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

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<tr>
<th>Code</th>
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Level Indicators

X = Certificate, Associate Diploma, Associate Degrees, Diploma
B = Degree
P = Graduate Diploma
N = Masters Degree
R = Doctoral
A = Associate Diploma
T = Associate Diploma in Engineering*
S = Special Units

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

Prerequisite and Co-requisite Units

For definitions of the terms prerequisite and co-requisite unit(s), refer to Rule 1.8.2 of the Student Rules, Policies and Procedures in this Handbook.
Students undertake a substantial piece of supervised research after academic advisement. This might include:

- **AAB001 RESEARCH PROJECT**
  - Course: AA40
  - Credit Points: 12
  - Contact Hours: 48

- **AAB002 GRADUATE SEMINAR**
  - Seminar series involving postgraduate students, staff and visiting experts in the cross-fertilisation of ideas and research in the arts. The seminars aim to foster a culture which shares and debates research findings and perceptions about the arts.
  - Course: AA40
  - Credit Points: 12
  - Contact Hours: 2 per week

- **AAB004 CONTEMPORARY AESTHETIC DEBATES**
  - Introduction to modern aesthetic debates that inform contemporary art practice. The unit addresses philosophical discourse on art from Kant to postmodern theories.
  - Course: AA40
  - Credit Points: 12
  - Contact Hours: 3 per week

- **AAB005 READINGS IN VISUAL ARTS**
  - This unit concentrates on developing critical and analytical skills in reading and writing about the visual arts. It focuses on critical art-historical writings since 1968.
  - Course: AA40
  - Credit Points: 12
  - Contact Hours: 3 per week

- **AAB006 FEMINIST STUDIES IN THE ARTS**
  - Students will develop an understanding of historical and current feminist theory and will read and analyse art from feminist perspectives.
  - Course: AA40
  - Credit Points: 12
  - Contact Hours: 3 per week

- **AAB051 ARTS IN SOCIETY**
  - Contemporary and historical perspectives on the relation between art and society. Relevant themes and theories include fine art, modernism and the avant-garde, craft and utilitarianism, art and politics, representation and sexuality, patronage and institutions, cultural studies, postmodernism, art and technological change and cross-cultural encounters. A purpose-designed CD-ROM focusing across Australian arts exemplifies the lecture series.
  - Course: AA11, AA21, AA51, AA71, AA81, HU20, SS07 (M&J course code)
  - Credit Points: 12
  - Contact Hours: 3 per week

- **AAB053 GENDER ISSUES IN THE VISUAL AND PERFORMING ARTS**
  - This unit introduces students to the ways in which the arts challenge and disrupt society. Relevant themes and theories include fine art, modernism, the avant-garde, craft and utilitarianism, art and politics, representation and sexuality, patronage and institutions, cultural studies, postmodernism, art and technological change and cross-cultural encounters. A purpose-designed CD-ROM focusing across Australian arts exemplifies the lecture series.
  - Course: AA11, AA21, AA51, AA71, AA81, HU20, SS07 (M&J course code)
  - Credit Points: 12
  - Contact Hours: 3 per week

- **AAB055 PROFESSIONAL PRACTICE**
  - Through secondment to professional organisations, final year students gain insights into the practical application of their course work. Access to this unit is reserved for students who have demonstrated an outstanding level of self-directed learning and a high level of requisite skills.
  - Course: AA11, AA21, AA51, AA71
  - Prerequisite: High achievement in major study area
  - Credit Points: 12
  - Contact Hours: 3 per week

- **AAB056 PROFESSIONAL STUDIES**
  - Through secondment to professional organisations, final year students gain insights into the practical application of their course work.
  - Course: AA11, AA21, AA51, AA71
  - Prerequisite: High achievement in major study area
  - Credit Points: 12
  - Contact Hours: 3 per week

**AAB057 INDEPENDENT STUDY**
- With the approval of the Unit Coordinator, the student constructs and executes a project in an area of their own choice. The project may be theoretical in the field of scholarship, practical intensive discipline work or experimental. Access to this unit is reserved for students who have demonstrated an outstanding level of self-directed learning and a high level of requisite skills.
  - Course: AA11, AA21, AA51, AA71
  - Prerequisite: High achievement in major area of study
  - Credit Points: 12

**AAB058 ARTS RESEARCH**
- An introduction to current research methods and approaches in the arts, the unit addresses the issues of the status of the observer and the nature of validation in research. This unit is a prerequisite for entry to Honours.
  - Course: AA11, AA21, AA51, AA71
  - Credit Points: 12
  - Contact Hours: 3 per week

**AAB059 HYBRID ARTS PROJECT**
- With the approval of the Unit Coordinator, students may develop group cross-disciplinary projects or participate in a scheduled cross-disciplinary arts project. Approved or scheduled projects will develop new work in a workshop environment and lead to appropriate presentation.
  - Course: AA11, AA21, AA51, AA71
  - Prerequisite: Notable achievement in major area of study
  - Credit Points: 12

**AAB060 APPLIED RESEARCH METHODOLOGIES**
- Students apply learning and understandings of arts research methods to their own identified areas of significance. The unit includes research proposal, literature review, conceptual frameworks, methodology, data collection and analysis and report publishing.
  - Course: AA11, AA21, AA51, AA71
  - Credit Points: 12
  - Contact Hours: 3 per week

**AAB061 ARTS BUSINESS MANAGEMENT**
- An introduction to management techniques within the Australian arts environment, including company structures, cultural policy, strategic management and leadership in the arts, legal, ethical, economical and social requirements of arts, boards, entrepreneurial activity.
  - Course: AA11, AA21, AA51, AA71
  - Credit Points: 12
  - Contact Hours: 3 per week

**AAB062 ARTS EVENT PROMOTION AND PUBLIC RELATIONS**
- The roles of publicist, promotion officer, marketing manager and public relations manager in arts organisations. Sponsorship, fundraising programs, management drives, Planning the promotional and public relations campaign.
  - Course: AA11, AA21, AA51, AA71
  - Credit Points: 12
  - Contact Hours: 3 per week

**AAB100 COMPOSITION 1**
- Introduction to improvisation and choreographic devices, exploration of the fundamental concepts of time, space and energy Experimentation in the use of dance to express ideas.
  - Course: AA11
  - Credit Points: 12
  - Contact Hours: 3 per week

**AAB104 MUSIC**
- Elements of music: beat, accent, rhythm and phrasing; nineteenth and twentieth century musical styles; notation, score reading, vocal and improvisation studies.
  - Course: AA11
  - Credit Points: 12
  - Contact Hours: 3 per week
Course: AA11  
Credit Points: 12  
Contact Hours: 3 per week

- **AAB106 DANCE ANALYSIS & HISTORY 2**  
  Introduction to the analysis of dance through a concentration on the dance as text; a study of various historical contexts of dance as art. Focus on modern dance.  
  Course: AA11  
  Prerequisite: AAB125  
  Credit Points: 12  
  Contact Hours: 3 per week

- **AAB109 PRACTICUM**  
  Consolidation of the student's knowledge and skills in direct artistic experience in real contexts.  
  Course: AA11  
  Credit Points: 12

- **AAB112 HISTORY OF AUSTRALIAN THEATRE DANCE**  
  A study of the development of dance as an art form in Australia in the twentieth century.  
  Course: AA11  
  Credit Points: 12  
  Contact Hours: 3 per week

- **AAB114 DANCE IN AUSTRALIAN SOCIETY**  
  The ritual, artistic and social functions of dance in contemporary Australian society.  
  Course: AA11  
  Credit Points: 12  
  Contact Hours: 3 per week

- **AAB116 DANCE IN THE COMMUNITY**  
  Identifying community groups and issues; functions and benefits of dance in the community; political and social role of the dance artist; philosophy and practice of community arts in Australia; funding and planning procedures; adaptation of dance skills.  
  Course: AA11  
  Credit Points: 12  
  Contact Hours: 3 per week

- **AAB117 DANCE IN EDUCATION**  
  Introduction to the philosophy and practice of dance education, particularly the areas of performance, choreography and appreciation. Appropriate for students planning a career in either primary or secondary education sectors.  
  Course: AA11  
  Credit Points: 12  
  Contact Hours: 3 per week

- **AAB121 CONTEMPORARY TECHNIQUE 1**  
  Designated Unit. The basic contemporary dance vocabulary; study of Graham, Cunningham or Limon Technique; reference to development of strength, flexibility and placement of spine and limbs; basic combinations of movements; analysis of dance sequences (year-long unit)  
  Course: AA11  
  Credit Points: 12  
  Contact Hours: 7.5 per week

- **AAB122 CONTEMPORARY TECHNIQUE 2**  
  Designated Unit. Technical work: off-balance turns and rapid changes of weight, level and direction; exploration of rhythm; emphasis on performance of sequence work (year-long unit)  
  Course: AA11  
  Prerequisite: AAB121  
  Credit Points: 12  
  Contact Hours: 7.5 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

- **AAB155 ADVANCED ANALYSIS: BALLET**  
  Development of students' skills in the aesthetic appreciation and analysis of masterworks of dance. Content includes a review of elements and principles of dance analysis: Classicism; Romanticism; choreographic processes in ballet.  
  Course: AA11  
  Prerequisite: AAB106  
  Credit Points: 12  
  Contact Hours: 2 per week

- **AAB156 ADVANCED ANALYSIS: MODERN**  
  Development of students' skills in the aesthetic appreciation and analysis of masterworks of dance. Content includes evaluating and interpreting the dance, review of dance language, aesthetic theories and styles in dance.  
  Course: AA11  
  Prerequisite: AAB106  
  Credit Points: 12  
  Contact Hours: 2 per week

