB934 BIOLOGY & BEHAVIOUR

The physiological and cognitive bases to human behaviour; the nervous and endocrine systems of the body, the brain and its functioning; consciousness and altered states of consciousness; hormones and drugs and their effects on emotional expression; and overall the relation of physiological and cognitive factors to motivation and behaviour. Some attention is also
given to comparative psychology, with reference to animal/human behaviour.

Course: SSB07  Prerequisite: SSB003 or SSB912  
Credit Points: 12  Contact Hours: 3 per week

### SSB936 PERSONALITY & PSYCHOPATHOLOGY

The concept of personality and individual differences from the viewpoint of theory, research and assessment/application; functional and dysfunctional aspects of personality; the integration of traditional theoretical perspectives - psychoanalytic, trait, humanistic and social-cognitive - with more modern perspectives; research methods and applications in personality studies, validity and reliability of personality profiles; biological issues in behaviour, environmental and cultural effects on personality including workplace situations, life style changes.

Course: SSB07  Prerequisite: SSB915  
Credit Points: 12  Contact Hours: 3 per week

### SSB937 APPLIED COGNITIVE PSYCHOLOGY

An introduction to cognitive psychology; perception processes in cognition; memory processes; problem-solving and decision-making; the development of artificial intelligence application of cognitive psychology. Artificial intelligence, ergonomics and job design also included as topics.

Courses: IP51, IS43, IT20, SSB07  
Prerequisite: SSB912 or 96 credit points of approved study.  
Incompatible with: SSB933  
Credit Points: 12  Contact Hours: 3 per week

### SSB938 PSYCHOLOGY OF VIOLENCE

Types of violence including family violence, crime (assault, theft, robbery with violence, rape, murder, abduction, torture), war; reactions to violence (general post-trauma and specific effects); service responses including those focused on families, community networks, social support, counselling and therapy, group work; societal attitudes; responses to the perpetrators; differences between the effects of general trauma and personal violence; cultural and gender issues.

Course: SSB07  Co-requisites: SSB017 and SSB946  
Prerequisite: 36 credit points of approved second or third level psychology units.  
Credit Points: 12  Contact Hours: 3 per week

### SSB939 ALCOHOL & OTHER DRUG STUDIES

An advanced unit giving special attention to the following: what is a drug?, an overview of licit and illicit drugs; states of consciousness; models of use: assessment; and referral practices, theories and research into dependency, historical examples of drug use; Australian drug use; social reinforcement of drug use; gender issues; cultural issues; physiology of drug use; power issues; crisis intervention; legal issues; mythology and drug use.

Course: SSB07  
Prerequisites: Any two of the following: SSB934, SSB936, SSB937, SSB946  
Credit Points: 12  Contact Hours: 3 per week

### SSB940 ETHICAL, LEGAL & PROFESSIONAL ISSUES IN PSYCHOLOGY

Issues will be chosen each year but will cover at least ten of the following topics: philosophy and the scientific method (paradigms old and new eg. constructivists and postconstructionists); ethics; gender; cross-cultural issues; legal issues (advocacy, litigation, expert witness, freedom of information); treatment issues (contentious treatments); psychology and social control (custodial issues); psychology in the public domain (T.V. pop psychology, marketing and advertising); psychologist as person (burnout, role conflicts); psychology as colonisation (exporting constructs to other cultures); psychology of violence and trauma.

Course: SSB07  
Prerequisite: 36 credit points of approved second or third year psychology units  
Credit Points: 12  Contact Hours: 3 per week

### SSB941 PSYCHOLOGICAL ASSESSMENT

Theory and principles underlying psychological or personal assessment and testing are involved; applications are primarily examined in personnel or organisational areas (such as the assessment of ability, interests, values, job satisfaction, commitment and morale, and other attitudinal measures); issues in clinical and counselling assessment using interviews for selection, work analysis, counselling and appraisal; practical application including project or assignment work involving a short organisational placement.

Course: SSB07  
Prerequisite: 36 credit points of second or third year psychology units.  
Credit Points: 12  Contact Hours: 3 per week

### SSB942 INDEPENDENT STUDY (PSYCHOLOGY)

Students either individually or in small groups, undertake one or several approved learning activities within an approved content area. Activities could include literature reviews, research (mini-thesis), project, practicum (work placement and report), classroom presentation to a selected class, and other activities.

Course: SSB07  
Prerequisite: 36 credit points of second or third year psychology units.  
Credit Points: 12  Contact Hours: 3 per week

### SSB943 OCCUPATIONAL & VOCATIONAL PSYCHOLOGY

The well-being and productivity of individuals and groups in the work force; the psychological and social effects of unemployment; career planning and choice; the transition from school or college to work; adjustment at work; interests, values and ethics inherent in or related to the different workplaces and professions; theories and models of career choice and development; health and adjustment at work; unemployment.

Course: SSB07  
Prerequisite: 36 credit points of second or third year psychology units.  
Credit Points: 12  Contact Hours: 3 per week

### SSB944 INDUSTRIAL & ORGANISATIONAL PSYCHOLOGY

This unit examines human factors in job design, occupational health and safety, work and personal motivation, the assessment of suitability and/or performance, and the qualities needed in career advancement.

Course: SSB07  
Prerequisite: SSB950 and at least one of SSB917 or SSB915  
Credit Points: 12  Contact Hours: 3 per week

### SSB946 COUNSELLING THEORY & PRACTICE 2

Counselling issues and approaches in relation to loss and grief, post-traumatic stress, rehabilitation, drugs
and substance abuse, relationship counselling, separation, sexual abuse, suicide, cultural differences, psychosis; current approaches to counselling including process work, brief psychotherapy, languaging and the construction of problems; group therapy; group counselling; analytic psychotherapy; ethical, social and moral issues in counselling.

Course: SSB07
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: SSB07
Prerequisite: 36 credit points of second level psychology units including SSB005 or SSB913 as one of the units.
Credit Points: 12
Contact Hours: 3 per week

SSB949 INTRODUCTION TO FAMILY THERAPY

Major concepts of systemic theory as applied to families; major models of family therapy eg. structural, strategic, systemic, solution focused; assessment of family structures and dynamics; using therapeutic teams eg. reflecting team; contemporary issues in family work eg. gender, ethnicity, changing family foundations; specific ethical issues eg. confidentiality, record keeping, interaction with other systems, referral management; family dynamics.

Course: SSB07
Prerequisite: SSB008
Credit Points: 12
Contact Hours: 3 per week

SSB950 RESEARCH DESIGN & DATA ANALYSIS

An overview of the scientific method; the use of the null hypothesis; Type I and Type II errors; issues of control; underlying assumptions; basic experimental and non-experimental design; inferential statistics; tests; simple regression; one-way analysis of variance; correlations and correlational analysis, computer-based statistical analysis; introduction to non-parametric analyses including Chi-Square and the analysis of ranked data. Introduction to the use of SAS or SPSS in statistical analysis.

Course: SSB07
Prerequisite: SSB930
Credit Points: 12
Contact Hours: 3 per week

SSB951 ADVANCED STATISTICAL ANALYSIS

A specialist statistical program is taught for the preparation and support of students using quantitative procedures for research; procedures are practised on data available in 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: SSB07
Prerequisite: SSB950
Credit Points: 12
Contact Hours: 3 per week

SSB952 RESEARCH PROJECT

Review of principles in proposal development, hypothesis raising, research design and related analyses; differences between employer reports and academic reports; students will develop and carry out a project capable of report in both 'academic' and 'employer' form and two reports will be required, one for academic purposes and the other for practical and/or employer/consultant advisory purposes.

Course: SSB07
Prerequisites: 60 credit points of second or third year psychology units
Credit Points: 12
Contact Hours: 3 per week

SSB953 SPECIAL TOPIC

Specifically, as determined by the special topic presenter in conjunction with the Head of School; usually at 'third year' level.

Course: SSB07
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: SSB07
Prerequisite: SSB960
Credit Points: 12
Contact Hours: 3 per week

SSB969 SOCIOLOGICAL ANALYSIS

Contemporary forms of theoretical analysis and methodology; the fundamental theoretical tools which underpin different methods of research and analysis.

Course: SSB07
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: SSB07
Prerequisite: SSB960
Credit Points: 12
Contact Hours: 3 per week

SSB971 POLITICAL SOCIOLOGY

Key concepts such as the modern state, participation; democracy; citizenship power; authority; conflicts, and political movements.