- **AAB157 ADVANCED ANALYSIS: COMPARATIVE**  
  The skills involved in the aesthetic appreciation and analysis of the masterworks of ballet or modern/contemporary dance used to engage in a comparison of features of specific dances chosen for detailed study.  
  Course: AA11  
  Prerequisites: AAB155, AAB156  
  Credit Points: 12  
  Contact Hours: 1 per week

- **AAB158 ADVANCED COMPOSITION 1**  
  Exploration of how dance creates meaning: the aesthetic questions that have emerged out of the last major choreographic movement; an exploration of possible future directions.  
  Course: AA11  
  Corequisite: AAB155  
  Credit Points: 12  
  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  
  Corequisite: AAB156  
  Credit Points: 12  
  Contact Hours: 5 per week

- **AAB165 COMPOSITION 2**  
  Extends the students' dance composition knowledge and skills and provides opportunity for choreographic experimentation. Focus on movement, content and form. Music, costume and lighting will be considered in relationship to developing the work for performance (year-long unit).  
  Course: AA11  
  Prerequisite: AAB100  
  Credit Points: 12  
  Contact Hours: 1.5 per week

- **AAB166 BALLET TECHNIQUE AND KINESIOLOGY**  
  Designated unit. Consolidation of the fundamental technique and its applications designed to reinforce and develop an appropriate range of technical skills within the four-tier practical level system. Study of anatomical structures and systems and the practical application injury prevention and management techniques (year-long unit).  
  Course: AA11  
  Credit Points: 12  
  Contact Hours: 6 per week

- **AAB167 BALLET TECHNIQUE AND ALIGNMENT**  
  Designated unit. Designed to expand students' understanding of the basic principles of ballet technique and to provide an awareness of alignment principles and alternative body philosophies (year-long unit).  
  Course: AA11  
  Prerequisite: AAB166  
  Credit Points: 12  
  Contact Hours: 6 per week

- **AAB168 PERFORMANCE STUDIES 1**  
  Development of outstanding practical skills in a variety of dance styles and exploration of the ways the performer provides a resource for the choreographer. Repertoire and the processes involved in the learning, rehearsing and performing of different styles of choreographic work.  
  Course: AA11  
  Credit Points: 12  
  Contact Hours: 3 per week
Synthesis of the artform; incorporation of all elements of study, culminating in public performances.

Credit Points:
Course: AAB199 PERFORMANCE STUDIES
Further development of skills in both technical and artistic expression aligned with the exploration of the rehearsal and performing work ethic.
Course: AAB199 Credit Points: 12 Contact Hours: 3 per week

AAB170 PERFORMANCE STUDIES 3
Synthesis of the artform; incorporation of all elements of study, culminating in public performances.
Course: AAB170 Credit Points: 12 Contact Hours: 3 per week

AAB171 DANCE STYLES 1
Jazz and tap styles - essential steps and various combinations.
Course: AAB171 Credit Points: 12 Contact Hours: 3 per week

AAB172 DANCE STYLES 2
Folk dance and musical theatre. Various dances specific to different areas of the world; skills required in the presentation of musical theatre.
Course: AAB172 Credit Points: 12 Contact Hours: 3 per week

AAB173 ADVANCED PERFORMANCE 1
Development of outstanding practical skills combining the use of aesthetic quality and artistry.
Course: AAB173 Credit Points: 12

AAB174 ADVANCED PERFORMANCE 2
The dancer's responsibilities to the choreographer and fellow dancers, and approach to the rehearsal situation. Classes include point, repertoire, character, pas de deux, musical theatre.
Course: AAB174 Credit Points: 12

AAB175 FOLK DANCE
Historical and cultural contexts; study of the wider aspects of folk dance (costume, music, ideology); steps and sequences from a wide range of folk dances.
Course: AAB175 Credit Points: 12 Contact Hours: 3 per week

AAB176 JAZZ AND POPULAR DANCE
History and sociology of jazz and popular dances; examination of dance in musical theatre and other commercial contexts; basic technique and steps in a range of jazz and popular dance styles.
Course: AAB176 Credit Points: 12 Contact Hours: 3 per week

AAB177 PRODUCTION TECHNIQUES
Introduction to the mechanics of theatre productions, the personnel and tasks. Lighting, sound, costume.
Course: AAB177 Credit Points: 12 Contact Hours: 3 per week

AAB202 ACTING 1
Designated unit. Fundamentals of theatre and the acting process. Workshop activities including improvisation and exercises which focus on the elements of dramatic form and the acting process.
Course: AAB202 Credit Points: 12 Contact Hours: 3 per week

AAB203 ACTING 2
Designated unit. Introduction to text-based performance; the naturalistic style of acting, the foundation for stage, film and television; textual analysis, personal research in role preparation; efficient use of rehearsal time.
Course: AAB203 Credit Points: 12 Contact Hours: 3 per week

AAB204 VOICE AND MOVEMENT 1
Introduction to a holistic approach to body and voice and their integration as the basis for all forms of dramatic expression.
Course: AAB204 Credit Points: 12 Contact Hours: 6 per week

AAB205 VOICE AND MOVEMENT 2
Continuation of developing an understanding of the concepts and skills required for a career as a professional performer. Text work, advanced voice and body training, strength and stamina, flexibility, fluency, expressiveness.
Course: AAB205 Credit Points: 12 Contact Hours: 6 per week

AAB206 ELEMENTS OF DRAMA
Development of an understanding of drama theory and practice, and of their interrelation through an introduction to the basic elements of dramatic performance such as space, performer, audience, language, rhythm, action.
Course: AAB206 Credit Points: 12 Contact Hours: 3 per week

AAB214 PROCESS DRAMA
Workshops involving individual, face-to-face and group role play; participant enrolment, leader-in-role and intervention; identification with role; negotiation, devising and consequent decision-making; dramatic tension and resolution; structuring for the theme and for the dramatic moment; distancing devices; reflection, re-enactment and remaking.
Courses: AAB214, EDS0
Credit Points: 12 Contact Hours: 3 per week

AAB216 PLAYWRITING
An introduction to writing text for performance and appraising scripts; the main qualities of dramatic writing are identified; the working environment for dramatic writers in Australia is considered.
Course: AAB216 Credit Points: 12 Contact Hours: 3 per week

AAB233 VOICE AND MOVEMENT 3
This unit moves from naturalism to the area of heightened language. Focus is on the technical devices of Shakespearean text. Work developed will be performed both on the stage and for camera.
Course: AAB233 Credit Points: 12 Contact Hours: 6 per week

AAB234 VOICE AND MOVEMENT 4
Development of a vocal and physical technique that supports and serves the professional performer. Advanced classes in physical theatre will develop physical expressiveness, clarity and strength. Advanced studio work continues development in film and television techniques.
Course: AAB234 Credit Points: 12 Contact Hours: 6 per week

AAB235 VOICE AND MOVEMENT 5
Application of acting skills involving voice and movement is consolidated in production situations. Students are prepared for auditions for directors and agents.
Course: AAB235 Credit Points: 12 Contact Hours: 6 per week

AAB247 ACTING 3
Designated unit. Exploration of non-naturalistic style of text and performance. Development of more specific acting skills and deeper textual understanding necessary to perform Shakespearean text, on the stage and for film and television.
Course: AAB247 Credit Points: 12 Contact Hours: 6 per week

AAB248 ACTING 4
Designated unit. Advanced unit dealing with role, character creation and playing a range of theatrical styles.
Professional text preparation, rehearsal management and audition techniques.

Course: AA21  
Prerequisites: AAB247  
Credit Points: 12  
Contact Hours: 20 per week

- AAB251 STUDIES IN THEATRE HISTORY 1
  
  The first in a series of three Theatre History units, this examines the three major theatre movements: Realism, Epic Theatre and The Theatre of the Avant Garde.
  
  Course: AA21  
  Credit Points: 12  
  Contact Hours: 3 per week

- AAB252 STUDIES IN THEATRE HISTORY 2
  
  Explores theatre genres where structure has played a major role. Heightened and stylised language, music, theatre, spectacle and multimedia.
  
  Course: AA21  
  Credit Points: 12  
  Contact Hours: 3 per week

- AAB253 STUDIES IN THEATRE HISTORY 3
  
  Draws on the understandings developed in the previous Theatre History units and relates them to the development of Australian performance idioms. Indigenous Australian performance; post-colonial and intercultural drama; fusing traditional and contemporary form to create Australian content for the global market.
  
  Course: AA21  
  Credit Points: 12  
  Contact Hours: 3 per week

- AAB254 MUSIC AND DANCE
  
  Origins of music, music and the body, rhythm, ear training. Periods and styles of music and improvisation. Individual vocal coaching in preparation for performance. Posture and alignment of the body, introduction to basic technical principles in traditional and contemporary dance technique and dance sequences (year-long unit).
  
  Course: AA21  
  Prerequisite: AAB265 or by audition  
  Credit Points: 24  
  Contact Hours: 3 per week

- AAB255 THEATRE PRODUCTION 1
  
  Students participate in a season of semi-professional performance projects. Acting students work as an ensemble in roles for video and theatre. Technical students work in a range of organisation and technical roles.
  
  Course: AA21  
  Prerequisite: AAB248 or AAB294  
  Credit Points: 24  
  Contact Hours: 3 per week

- AAB256 THEATRE PRODUCTION 2
  
  Students participate in a season of professional performance projects. The season gives the students the opportunity to demonstrate their skills to potential employers in the industry.
  
  Course: AA21  
  Prerequisite: AAB248 or AAB294  
  Credit Points: 36

- AAB257 ACTING STUDIES 1
  
  Students are introduced to the work of Stanislavski and a number of his key interpreters including Cohen, Benedetti, Hagen, Adler and Moore. A range of acting styles is explored including an examination of Brecht's theories of performance.
  
  Course: AA21  
  Credit Points: 12  
  Contact Hours: 3 per week

- AAB258 ACTING STUDIES 2
  
  Introduction to methods of script analysis and style analysis appropriate for a practical exploration of Shakespearean play texts. Students explore and rehearse selected scenes from a number of Shakespeare's plays.
  
  Course: AA21  
  Credit Points: 12  
  Contact Hours: 3 per week

- AAB259 THE PERFORMANCE INSTRUMENT: BODY AND VOICE
  
  Understanding vocal and physical patterns; application of integrated approach to body and voice in personal expression.
  
  Course: AA21  
  Credit Points: 12  
  Contact Hours: 3 per week

Course: AA21
Credit Points: 12  
Contact Hours: 4 per week

- 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

- AAB263 ARTS MARKETING
  
  General principles of marketing; the marketing plan; applications in the arts; planning, research and analysis, targeting, costing and presenting to the client.
  
  Course: AA21  
  Credit Points: 12  
  Contact Hours: 3 per week

- AAB266 ARTS EVENTS PLANNING
  
  Researching and producing either strategic, operational or human resource management plans; confronting practical and philosophical issues in arts planning.
  
  Course: AA21  
  Credit Points: 12  
  Contact Hours: 3 per week

- AAB271 STUDIES IN DIRECTING
  
  History of the development of the role of the director; theoretical study of key major directors in West European tradition as well as key Australian directors. Practical work includes rehearsal techniques and problem-solving exercises.
  
  Course: AA21  
  Credit Points: 12  
  Contact Hours: 3 per week

- AAB272 DRAMA AND COMMUNITY CULTURAL DEVELOPMENT
  
  Examination of drama's role in the life of the Australian community. Interrogation of the concepts of community, culture and development; cultural development and its relationship to art and the new technologies.
  
  Course: AA21  
  Credit Points: 12  
  Contact Hours: 3 per week

- AAB273 PERFORMANCE
  
  Introduction to a clearly defined rehearsal ethic through extended performance project. Text analysis, formal group discussion, role creation and rehearsal, live performance of a scripted drama before an audience.
  
  Course: AA21  
  Prerequisite: AAB294  
  Credit Points: 12  
  Contact Hours: 3 per week

- AAB274 THEATRECRAFT
  
  Development of practical skills in workshop construction and pre-production areas of stage scenery, props and costumes.
  
  Course: AA21  
  Credit Points: 12  
  Contact Hours: 6 per week

- AAB275 READING PERFORMANCE
  
  Theories of analysis: script to performance, semiotics, hermeneutics, reception studies, anthropology, phenomenology; theatrical actions and reactions, feminist studies. Objects of analysis include the classics, video/film, musicals, dance theatre, installations, stand-up comedy, opera, hybrid art forms and street theatre.
  
  Course: AA21  
  Credit Points: 12  
  Contact Hours: 3 per week

- AAB276 VISUAL THEATRE
  
  Role of visual expression in theatrical events; elements of space; approaches to researching design elements; bearing of text and resources on events; Western and Eastern influences.
  
  Course: AA21  
  Credit Points: 12  
  Contact Hours: 3 per week
AAB277 PHYSICAL THEATRE
Exercises and improvisation relating to physical performance; skills in circus, street theatre, popular theatre and acrobatic techniques. The practical components are contextualized by readings and discussions of the work of physical theatre exponents.
Course: AA21 Prerequisite: audition/interview
Credit Points: 12 Contact Hours: 3 per week

AAB278 TECHNICAL THEATRE
Introductory technical knowledge and skills in theatrical lighting and sound operation necessary to stage a production in a small theatre with a minimum of support staff.
Course: AA21
Credit Points: 12 Contact Hours: 3 per week

AAB279 THEATRE FOR YOUNG PEOPLE
Youth theatre, young people’s theatre, theatre in education and community theatre. Strategies for working with young people that take account of contemporary cultural currents; incorporated use of tools such as electronic media to focus on young people’s cultural consumption and production.
Course: AA21, ED250
Credit Points: 12 Contact Hours: 5 per week

AAB280 DRAMA AS SOCIAL ACTION
Combination of practical and theoretical investigation into the process of improvisation and the way drama can be used as a tool for critical enquiry and social change. Provides basis for further work in writing for performance and advanced improvisational skills.
Course: AA21, ED22, ED50 Prerequisite: AAB214
Credit Points: 12 Contact Hours: 3 per week

AAB281 DIRECTING FOR THEATRE
Analysis of the director’s role in production management including play selection, resource auditing, pre-production analyses, time, budget and resource planning, design, technical effects, promotion and publicity and the responsibilities of health, safety and ethical issues.
Course: AA21
Credit Points: 12 Contact Hours: 3 per week

AAB282 WRITING FOR PERFORMANCE
Exercises in aspects of writing performance text; evaluation of a piece of new writing; the generation, polishing and formatting of original performance text; acting as dramaturge in the development of the text of a fellow student.
Course: AA21
Credit Points: 12 Contact Hours: 4 per week

AAB289 TECHNICAL PRODUCTION 1
Development of basic skills in theatrical lighting and sound operation and their integration into the overall production process.
Course: AA21 Prerequisite: AAB202
Credit Points: 12 Contact Hours: 6 per week

AAB290 TECHNICAL PRODUCTION 2
Continuation of creative use of lighting and sound in performances. Introduction to lighting and sound design.
Course: AA21 Prerequisite: AAB289
Credit Points: 12 Contact Hours: 6 per week

AAB291 TECHNICAL PRODUCTION 3
Broadening of skills base in areas of lighting and sound into drama, contemporary dance, ballet, opera, musicals, concerts and television productions.
Course: AA21 Prerequisite: AAB290
Credit Points: 12 Contact Hours: 21 per week

AAB292 STAGE AND TECHNICAL MANAGEMENT 1
Introduction to coordination of a live theatre production including theatre layout and terminology, role of the stage manager, duties and responsibilities from pre-rehearsal to close of season, communication procedures, rehearsal room procedures.
Course: AA21
Credit Points: 12 Contact Hours: 4 per week

AAB293 STAGE AND TECHNICAL MANAGEMENT 2
Introduction to the management issues in areas of stage mechanics, flying, props and wardrobe and preparation of students to undertake performance crew roles in these departments.
Course: AA21 Prerequisite: AAB292
Credit Points: 12 Contact Hours: 4 per week

AAB294 STAGE AND TECHNICAL MANAGEMENT 3
Broadening the skills base for stage managers into opera, ballet, modern dance, concerts and television, including the responsibilities of production management.
Course: AA21 Prerequisite: AAB293
Credit Points: 12 Contact Hours: 4 per week

AAB304 FORMING KNOWLEDGE
The approaches to art taken by major aestheticians; the characteristics and significance of the aesthetic field; the way the arts contribute to the development of mind and knowledge; modes of knowing, propositional knowledge and tacit understanding.
Courses: AA21, ED54
Credit Points: 12 Contact Hours: 3 per week

AAB410 ART CURRICULUM DESIGN & DEVELOPMENT
Major art curriculum approaches as found in the literature and a variety of art syllabus support documents. Analysis of art curriculum planning models; design and development of art programs for schools; production of art resources to support curriculum.
Course: ED26
Credit Points: 12 Contact Hours: 3 per week

AAB411 DRAMA ACROSS THE CURRICULUM
Process models of drama applied to curriculum; drama methods, dramatic contexts and power in the classroom; content analysis and planning; implementation of lesson sequence based on dramatic action; preparation of curriculum materials. Compulsory study school for external students.
Course: ED26
Credit Points: 12 Contact Hours: 3 per week

AAB412 ART CURRICULUM STUDIES 1
Students develop planning and teaching skills in selected curriculum areas. Content includes: the nature of the curriculum area/discipline; its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
Course: ED50, ED54
Credit Points: 48 credit points in each relevant discipline area.