Course: SSB07
Prerequisite: SSB960
Credit Points: 12
Contact Hours: 3 per week

SSB980 ADVANCED SOCIOLOGICAL THEORY

Wide range of contemporary sociological theories; current debates and critiques of leading social theorists.

Course: SSB07
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: SSB07
Prerequisite: SSB960
Credit Points: 12
Contact Hours: 3 per week

SSB989 HEALTH & THE LIFE-CYCLE

An examination of changing patterns of individual wellness, illness, and mortality often coinciding with life-cycle changes or 'Rites of Passage'; the social, cultural, anthropological and technological aspects of the pre-birth and post-death phases; analysis of the cyclical process; compared and contrasted with a psychological human developmental approach.

Note: Can be undertaken by students from other Faculties as an elective unit.

Courses: ED26, ED50
Credit Points: 12
Contact Hours: 3 per week
■ SSP001 INTERPERSONAL RELATIONSHIPS IN COUNSELLING
Overview of concepts related to interpersonal relationships; social perception and attribution theory; self-concept and the circular process of social interaction; contemporary models of interpersonal communication; the emotions and their effects on communication; facilitating communication; interpersonal influence; defensiveness; conflict; stress; gender issues.
Course: SS10
Credit Points: 12 Contact Hours: 3 per week

■ SSP004 THEORY & PRACTICE OF COUNSELLING 1
Overview of the counselling process; role of the major theories in counselling; micro-counselling skills; general philosophical assumptions in counselling; humanistic approaches: (client-centred, Gestalt, TA); existential model; a four-day intensive practicum workshop of microskills development is compulsory.
Course: SS10
Credit Points: 12 Contact Hours: 3 per week

■ SSP005 PRACTICUM 2
Advanced skill training workshops; supervised counselling experience involving work with clients; interaction of students and supervisor.
Course: SS10
Prerequisite: SSP004 Co-requisite: SSP007
Credit Points: 8

■ SSP006 COUNSELLING: A SOCIOLOGICAL PERSPECTIVE
Sociological analysis of counselling and the helping process in terms of the functions they serve for society; the nature of helping and the helping process; sociological conceptions of the individual; social control function of helping; medicalisation and professionalisation of helping; the effect of organisation on the helping process.
Course: SS10
Prerequisite: SSP001 Co-requisite: SSP006
Credit Points: 8 Contact Hours: 3 per week

■ SSP007 THEORY & PRACTICE OF COUNSELLING 3
Historical development of psychoanalysis and analytic theory; psychodynamics in counselling practice; hypnosis and conscious phenomena in counselling; scientific credibility of psychoanalytic and analytic psychotherapy; neurosis and psychosis in counselling.
Course: SS10
Prerequisite: SSP004 Co-requisite: SSP007
Credit Points: 12 Contact Hours: 3 per week

■ SSP009 CAREER GUIDANCE & COUNSELLING
Theoretical approaches to career guidance; developmental theory and opportunity structure theories; resources and information for career guidance; career education programs; independent research.
Course: SS10
Credit Points: 8 Contact Hours: 3 per week

■ SSP012 THE COUNSELLOR & THE ORGANISATION
Helping organisations as bureaucracies; organisational response to social change; stress within helping organisations; teamwork among professional helpers; counsellor roles.
Course: SS10
Prerequisite: SSP006
Credit Points: 8 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
Prerequisite: SSP007
Credit Points: 8 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: SS10
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 tachometry; 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; setting out surveys; earthworks computation; elements of cadastral surveying.
Course: IF52, SV34
Prerequisite: SVB121 Co-requisite: SVB211
Credit Points: 13 Contact Hours: 6 per week

■ SVB270 LAND ADMINISTRATION 1
Introduction to elements of law; law relating to land title and registration; crown land administration in Queensland.
Courses: IF52, SV34
Credit Points: 6 Contact Hours: 3 per week
SVB306 SURVEYING
Introductory surveying: instrumental use of level, theodolite, map reading; standard problems in surveying; design and surveying of land contours; data reduction; digital terrain models.

Course: CS52
Credit Points: 4 Contact Hours: 2 per week

SVB311 DATA PRESENTATION 3
Cadastral plan drawing; introduction to cartography; cartographic reproduction; mapping agencies.