AAB413 ART CURRICULUM STUDIES 2
Extends AAB412; curriculum development within the context of contemporary policies, frameworks and agencies; principles of measurement, assessment and evaluation; teaching and learning strategies; directions in curriculum development.
Course: ED50, ED54 Prerequisite: AAB412
Credit Points: 12 Contact Hours: 3 per week
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Prerequisite</th>
<th>Credit Points</th>
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<tr>
<td>AAB414</td>
<td>DRAMA CURRICULUM STUDIES 1</td>
<td>Students develop planning and teaching skills in</td>
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<td>selected curriculum areas; the nature of the</td>
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<td>curriculum area/discipline and its role and</td>
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<td>contribution as a medium for education;</td>
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<td>introduction to relevant syllabuses and</td>
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<td>curriculum documents; lesson and curriculum unit</td>
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<td>planning activities; and teaching strategies</td>
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<td>designed to promote a range of learning</td>
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<td>experiences in selected curriculum areas.</td>
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<td>Course: ED50, ED54</td>
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<td>AAB415</td>
<td>DRAMA CURRICULUM STUDIES 2</td>
<td>Extends AAB414; curriculum development within the</td>
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<td>context of contemporary policies, frameworks and</td>
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<td>directions in curriculum development.</td>
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<td>Course: ED50, ED54</td>
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<td>AAB421</td>
<td>FOUNDATION ART STUDIES</td>
<td>Participation in the process of solving broad-</td>
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<td>ranging visual problems through developing ideas,</td>
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<td>recording information and forming solutions to</td>
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<td>visual problems; seeks to develop genuine enquiry</td>
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<td>and the attainment of appropriate levels of</td>
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<td>competence of techniques; materials and resources</td>
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<td>to bring ideas to fruition.</td>
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<td>Course: ED50</td>
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<td>Contact Hours: 4 per week</td>
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<td>AAB447</td>
<td>DRAWING</td>
<td>Examination of established systems of drawing by</td>
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<td>3 per week</td>
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<td>historical reference and exploration of materials; methods</td>
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<td>by which shape and volume can be determined by</td>
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<td>drawing techniques; the fine as a means of</td>
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<td>expression and communication; methods and</td>
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<td>techniques for creating solid form by the use of</td>
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<td>various media; perspective; rendering; perceptual</td>
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<td>organisation and expressive effects; use of</td>
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<td>drawing for teachers who require visual</td>
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<td>expression and delineation within their areas.</td>
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<td>Courses: AA71, ED22, ED26, ED50</td>
<td>Credit Points:</td>
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<td>Contact Hours: 3 per week</td>
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<tr>
<td>AAB474</td>
<td>EDUCATIONAL DRAMA</td>
<td>Not offered in 1996. Practical introduction to</td>
<td>12</td>
<td>3 per week</td>
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<td>educational drama techniques; teacher-in-role,</td>
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<td>enrolment of students, dramatic exercises, analogies, simulations; fieldwork project; planning, teaching and evaluating a simple program. Incompatible with tertiary studies in drama or substantial experience in teaching drama.</td>
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<td>Course: ED26</td>
<td>Credit Points:</td>
<td>3 per week</td>
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<td>Contact Hours: 3 per week</td>
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<td>AAB455</td>
<td>COMPUTER GRAPHICS</td>
<td>An introduction to 2D and 3D image generation,</td>
<td>12</td>
<td>3 per week</td>
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<td>manipulation and output through the critical study</td>
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<td>of systems, software, procedures and</td>
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<td>applications. Students develop a core understanding</td>
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<td>of the current characteristics and</td>
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<td>potentialities embedded in the technology.</td>
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<td>Courses: AA71, ED22, ED26, ED5</td>
<td>Credit Points:</td>
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<td>Contact Hours: 3 per week</td>
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<td>AAB457</td>
<td>SCULPTURE</td>
<td>Students will be expected to observe, question,</td>
<td>12</td>
<td>3 per week</td>
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<td>and explore issues to reach solutions that will</td>
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<td>reflect an individual imagination. Knowledge and</td>
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<td>skills that apply to sculpture will be pursued.</td>
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<td>Courses: AA71, ED22, ED26, ED50, ED51, ED52</td>
<td>Credit Points:</td>
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<td>Contact Hours: 3 per week</td>
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<td>AAB601</td>
<td>MUSICIANSHP 1</td>
<td>Reading skills acquired by the study of material in</td>
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<td>3 per week</td>
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<td>a variety of harmonic contexts. Keyboard skills:</td>
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<td>extension of existing skills by application of</td>
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<td>scales, intervals, chord formation in sight reading, accompanying and improvisation at the keyboard (year-long unit).</td>
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<td>Course: AA51</td>
<td>Credit Points:</td>
<td>12 per week</td>
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<td>Contact Hours: 2 per week</td>
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<tr>
<td>AAB602</td>
<td>MUSICIANSHP 2</td>
<td>Continuation of AAB601 with emphasis on developing</td>
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<td>2 per week</td>
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<td>a heightened awareness of the musical structure,</td>
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<td>organisation and quality of sound (year-long unit).</td>
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<td>Course: AA51</td>
<td>Credit Points:</td>
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<td>Contact Hours: 2 per week</td>
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<td>AAB604</td>
<td>WRITING TECHNIQUES 1</td>
<td>A focus on diatonic harmony using written exercises</td>
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<td>2 per week</td>
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<td>and original compositions. Content includes melody writing, four-part vocal score, short pieces for piano, cycle of fifths and choral cadences, introductory jazz harmony and the use of computers for music writing (year-long unit).</td>
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<td>Course: AA51</td>
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<tr>
<td>AAB605</td>
<td>WRITING TECHNIQUES 2</td>
<td>A focus on chromatic harmony and twentieth century techniques through written exercises and original composition (year-long unit).</td>
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<td>Course: AA51</td>
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<td>Contact Hours: 2 per week</td>
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<td>AAB606</td>
<td>PRINCIPAL STUDIES 1</td>
<td>Designated unit. Development of strong and</td>
<td>24</td>
<td>4 per week</td>
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<td>reliable technique on a chief practical instrument, voice or composition. Analysis, interpretation and performance skills and appropriate public presentation in performance. Improvisation (Jazz and Popular Music students only) (year-long unit).</td>
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<td>Course: AA51</td>
<td>Credit Points:</td>
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<td>Contact Hours: 4 per week</td>
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<tr>
<td>AAB607</td>
<td>PRINCIPAL STUDIES 2</td>
<td>Designated unit. The study of a range of solo</td>
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<td>4 per week</td>
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<td>repertoire on a chief practical instrument or</td>
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<td>voice, or the study of a range of compositional</td>
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<td>practices and methods. Repertoire is chosen</td>
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<td>appropriate to the students' developing</td>
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<td>technical and interpretative skills; performance</td>
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<td>seminar, concerts and directed ensemble.</td>
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<td>Improvisation (Jazz and Popular Music students only) (year-long unit).</td>
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<td>Course: AA51</td>
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<td>Contact Hours: 4 per week</td>
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<tr>
<td>AAB608</td>
<td>PRINCIPAL STUDIES 3</td>
<td>Consolidation and extension of studies leading to</td>
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<td>4 per week</td>
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<td>a solo public recital in semester two. Performance</td>
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<td>seminar, directed ensemble and concert</td>
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<td>attendance. Improvisation (Jazz and Popular Music</td>
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<td>students only) (year-long unit).</td>
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<td>Course: AA51</td>
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<tr>
<td>AAB609</td>
<td>MUSIC IN WESTERN CIVILISATION 1</td>
<td>Overview of musical history and styles from late</td>
<td>24</td>
<td>4 per week</td>
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<td>medi eval times to the end of Baroque period</td>
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<td>within the context of Western culture.</td>
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<td>Course: AA51</td>
<td>Credit Points:</td>
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<td>Contact Hours: 4 per week</td>
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<td>AAB610</td>
<td>MUSIC IN WESTERN CIVILISATION 2</td>
<td>Overview of musical history and styles from the</td>
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<td>Classical period up to the present day within the</td>
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<td>context of Western culture.</td>
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<td>Course: AA51</td>
<td>Credit Points:</td>
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- **AAB611 MUSIC FROM 1600 TO 1750**
  Music Literature and Analysis: study of the history and stylistic development of late Renaissance, Baroque and Early Classical music in its social and cultural context; analytical studies of a range of representative works dealing with stylistic characteristics and compositional processes.
  Course: AA51  Prerequisite: AAB609 or AAB610  Credit Points: 12  Contact Hours: 3 per week

- **AAB612 MUSIC FROM 1750 TO 1900**
  Music Literature and Analysis: study of the history and stylistic development of Classical and Romantic music in its social and cultural context; analytical studies of a range of representative works dealing with stylistic characteristics and compositional processes.
  Course: AA51  Prerequisite: AAB609 or AAB610  Credit Points: 12  Contact Hours: 3 per week

- **AAB613 MUSIC FROM 1900 TO 1950**
  Music Literature and Analysis: historical overview of the various major styles of twentieth-century music with major emphasis on Debussy, the Second Viennese School, Bartok and Stravinsky; analysis of selected key works of the period.
  Course: AA51  Prerequisite: AAB609 or AAB610  Credit Points: 12  Contact Hours: 3 per week

- **AAB614 MUSIC FROM 1950 TO PRESENT DAY**
  Music Literature and Analysis: listening, analysis and study of the music of composers representing a broad international spectrum of the major styles of the period.
  Course: AA51  Prerequisite: AAB609 or AAB610  Credit Points: 12  Contact Hours: 3 per week

- **AAB615 JAZZ AND POPULAR MUSIC**
  Music Literature and Analysis: a sociological and musicological survey of Western popular music this century encompassing a range of styles and forms, including blues, pre-modern jazz, modern jazz, pop and youth culture.
  Course: AA51  Credit Points: 12  Contact Hours: 3 per week

- **AAB616 ENSEMBLE 1**
  Students experience the cooperative interaction of music making as a participant in large ensembles, chamber music, and small combo activity. (Year-long unit available only with the approval of Unit Coordinator.)
  Course: AA51  Prerequisite: AAB606  Credit Points: 12  Contact Hours: 4 per week

- **AAB617 CHORAL AND INSTRUMENTAL ARRANGING**
  Development of arranging skills for instrumental/choral ensembles using music of various styles.
  Course: AA51  Credit Points: 12  Contact Hours: 3 per week

- **AAB618 COMPOSITION FOR FILM AND TELEVISION**
  Continuation of the development of computer sequencing and compositional skills. Incorporates a shift into focus towards film and video time coding, film analysis and visual and thematic coding.
  Course: AA51  Prerequisite: AAB604  Credit Points: 12  Contact Hours: 3 per week

- **AAB619 INTRODUCTION TO MUSIC TECHNOLOGY**
  Introduces students to the broad range of options available to the musician in the age of technology. Through the universal electronic language of MIDI students explore sequencers as a tool for composition.
  Course: AA51  Prerequisite: Ability to read common practice notation  Credit Points: 12  Contact Hours: 3 per week

- **AAB620 INTRODUCTION TO POPULAR SONG COMPOSITION**
  Continues the development of MIDI sequencing skills while the focus moves from the technology itself to the application of skills in the area of Popular Music Composition and Arrangement.
  Course: AA51  Prerequisite: AAB604  Credit Points: 12  Contact Hours: 3 per week

- **AAB621 STUDIO RECORDING TECHNIQUES**
  Study of basic acoustics, recording procedures and equipment, critical analysis and discussion of recordings, recording projects involving a variety of ensembles.
  Course: AA51  Credit Points: 12  Contact Hours: 3 per week

- **AAB622 SECOND STUDY 1**
  Widens the base of students' practical skills through the study of a second instrument or voice. (Students normally choose an instrument closely related to that of their Principal Study.) (Year-long unit available to AA51 students only.)
  Course: AA51  Prerequisite: Consent of Course Coordinator  Credit Points: 12  Contact Hours: 4 per week

- **AAB623 CHORAL CONDUCTING**
  Introduces students to a wide range of choral music and styles and assists them to achieve artistic objectives in music performance through conducting workshop activities including practical conducting, stylistic practices, repertoire and rehearsal and performance techniques.
  Course: AA51  Prerequisite: AAB605  Credit Points: 12  Contact Hours: 3 per week

- **AAB624 COMPUTER MUSIC**
  Introduces students to algorithmic composition, interactive composition and performance, sound synthesis, contemporary compositional techniques, computer performance interfaces and live performance practices in computer music.
  Course: AA51  Prerequisite: AAB604 and AAB619  Credit Points: 12  Contact Hours: 3 per week

- **AAB625 INSTRUMENTAL CONDUCTING**
  Introduces students to a wide range of instrumental works and styles and assists them to achieve artistic objectives in music performance through conducting workshop activities including practical conducting, score preparation and rehearsal techniques.
  Course: AA51  Prerequisite: AAB605 and AAB610  Credit Points: 12  Contact Hours: 3 per week

- **AAB626 MUSIC AND SOUND FOR MULTIMEDIA**
  This unit deals with computer-assisted music composition, the role of music in non-linear structures, the effect and affect of sound in multimedia productions, sound effects and Foley techniques, introductory multimedia authoring, musical acoustics and digital sound theory.
  Course: AA51  Prerequisite: AAB601 or AAB619  Credit Points: 12  Contact Hours: 3 per week

- **AAB627 STUDIO MUSIC TEACHING**
  This unit is designed to give students a structured approach to the teaching of their craft in the studio and to investigate and develop those pedagogical skills and personal attributes necessary to become successful teachers.
  Course: AA51  Prerequisite: AAB606 or equivalent  Credit Points: 12  Contact Hours: 3 per week

- **AAB628 SECOND STUDY 2**
  Continues the development of students' practical skills through the study of a second instrument or voice. (Stu-
students normally choose an instrument closely related to that of their Principal Study.) (Year-long unit available to AA51 students only.)

Course: AA51  Prerequisite: AAB622
Credit Points: 12  Contact Hours: 4 per week

- AAB629 ENSEMBLE 2
Further development of the cooperative interaction of music making by participating in large ensembles, chamber music or small combo activity. (Year-long unit available only with the approval of Unit Coordinator.)

Course: AA51  Prerequisite: AAB616
Credit Points: 12  Contact Hours: 4 per week

- AAB701 MODERNISM
An examination of the concepts and movements that comprise twentieth-century modernism. Key themes such as avant-garde, modernism and modernity will be explored in detail, especially in relation to the theory and practice of avant-garde modernism.

Course: AA71, ED50
Credit Points: 12  Contact Hours: 3 per week

- AAB712 CONTEMPORARY ART ISSUES
Current practices in the visual arts are addressed by analysing and interpreting original works on exhibition, in stockrooms and in studios. By means of lectures, discussions and analysis of artworks and readings, the individual's awareness of the conceptual, historical and philosophical contexts concerning artists and the artworks is heightened.

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

- AAB726 INTRODUCTION TO ART HISTORY
Students are introduced to the basic thetatics in the discipline of art history. Topics include approaches to art history; art as a symbolic object; art as commodity; the sciences for art; iconography, feminism and art history; semiotics, criticism and art history.

Course: AA71  Prerequisite: ATB100
Credit Points: 12  Contact Hours: 3 per week

- AAB740 FOUNDATION ART PRACTICE 1
Designated unit. Development of a self-sustaining, self-responsible art practice; fostering of appropriate research skills; encouragement of open flexible independent approach to formulating resolutions to conceptual and visual concerns; development of safe workshop practices, safe studio work habits and appropriate professional skills.

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

- AAB741 FOUNDATION ART PRACTICE 2
Designated unit. Further development of a self-sustaining, self-responsible art practice; expansion of appropriate research skills; broadening of open flexible independent approach to formulating resolutions to conceptual and visual concerns; increased knowledge of safe workshop practices, safe studio work habits and appropriate professional skills.

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

- AAB742 STUDIO ART PRACTICE 1
Designated unit. In consultation with studio staff, students formulate a program of work for the semester which allows students to investigate their own personal artistic direction, formulate and develop self-generated enquiry and acquire working methods, resources, skills and knowledge necessary to realise concepts.

Course: AA71  Prerequisite: AAB741
Credit Points: 12  Contact Hours: 6 per week

- AAB743 STUDIO ART PRACTICE 2
Designated Unit. In consultation with relevant staff, students should develop a program of studio work which builds on the previous semester's studies and sets appropriate goals for this semester. A more rigorous questioning of concept and artefact is required.

Course: AA71  Prerequisite: AAB742
Credit Points: 12  Contact Hours: 6 per week

- AAB744 STUDIO ART PRACTICE 3
Studies commenced in year two are built on and developed through sustained studio practice and independent research at an appropriately advanced level.

Course: AA71  Prerequisite: AAB743
Credit Points: 12  Contact Hours: 6 per week

- AAB745 STUDIO ART PRACTICE 4
Further development of studio work culminating in a graduating exhibition.

Course: AA71  Prerequisite: AAB744
Credit Points: 12  Contact Hours: 6 per week

- AAB751 EXTENDED STUDIO PRACTICE 1
Extension of practical studio units of core media studies or elective studio units. (Note: contract approval by the Unit Coordinator is required.)

Course: AA71, AA81, ED22, ED26, ED50, ED51, ED52
Credit Points: 12  Contact Hours: 6 per week

- AAB752 EXTENDED STUDIO PRACTICE 2
Extension of practice studio units or core media studies or elective studio units.

Course: AA71, AA81, ED22, ED26, ED50
Credit Points: 12  Contact Hours: 6 per week

- AAB753 EXTENDED STUDIO PRACTICE 3
Extension of practice studio units or core media studies or elective studio units.

Course: AA71, AA81
Credit Points: 24  Contact Hours: 12 per week

- AAB754 EXTENDED STUDIO PRACTICE 4
Extension of practice studio units or core media studies or elective studio units.

Course: AA71, AA81
Credit Points: 24  Contact Hours: 12 per week

- AAB801 FOUNDATIONS OF COMMUNICATION DESIGN 1
Visual design and its application in communication; exploration of fundamental human interface and graphic concepts; overview of media and variety of design practices.

Course: AA81
Credit Points: 12  Contact Hours: 3 per week

- AAB802 FOUNDATIONS OF COMMUNICATION DESIGN 2
Design priorities/alternatives, interpretation of ideas, representation in visual systems, refinement of concepts, problem solving through presentation of models.

Course: AA81  Prerequisite: AAB801
Credit Points: 12  Contact Hours: 3 per week

- AAB807 MEDIA TECHNOLOGY 1
The application of computers and digital technologies to the processes of visual communication design: computers, operating systems and networks; 2-D graphic systems; basic programming.

Course: AA81
Credit Points: 12  Contact Hours: 3 per week

- AAB808 MEDIA TECHNOLOGY 2
Continuation of application of computers and digital technologies to the processes of visual communication design: page layout and design; screen layout and design; human-computer-interface design; intermediate programming.
Course: AAB811 HISTORY OF DESIGN AND MEDIA TECHNOLOGY
Major design developments in society from the nineteenth century: the impact of the Industrial Revolution on design; the convergence of media technology and visual communication; post-war movement towards greater specialization within design applications.
Course: AAB811 Credit Points: 12 Contact Hours: 3 per week

Course: 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

Course: AAB912 EXPLORING MUSIC 2
Instrumental music forms with emphasis on recorder skills. Conducting, rehearsing and performing techniques will be developed.
Course: ED51 Prerequisite: AAB911 Credit Points: 12 Contact Hours: 3 per week

Course: 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, reading and writing techniques and music technology skills are developed.
Course: ED51 Prerequisite: AAB912 Credit Points: 12 Contact Hours: 3 per week

Course: 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

Course: AAB915 VISUAL & PERFORMING ARTS CURRICULUM 2
An in-depth study of 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

Course: AAB916 ADVANCED VISUAL & PERFORMING ARTS CURRICULUM
The curriculum of dance, drama, music or visual arts to an advanced level; designing and implementing programs in 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

Course: 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

Course: 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

Course: 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

Course: AAN002 ARTS RESEARCH METHODS 2
An application of the understandings gained in AAN001 to a selected area. Normally the student will produce an interpretive analysis in a written presentation of 5000 words.
Course: AT22 Credit Points: 12 Contact Hours: 3 per week

Course: 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.
Course: AA24, AT22 Credit Points: 12 Contact Hours: 3 per week

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

Course: 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

Course: 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 6000-10000 words, or equivalent if other media/reportage is used.
Course: AA24 Credit Points: 12

Course: AAN011 ADVANCED PROFESSIONAL PRACTICE 1
An investigation of the student's professional practice through observation and research in consultation with the supervisor.
Course: AA24 Credit Points: 12

Course: AAN012 ADVANCED PROFESSIONAL PRACTICE 2
Extension and elaboration of the student's professional practice through evaluation and analysis in consultation with the supervisor.
Course: AA24 Credit Points: 12
Students are expected to implement a major individual skills development including research, rehearsal and preparation for an exhibition or performance.