Courses: IF52, SV34 Prerequisite: SVB111
Credit Points: 5 Contact Hours: 3 per week

SVB331 OBSERVATIONS & ADJUSTMENTS 1
Review of relevant statistical concepts; theory of observations and of random errors; linear and nonlinear functional models; the stochastic model; the law of propagation of variances; the error ellipse; practical applications.

Courses: IF52, SV34 Co-requisite: MAB795
Prerequisites: MAB495, MAB499
Credit Points: 4 Contact Hours: 2 per week

SVB343 PHOTOGRAMMETRY 1
Introduction to photogrammetry; photogrammetric optics; summary of single photographs; geometry and use of single photographs; geometry and use of stereogram; half-day visit to an aerial survey/mapping organisation.

Courses: IF52, SV34 Prerequisite: PHB170
Credit Points: 6 Contact Hours: 3 per week

SVB352 LAND STUDIES A
Introduction to ecology; conservation of resources; introduction to physical aspects of land; assessment of physical land parameters; land classification; 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, SVB373
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
Reproductive processes; colour systems, colour separation and colour correction; digital mapping techniques; cartographic data structures; geographical surfaces.

Courses: IF52, SV34
Prerequisites: SVB211, SVB311
Credit Points: 5 Contact Hours: 3 per week

SVB430 LAND SURVEYING 4
Primary traversing; classical triangulation; trigonometrical levelling; precise levelling; off-campus field work.

Courses: IF52, SV34 Prerequisite: SVB121
Co-requisites: SVB431, SVB442
Credit Points: 9 Contact Hours: 4 per week

SVB431 OBSERVATIONS & ADJUSTMENTS 2
Introduction to least squares adjustment; standard problems one and two; extensive practical applications to linear and non-linear problems with both univariate data sets.

Courses: IF52, SV34 Prerequisite: SVB331
Credit Points: 4 Contact Hours: 2 per week

SVB442 GEODETIC COMPUTATIONS
Plane coordinate computation; geometrical geodesy; geometry of spheroid, computation on the spheroid; theory of map projections; the transverse mercator and UTM; computations on the Australian Map Grid.

Courses: IF52, SV34 Co-requisite: SVB430
Prerequisites: MAB495, SVB121
Credit Points: 9 Contact Hours: 4 per week

SVB443 PHOTOGRAMMETRY 2
Principles of construction; operation of analogue stereoplotter; aerial triangulation; terrestrial photogrammetry; analytical photogrammetry; half-day visit to an aerial survey/mapping organisation.

Courses: IF52, SV34 Co-requisite: SVB431
Prerequisites: MAB795, SVB343
Credit Points: 11 Contact Hours: 6 per week

SVB451 LAND STUDIES B
Introduction to theory of price; location theory; land economics.

Course: SV34
Credit Points: 5 Contact Hours: 3 per week

SVB470 LAND ADMINISTRATION 2
Introduction to government and public administration; Australian public land administration; private sector land administration.

Courses: IF52, SV34
Credit Points: 4 Contact Hours: 2 per week

SVB473 LAND INFORMATION SYSTEMS 1
Need for a computerised land information system review of cadastral systems; land title systems: the multipurpose cadastre and automation; survey requirements for land information systems; design principles, retrieval techniques.

Courses: IF52, SV34
Prerequisites: CSB294, SVB211, SVB393
Co-requisites: SVB393, SVB573
Credit Points: 5 Contact Hours: 3 per week

SVB535 LAND SURVEYING 5
Hydrographic surveying; topographic surveying.

Courses: IF52, SV34
Prerequisites: MAB495, SVB121, SVB430
Credit Points: 5 Contact Hours: 3 per week

SVB551 LAND VALUATION
Concepts and purposes of valuation; improvements; urban and rural valuation; interest in land; compensation; legislation affecting land valuation; land valuation practice.