Course: AA24  Credit Points: 24

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

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

The links between technology and dance in the areas of light and sound; the principal 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

An investigation of the role of the dramaturge in Western cultures, particularly the emerging role of the dramaturge in Australian theatre; the methodologies of the dramaturge, the criteria used for script assessment, and a comparative study of the role of the script editor/story editor in the screen writing industry.

Course: AA24, AA40  Credit Points: 12  Contact Hours: 2 per week

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

Course: AA24  Credit Points: 12  Contact Hours: 3 per week

Analysis of a variety of cultural products selected from a cross-section of contexts, genre and media; an introduction to some of the major theoretical issues and concerns underlying contemporary developments in the fields of cultural analysis and literary criticism.

Course: AA24, AA40  Credit Points: 12  Contact Hours: 2 per week

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

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

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: AA24  Credit Points: 12  Contact Hours: 3 per week

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

Course: ED32, ED37  Corequisite: AAP420  Prerequisite: AAP421
Credit Points: 12  Contact Hours: 3 per week

See AAP421.

Course: ED32, ED37  Corequisite: AAP420  Prerequisite: AAP421
Credit Points: 12  Contact Hours: 3 per week

See AAP421.

Course: ED32, ED37  Corequisite: AAP420  Prerequisite: AAP421
Credit Points: 12  Contact Hours: 3 per week

See AAP421.

Course: ED32, ED37  Corequisite: AAP420  Prerequisite: AAP421
Credit Points: 12  Contact Hours: 3 per week

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

Course: ED32, ED37  Corequisite: EDP451
Credit Points: 12  Contact Hours: 3 per week

See AAP430.

Course: ED32, ED37  Corequisite: EDP451
Credit Points: 12  Contact Hours: 3 per week

See AAP430.

Course: ED32, ED37  Corequisite: EDP451
Credit Points: 12  Contact Hours: 3 per week

See AAP430.

Course: ED37  Corequisite: AAP431
Credit Points: 12  Contact Hours: 3 per week

See AAP430.

Course: ED37  Corequisite: AAP431
Credit Points: 12  Contact Hours: 3 per week

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

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

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

- AAP502 ART EDUCATION PROGRAM DESIGN & PRACTICE
  Design and implementation of defensible art education programs at broad and specific school levels; the learning outcomes of art activities; classroom practice and evaluation across all levels of schooling.
  Courses: ED22, ED26, ED51 Prerequisite: AAP501
  Credit Points: 12 Contact Hours: 3 per week

- AAP503 CLAY MATERIALS
  Develop ceramic knowledge, artistic concepts and practical/technical skills; investigation of selected historical ceramic eras; understanding of the relationship between ceramics and the maker's culture; development of personal imagery and design.
  Courses: ED22, ED26, ED50, ED51, AA71
  Credit Points: 12 Contact Hours: 3 per week

- AAP505 FIBRE
  Historical and contemporary textile media; development of technical and conceptual textile knowledge; utilisation of fibre/textile materials and processes to develop both 2 and 3 Dimensional textile artefacts/objects; the relationship between textile arts and selected cultures; particularly in relation to fashion design, individual development of design, construction and decoration techniques and textile imagery.
  Courses: ED22, ED26, ED50, ED51, AA71
  Credit Points: 12 Contact Hours: 3 per week

- AAP507 PAINTING
  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 class and professional practice.
  Courses: ED22, ED26, ED50, ED51, AA71
  Credit Points: 12 Contact Hours: 3 per week

- AAP509 PHOTOGRAPHIC MEDIA
  Photographic processes; aesthetic aspects of photography; history of art and photography; personal approaches to photography.
  Courses: ED22, ED26, ED50, ED51, AA71
  Credit Points: 12 Contact Hours: 3 per week

- AAP511 PRINTMAKING
  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, ED26, ED50, ED51, AA71
  Credit Points: 12 Contact Hours: 3 per week

- AAX101 DANCE COMPOSITION 1
  Discussion and theoretical understanding of dance composition; practical exploration of skills essential for dance composition including: establishment of approach or theme, style of movement, patterning of movement, phrasing of steps, selection and structuring of completed dance segments.
  Course: AA09
  Credit Points: 8 Contact Hours: 2 per week

- AAX102 DANCE COMPOSITION 2
  Discussion and investigation of dance forms; preparation and presentation of short solo and group sequences; practical experience in group dance through improvisation and set compositional studies; discussion and criticism of presented dance work; discussion of criteria for evaluation and assessment of dance works.
  Course: AA09
  Credit Points: 8 Contact Hours: 2 per week

- AAX103 MUSIC
  Musical basics through aural and written theories.
  Courses: AA09
  Credit Points: 8 Contact Hours: 1.5 per week

- AAX104 DANCE KINESIOLOGY & ALIGNMENT
  Principles governing human stability and motion; ways muscles work to produce dance movement; machines of the body; movement and dance injuries.
  Course: AA09
  Credit Points: 12 Contact Hours: 2.5 per week

- AAX105 DANCE STYLES 1
  Study of folk dance, tap dance and jazz dance styles. Practical work includes: folk steps and dances from selected parts of the world; tap and jazz dance combinations and routines for performance.
  Course: AA09
  Credit Points: 8 Contact Hours: 3 per week

- AAX106 DANCE STYLES 2
  Development of dancing and singing skills; composition of dance routines for chorus; dramatic aspects of music comedy; tap dance combinations and routines, study of character and jazz styles; practical work includes basic technique, step combinations, solo and group choreographic work.
  Courses: AA09
  Credit Points: 12 Contact Hours: 2 per week

- AAX111 REPERTOIRE & PRACTICE PERIOD 1
  Designated Unit. Study of selected repertoire pieces; rehearsal of individual aspects of the repertoire work; performance of all or part of the selected repertoire; preparation for rehearsals and performance; technique and dress rehearsals; critical evaluation during season and post-performance evaluation.
  Course: AA09
  Credit Points: 12

- AAX112 REPERTOIRE & PRACTICE PERIOD 2
  Designated Unit. Continuation of studies initiated in AAX111.
  Course: AA09
  Credit Points: 16

- AAX113 REPERTOIRE & PRACTICE PERIOD 3
  Designated Unit. Continuation of AAX112.
  Courses: AA09
  Credit Points: 16

- AAX114 REPERTOIRE & PRACTICE PERIOD 4
  Designated Unit. Continuation of AAX113; preparation for the dance industry; curriculum vitae and funding applications.
  Courses: AA09
  Credit Points: 16

- AAX115 DANCE HISTORY
  Early development of dance technique; social and religious functions of dance; dance throughout the Renaissance period; the European and Russian contribution to classical ballet; the rise of modern dance in Europe and America; dance in Australia.
  Course: AA09
  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.
  Courses: AA09
  Credit Points: 8
  Contact Hours: 2 per week

- **AAX117 BALLET TECHNIQUE 1**
  Designated Unit. The study of ballet technique within the four-tier practical levels system. Principles governing the technique; practical work includes barre work, adagio, pirouettes, allegro, piano and pas de deux.
  Course: AA09
  Credit Points: 8
  Contact Hours: 9 per week

- **AAX118 BALLET TECHNIQUE 2**
  Designated Unit. Continuation of study initiated in AAX117.
  Course: AA09
  Prerequisite: AAX117
  Credit Points: 8
  Contact Hours: 7.5 per week

- **AAX119 BALLET TECHNIQUE 3**
  Designated Unit. Consolidation of technique; study of differing stylistic approaches to the ballet technique through the four-tier levels system.
  Course: AA09
  Prerequisite: AAX118
  Credit Points: 8
  Contact Hours: 9 per week

- **AAX120 BALLET TECHNIQUE 4**
  Designated Unit. Technique classes of advanced standard incorporating difficult exercise combinations, with an emphasis on performance quality and style within the four-tier levels system.
  Course: AA09
  Prerequisite: AAX119
  Credit Points: 8
  Contact Hours: 7.5 per week

- **AAX121 CONTEMPORARY TECHNIQUE 1**
  Designated Unit. The study of contemporary dance techniques within the four-tier levels system. Practical work includes floor work, centre work and basic combinations to develop flexibility, strength and coordination; vocabulary of contemporary dance techniques.
  Course: AA09
  Prerequisite: AAX121
  Credit Points: 8
  Contact Hours: 9 per week

- **AAX122 CONTEMPORARY TECHNIQUE 2**
  Designated Unit. Continuation of study initiated in AAX121.
  Course: AA09
  Prerequisite: AAX121
  Credit Points: 8
  Contact Hours: 7.5 per week

- **AAX123 CONTEMPORARY TECHNIQUE 3**
  Designated Unit. Consolidation of technical knowledge; increased degree of difficulty in turning and jumping sequences; rapid changes of weight and off-balance work within the four-tier levels system.
  Course: AA09
  Prerequisite: AAX122
  Credit Points: 8
  Contact Hours: 7.5 per week