Courses: IF52, SV34 Prerequisite: SVB451
Credit Points: 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: CE364, 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
Prerequisites: SVB473 Co-requisite: SVB412
Credit Points: 4 Contact Hours: 2 per week

SVB571 CADASTRE
Complex and modern problems involved in the cadastre.
Course: SV34
Prerequisite: SVB393
Credit Points: 4 Contact Hours: 2 per week

SVB573 LAND ADMINISTRATION 3
Queensland case law; legislation affecting land and the survey of land including the registration of interests in land; and statutory control of land development.
Courses: IF52, SV34
Prerequisites: SVB270
Credit Points: 6 Contact Hours: 3 per week

SVB574 LAND ADMINISTRATION 4
Introduction to rural and urban sociology; social aspects of land administration.
Course: SV34
Credit Points: 4 Contact Hours: 2 per week

SVB634 TOPICS IN ENGINEERING SURVEYING
Network reliability; deformation surveys; subsidence monitoring; precision alignment and distance measurement; jig surveys; high rise buildings.
Course: SV34
Prerequisites: SVB431 Co-requisite: SVB639
Credit Points: 5 Contact Hours: 3 per week

SVB636 LAND SURVEYING 6
Geophysical surveying; mine surveying; field astronomical observation.
Courses: IF52, SV34
Prerequisites: PHB170, SV430
Credit Points: 6 Contact Hours: 3 per week

SVB639 OBSERVATIONS & ADJUSTMENTS 3
Design, pre-analysis and optimisation followed by execution, adjustment and assessment of horizontal (two-dimensional) control networks, traverse and level networks (one-dimensional).
Course: SV34
Prerequisite: SVB431
Credit Points: 4 Contact Hours: 2 per week

SVB640 GEODESY
Introduction to history; definitions; gravity field of earth; level surfaces; spherical harmonics; variations of the gravity field; gravity measurements; geodetic reference systems; datum transformations; satellite geodesy; satellite doppler surveying; global positioning system; inertial surveying systems; geodynamics.
Course: SV34
Co-requisite: SVB639
Credit Points: 6 Contact Hours: 3 per week

SVB643 PHOTOGRAMMETRY 3
Numerical relative and absolute orientation; independent model and bundle methods of block adjustment for triangulation; close-range photogrammetry including nonconventional techniques; analytical plotters including generation, manipulation and storage of digital data; use of micro and mini computers in analytical photogrammetry.
Course: SV34
Prerequisite: SVB443 Co-requisite: SVB431
Credit Points: 5 Contact Hours: 3 per week

SVB645 REMOTE SENSING
Definitions and major systems for remote sensing; characteristic spectral reflectance of objects and spectral response of sensors; remote sensing acquisition hardware; remote sensing satellites; thermography and radar; data processing for presentation and enhancement; cartographic correction of remote sensing data for systematic geometric error.
Courses: EE43, SV34
Prerequisite: SVB343
Credit Points: 5 Contact Hours: 3 per week

SVB664 LAND DEVELOPMENT PRACTICE 2
Preliminaries of development, data assembly, statutory approvals, elements of design, requirements of communication, hydraulic and energy services, development costs, controls of land development schemes; neighbourhood, residential, industrial estate, canal and reclamation estates, commercial and rural development schemes; design of small towns.
Course: SV34
Prerequisites: SVB561, SVB574
Credit Points: 10 Contact Hours: 6 per week

SVB670 LAND ADMINISTRATION 5
Organisation theory; development planning procedures; land development analysis.
Course: SV34
Prerequisites: SVB451, SVB470
Credit Points: 6 Contact Hours: 3 per week

SVB680 PROFESSIONAL PRACTICE
History of surveying and surveyors; the surveyor in relation to statutory authorities, civil, commercial and taxation laws; the surveyor as employer, employee, expert witness; surveyor-client-consultant relationships; professional ethics.
Course: SV34
Prerequisite: SVB470
Credit Points: 6 Contact Hours: 3 per week

SVB682 SEMINAR 2
Preparation and presentation of at least one technical seminar paper in a field germane to surveying.
Courses: IF52, SV34
Prerequisites: SVB282, successful completion of units totalling not less than 85 hours of weekly contact time.
Credit Points: 2 Contact Hours: 1 per week

SVB683 PROJECT
 Undertake and report on an approved project in the field of surveying. Field trips on site or to local firms.
Course: SV34
Prerequisites: Successful completion of units totalling not less than 85 hours of weekly contact time.
Credit Points: 8 Contact Hours: 1 per week

SVB684 MAP PRODUCTION PLANNING
Planning of photogrammetric projects, specifications, control, costs accuracy; critical path method.
Course: SV34
Prerequisites: SVB412, SVB443
Credit Points: 5 Contact Hours: 3 per week

SVB685 PROJECT
 Undertaking of a substantial mapping project utilising knowledge gained in photogrammetric, traditional and computer-assisted methods. The project may be topographic or thematic.
Course: SV34
Prerequisites: SVB311, SVB412
Co-requisite: SVB443
Credit Points: 16 Contact Hours: 4 per week
SVB688 PROFESSIONAL PRACTICE A
Preparing surveyors for professional practice either as employer or employee.
Course: IF51, IF52
Prerequisites: Successful completion of units totalling not less than 100 hours of weekly contact time including SVB573.
Credit Points: 4 Contact Hours: 2 per week

SVB694 GEODESY 2
Review of matrices, the Jacobian matrix, orthogonal matrices; transformations, coordinate transformations; rotations in three dimensions, euler angles, datum transformations, the development of datums.
Course: SV34
Co-requisite: SVB640
Credit Points: 5 Contact Hours: 3 per week

SVB911 GRAPHIC DESIGN 1
Perception, development of awareness, a broad-based approach to design, including graphics, film, fabrics, industrial design. Sketching in pencil from nature, cast and other areas. Development of tones and textures using various media.
Course: SV34
Credit Points: 10 Contact Hours: 5 per week

SVB912 GRAPHIC DESIGN 2
Identification and statement of design problems and solutions; conceptualising in design; the study of colour; the abstract tools of design; composition, perspective, projections and layout.
Course: SV34
Prerequisite: SVB911
Credit Points: 9 Contact Hours: 4 per week

SVT443 PHOTOGRAMMETRY 3
The operation of stereoplotting instruments; aerial triangulation; compilation of maps.
Course: SV24
Prerequisite: SVT343
Credit Points: 8 Contact Hours: 3 per week

SVT623 PROJECT MAPPING
The role of government and the private sector in project mapping; planning mapping projects.
Course: SV24
Prerequisites: SVT343, SVT443
Credit Points: 4 Contact Hours: 1.5 per week

SVT642 MAP PROJECTIONS 1
Special trigonometry and its application to map projections; projections using a sphere as reference surface.
Course: SV24
Prerequisite: SVT115
Credit Points: 8 Contact Hours: 3 per week

SVT742 MAP PROJECTIONS 2
Geodesy: geometry of ellipse and ellipsoid; gravity; geodesy in mapping; the traverse mercator projection, UTM and the Australian Map Grid; computations: geographic to grid and vice versa.
Course: SV24
Prerequisite: SVT642
Credit Points: 8 Contact Hours: 3 per week

SVT826 CARTOGRAPHIC ADMINISTRATION
Government and public administration; theory of organisations and its application to mapping agencies.
Course: SV24
Credit Points: 8 Contact Hours: 3 per week

SVT915 CARTOGRAPHY 3
Economics of standard mapping, sheet sizes, map specifications, map accuracy; use of orthophotos; thematic mapping; special cartographic techniques.
Course: SV24
Prerequisite: SVT815
Credit Points: 8 Contact Hours: 3 per week

SVT916 CARTOGRAPHY 4
Digital methods in cartography; compilation of data for computer-assisted cartography; coordinate systems and digitising; methods of display.
Course: SV24
Prerequisites: SVT315, SVT991
Credit Points: 8 Contact Hours: 3 per week

SVT945 REMOTE SENSING
Remote sensing; data and information; electromagnetic propagation; spectral sensitivity and response; remote sensing imagery.
Course: SV24
Prerequisite: SVT343
Credit Points: 8 Contact Hours: 3 per week

SVT992 COMPUTER GRAPHICS 2
Data for computer-assisted mapping; programming techniques for automated drafting; HP graphics language for driving plotters.
Course: SV24
Prerequisites: SVT315, SVT991
Credit Points: 8 Contact Hours: 3 per week
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QUT Campus Maps
**Parking: University statutes apply**

- **Accessible parking**
- **Visiting staff parking**
- **Coin operated parking meter**

**Staff permit parking:**
- Car parks 3 and 7

**Visitor permit parking:**
- Car park 6

**Student permit parking:**
- Car parks 1, 2, 4, 5 and 6

Parking permits and enquiries:
- Campus Administration, C block

- **Taxi pickup**