- **AAX124 CONTEMPORARY TECHNIQUE 4**
  Designated Unit. Advanced technique classes incorporating difficult exercise combinations with rapid changes of weight, level, direction; performance quality and style.
  Course: AA09
  Prerequisite: AAX123
  Credit Points: 8
  Contact Hours: 7.5 per week

- **ARB001 ARCHITECTURAL DESIGN 1**
  Introduction to design theory and methodology; design as an integrative process; aesthetic perceptions, graphic/presentation skills. Strategic learning at university. Introductory design exercises: simple elements and small scale urban spaces.
  Courses: AR48, BN30
  Credit Points: 12
  Contact Hours: 8 per week

- **ARB002 ARCHITECTURAL DESIGN 2**
  Development of design understanding integrating contextual constraints and technology. Introductory design exercises: simple buildings, spaces and elements.
  Courses: AR48, BN30
  Prerequisite: ARB001
  Credit Points: 12
  Contact Hours: 8 per week

- **ARB003 ARCHITECTURAL DESIGN 3**
  Development of design understanding and ability with emphasis on social and environmental values. Theory and methodology; activity analysis, site analysis, integration of construction and climatic studies. Design projects generally of domestic scale.
  Courses: AR48, BN30
  Prerequisite: ARB002
  Credit Points: 12
  Contact Hours: 6 per week

- **ARB004 ARCHITECTURAL DESIGN 4**
  Development of design understanding and ability with emphasis on social and environmental values. Integration of design theory, sociological issues and technology. Design projects generally of domestic scale.
  Courses: AR48, BN30
  Prerequisite: ARB003
  Credit Points: 12
  Contact Hours: 6 per week

- **ARB005 ARCHITECTURAL DESIGN 5**
  Development of design understanding and ability with emphasis on 'place' and design in social and physical context. Design projects aimed at developing issues of context, landscape, ethics and values and integrating building construction, climatic design and contextual studies. Projects include groups of buildings of medium scale and increasing complexity.
  Courses: AR48, BN30
  Prerequisite: ARB005
  Credit Points: 12
  Contact Hours: 6 per week

- **ARB006 ARCHITECTURAL DESIGN 6**
  Development of design emphasis introduced in ARB005. Design projects to develop contextual issues and integrate considerations of climatic design, construction and building services. Projects include groups of buildings of medium to large scale.
  Course: AR48
  Prerequisite: ARB006
  Credit Points: 24 (12 per semester)
  Contact Hours: 6 per week

- **ARB007 ARCHITECTURAL DESIGN 7**
  Design projects used to develop theory, critical analysis and issues of architectural quality. Integration of design science, construction, building services, codes and standards. Projects include buildings and building groups of medium to large scale.
  Course: AR48
  Prerequisite: ARB007
  Credit Points: 24 (12 per semester)
  Contact Hours: 6 per week

- **ARB008 ARCHITECTURAL DESIGN 8**
  Design projects used to develop individual approach and direction to architecture and to introduce urban design issues. Integration of building economics, services, technology and critical analysis. Projects include large scale civic or commercial developments in an urban context.
  Course: AR48
  Prerequisite: ARB008
  Credit Points: 24 (12 per semester)
  Contact Hours: 6 per week

- **ARB011 CONTEXTUAL STUDIES 1**
  Human scale, anthropometry and ergonomics. Introduction to a progressive study of architectural history. Early buildings to nineteenth century.
  Courses: AR48, BN30
  Credit Points: 6
  Contact Hours: 3 per week

- **ARB012 CONTEXTUAL STUDIES 2**
  Human behaviour; perceptions, learning, interpersonal communication and relationships, decision making, problem solving and stress management. Progressive study of architectural history to nineteenth century.
  Courses: AR48, BN30
  Prerequisite: ARB011
  Credit Points: 8
  Contact Hours: 3 per week
ARB013 CONTEXTUAL STUDIES 3
Human relationships: role of social and cultural variables in human environment interactions; theory of place; behaviour settings; privacy; personal space; territoriality; environmental meaning and cognition; cognitive maps and way-finding; risk perceptions; environmental stress; environmental evaluations; participatory design processes. Architectural history of the twentieth century; the modern movement: postmodern and recent. Introduction to design methodology; imagining, representing, testing, the VAST lists and an heuristic design model.
Courses: AR48, BN30
Credit Points: 8 Contact Hours: 2 per week

ARB014 CONTEXTUAL STUDIES 4
Human organisation, theory of formal organisations, Australian government structures, social analysis and forecasting, social interest groups. History of architecture in the twentieth century, the modern movement, postmodern and recent. Theories, styles and movements in architectural history.
Courses: AR48, BN30
Credit Points: 8 Contact Hours: 4 per week

ARB015 CONTEXTUAL STUDIES
The periods of Australian architectural development and important individual architects. Urban design theory, townscape, urban spaces, city form.
Courses: AR48, BN30
Credit Points: 6 Contact Hours: 2 per week

ARB016 CONTEXTUAL STUDIES 6
The legal system, statutory and common law, contract and tort, acts and regulations concerning the built environment, building codes of Australia. Queensland architectural heritage and contemporary architects. Principles for the analysis of design, factors affecting quality.
Courses: AR48, BN30
Credit Points: 8 Contact Hours: 3 per week

ARB017 CONTEXTUAL STUDIES 7
Architectural development in the Far East, Southeast Asia, the Pacific and South America. Planning of settlements, indigenous architecture, materials, techniques and construction, social, cultural and other influences, modernisation, current architectural issues. Theory and methods of critical analysis, critical appraisal of major works and architects, study of ideas and aesthetics.
Courses: AR48, BN30
Credit Points: 6 Contact Hours: 2 per week

ARB018 CONTEXTUAL STUDIES 8
Contemporary theories of design and aesthetics; ethics in architectural practice, current issues in architecture, changing roles and attitudes, trends and opportunities.
Courses: AR48, BN30
Credit Points: 6 Contact Hours: 2 per week

ARB021 TECHNOLOGY AND SCIENCE 1
Courses: AR48, BN30
Credit Points: 8 Contact Hours: 3 per week

ARB022 TECHNOLOGY AND SCIENCE 2
Principles of construction related to simple structures, construction systems, chemical properties and reaction of building materials. Introduction to computing in architecture.
Courses: AR48, BN30
Credit Points: 12 Contact Hours: 5 per week

ARB023 TECHNOLOGY AND SCIENCE 3
Domestic scale building construction. Principles of structures, climate and sun control.
Courses: AR48, BN30
Credit Points: 12 Contact Hours: 4 per week

ARB024 TECHNOLOGY AND SCIENCE 4
Domestic scale building construction, timber structural members and elements, climatic design, ventilation and airflow.
Courses: AR48, BN30
Credit Points: 12 Contact Hours: 4 per week

ARB025 TECHNOLOGY AND SCIENCE 5
Steel construction, structures and structural elements, stairs, medium rise construction in reinforced concrete and masonry, hydraulic services, thermal behaviour of buildings.
Courses: AR48, BN30
Credit Points: 12 Contact Hours: 6 per week

ARB026 TECHNOLOGY AND SCIENCE 6
Construction systems used in industrial and commercial buildings of medium to high rise. Reinforced concrete structures and structural elements. Curtain walls, acoustic and noise control. Building services and electricity, lifts, air conditioning.
Courses: AR48, BN30
Credit Points: 12 Contact Hours: 5 per week

ARB027 TECHNOLOGY AND SCIENCE 7
Complex construction systems, specialised structures, integration of complex services, tall buildings. Case studies of special aspects of architecture and technology.
Courses: AR48
Credit Points: 6 Contact Hours: 2 per week

ARB031 PROFESSIONAL STUDIES 1
Course: AR48
Credit Points: 16 (8 per semester) Contact Hours: 2 per week

ARB032 PROFESSIONAL STUDIES 2
Practice management, setting up a practice, office systems, marketing. Building economics, finance, cost control, risk management, QA. Building procurement systems. Professional practice, ethics, services, liability, the building contract and contract administration.
Course: AR48
Credit Points: 16 (8 per semester) Contact Hours: 3 per week

ARB033 PROFESSIONAL STUDIES 3
Standard contracts and contract administration. Issues in the profession, changing roles, new legislation.
Course: AR48
Credit Points: 16 (8 per semester) Contact Hours: 2 per week

ARB041 ELECTIVE 1
Elective unit drawn from an existing range of units available within the School and approved by Course Coordinator.
Course: BN30
Credit Points: 6 Contact Hours: 2 per week

ARB042 ELECTIVE 2
The Elective unit is drawn from an existing range of units within the School and approved by Course Coordinator.
Course: BN30
Credit Points: 6 Contact Hours: 2 per week

ARB043 ELECTIVE 3
Elective unit drawn from an existing range of units available within the Faculty of Built Environment and Engineering or another Faculty at QUT, and approved by the Course Coordinator.
Course: BN30  
Credit Points: 6  
Contact Hours: 2 per week

- ARB044 ELECTIVE 4  
Elective unit drawn from an existing range of units available within the Faculty of Built Environment and Engineering or another Faculty at QUT, and approved by the Course Coordinator.  
Course: AR48  
Credit Points: 6  
Contact Hours: 2 per week

- ARB045 ELECTIVE A  
Elective unit drawn from a range presented by the School, available within the Faculty, elsewhere at QUT or external units subject to approval.  
Course: AR48  
Credit Points: 6  
Contact Hours: 2 per week

- ARB046 ELECTIVE B  
Elective unit drawn from a range presented by the School, available within the Faculty, elsewhere at QUT or external units subject to approval.  
Course: AR48  
Credit Points: 6  
Contact Hours: 2 per week

- ARB051 RESEARCH METHODS  
An overview of research methodology, examination of differences between research methods and products. Students will undertake a short, directed research project.  
Course: AR48  
Credit Points: 6  
Contact Hours: 2 per week

- ARB052 ARCHITECTURAL RESEARCH 1  
The establishment of appropriate research methods and their development into a study proposal for an approved elected research topic. Establishment of objectives, delineation of areas, structuring research programs, reading sources, analysis and preliminary conclusions, individual proposals.  
Course: AR48  
Prerequisite: ARB051  
Credit Points: 6  
Contact Hours: 2 per week

- ARB053 ARCHITECTURAL RESEARCH 2  
Continued development of approved research topic commenced in ARB052. Definition and analysis of propositions, validation by research. Research submission.  
Course: AR48  
Prerequisite: ARB052  
Credit Points: 24  
Contact Hours: 6 per week

- ARB054 ARCHITECTURAL PROJECT  
A major project selected by the student and approved by the Course Coordinator. By the end of the semester the student should demonstrate through the project the course objectives, expressed as values and attitudes, knowledge and skills.  
Course: AR48  
Prerequisite: ARB053  
Credit Points: 24  
Contact Hours: 6 per week

- ARB061 ARCHITECTURAL APPLICATIONS 1  
Application of theory and knowledge gained in corequisite units and development of graphic skills in studio exercise.  
Course: BN30  
Corequisites: ARB001, ARB011, ARB021  
Credit Points: 12  
Contact Hours: 4 per week

- ARB062 ARCHITECTURAL APPLICATIONS 2  
Application of theory and knowledge gained in corequisite units and development of graphic skills in studio exercise.  
Course: BN30  
Corequisites: ARB002, ARB012, ARB022  
Credit Points: 8  
Contact Hours: 4 per week

- ARB063 ARCHITECTURAL APPLICATIONS 3  
Application of theory to architectural problems, with emphasis on architectural technology and science. Studio exercises and site visits.  
Course: BN30  
Corequisites: ARB003, ARB023  
Credit Points: 12  
Contact Hours: 4 per week

- ARB064 ARCHITECTURAL APPLICATIONS 4  
Application of theory to architectural problems, with emphasis on architectural technology and science. Studio exercises and site visits.  
Course: BN30  
Corequisites: ARB004, ARB024  
Credit Points: 8  
Contact Hours: 4 per week

- ARB065 ARCHITECTURAL APPLICATIONS 5  
Application of theory to architectural problems, with emphasis on architectural technology and science. Studio exercises and site visits.  
Course: BN30  
Corequisite: ARB025  
Credit Points: 12  
Contact Hours: 4 per week

- ARB066 ARCHITECTURAL APPLICATIONS 6  
Application of theory to architectural problems, with emphasis on architectural technology and science. Studio exercises and site visits.  
Course: BN30  
Corequisite: ARB025  
Credit Points: 8  
Contact Hours: 4 per week

- ARB071 ENVIRONMENTAL STUDIES  
The global ecosystem: the atmosphere and its processes, climate, air pollution, water cycles, water pollution, human population and demographic trends, renewable and non-renewable resources, land use, urbanism, the city as an ecosystem, national resource management and conservation.  
Course: BN30  
Credit Points: 6  
Contact Hours: 2 per week

- ARB141 THE HUMAN ENVIRONMENT 1  
The dimensions and movement of the human body, and of its perceptual systems, as an essential preliminary to the design of all artefacts for human use. Topics include static and dynamic anthropometry; human sensory systems; ergonomics; applications of anthropometrics and ergonomics to design.  
Course: BN30  
Credit Points: 6  
Contact Hours: 2 per week

- ARB146 INTRODUCTION TO INTERIOR TECHNOLOGY 1  
Basic mechanics and the physical, thermal and optical properties of materials; physics of light, optics, photometry, laser, holograms; thermal properties of materials and components; solar energy and its application; physics of sound, hearing and environmental acoustics; electricity and electrical circuits.  
Course: BN30  
Credit Points: 6  
Contact Hours: 2 per week

- ARB147 HISTORY OF THE BUILT ENVIRONMENT 1  
See PSB016  
Course: BN30  
Credit Points: 6  
Contact Hours: 3 per week

- ARB161 LIGHT AND COLOUR STUDIES 1  
Introduction to an understanding of colour, colour vision, colour harmony and contrast, mixing and application of colour. An introduction to a range of contemporary colour theories relating to the use of colour. A further introduction to the study of the qualitative effects of colour and lighting on form and space.  
Course: BN30  
Corequisite: ARB176  
Credit Points: 6  
Contact Hours: 3 per week
■ ARB168 TECHNOLOGY AND SCIENCE 1
A study of physical principles; introduction to mathematics and applied technologies and how they relate to industrial design.
Course: BN30
Credit Points: 12
Contact Hours: 6

■ ARB176 INTRODUCTORY INTERIOR DESIGN 1
Introduction to design theory, methodology, and aesthetic perceptions. Exploring design as an interactive process. Introductory design exercises, simple two and three dimensional elements. Freehand sketching, mechanical drawing, principles of perspective, principles of scale drawing and presentation skills. Unit includes tertiary learning-to-learn process necessary for effective and successful study.
Course: BN30
Credit Points: 18
Contact Hours: 9

■ ARB177 INTRODUCTORY INDUSTRIAL DESIGN 1
Introduction to basic design principles; three dimensional visual thinking; aesthetic perception; concept development of simple products; perspective drawing and presentation skills; strategic learning at university.
Course: BN30
Credit Points: 18
Proposed hours: 9

■ ARB185 TECHNOLOGY 2
Promote understanding and development of a basic knowledge of construction principles; building as a system; loads on buildings; performance of structural units; load bearing and skeletal construction systems.
Course: AR48
Credit Points: 6
Contact Hours: 3 per week

■ ARB191 THE HUMAN ENVIRONMENT 1
The dimensions and movement of the human body as a perpetual system for human use; static and dynamic anthropometry; human sensory systems; introduction to ergonomics; applications of anthropometrics and ergonomics to design.
Courses: AR41, AR48, BN30
Credit Points: 4
Contact Hours: 2 per week

■ ARB192 THE HUMAN ENVIRONMENT 2
Human needs and the influence of selected interpersonal and physical variables on human behaviour; the characteristics and dynamics of group behaviour, communication process types, and networks; concepts of power, leadership and conflict; observations of behaviour, research methods, interpretation and presentation of research; environmental stressors and their mediation by individual differences.
Courses: AR41, AR48
Credit Points: 4
Contact Hours: 2 per week

■ ARB193 DESIGN 1
Design theory; design definition; perception; elements and principles of design; effects of colour, texture, contour, pattern; human dimensions; anthropometrics, elements of aesthetics. Graphics: descriptive geometry; architectural graphics and rendering; freehand drawing and sketching. Design projects: two-dimensional and three-dimensional objects; personal working and living space.
Course: AR41
Credit Points: 8
Contact Hours: 5 per week

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

■ ARB195 TECHNOLOGY 1
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
Credit Points: 12
Contact Hours: 5 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: 6
Contact Hours: 2 per week

■ ARB267 LIGHT AND COLOUR STUDIES
A further investigation of the relevance of colour theories, and the relevance and use of colour in interior de-
design. It deals with the understanding of the symbolic, physiological and psychological aspects of colour, within historical and contemporary contexts.

Course: BN30
Credit Points: 12

**ARB276 INTRODUCTORY INTERIOR DESIGN** 2

A further introduction to design theory, methodology and perception. To demonstrate the application of environmental issues; refine awareness and understanding by working collaboratively with people in designing three-dimensional spaces to suit their needs. Continuation of mechanical and freehand presentation and development of written and verbal skills.

Course: BN30
Corequisite: ARB176
Credit Points: 18

**ARB277 INTRODUCTORY INDUSTRIAL DESIGN** 2

Continuation of ARB177; studio work involving three-dimensional design tasks of a variety of scales; workshop and field teaching; techniques of oral and written presentation of schemes to audience; report writing; use of English as applicable to the professional needs.

Course: BN30
Credit Points: 18

**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 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

**ARB289 DESIGN SCIENCE** 1

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

Courses: AR41, AR48, BN30
Credit Points: 2

**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

**ARB291 THE HUMAN ENVIRONMENT** 3

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

Courses: AR41, AR48, BN30

Credit Points: 6

**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: 6

**ARB293 DESIGN** 3

Theory: scope of design; Reitman's State Transformation model, problem-solving methods; predecessor 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

**ARB294 DESIGN** 4

See ARB293.

Course: AR41
Credit Points: 8

**ARB295 BUILDING CONSTRUCTION I**

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: 6

**ARB296 BUILDING CONSTRUCTION II**

See ARB295.

Courses: AR41, AR48
Credit Points: 6

**ARB299 INTRODUCTION TO COMPUTING** 1

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

Courses: AR41, AR48, BN30
Credit Points: 2

**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: AR41, AR48, BN30
Prerequisite: ARB248
Credit Points: 18

**ARB341 BUILDING CONSTRUCTION** 1

Introduction to common building materials, their properties and behaviour in use; the building as a system; elements of the small building and their function in the building system. Studio work will consist of exercises...
in construction drawing related to the lecture topics.

Lectures and studio work are complemented by site visits and workshop practice.

Course: BN30
Credit Points: 16 Contact Hours: 6 per week

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

- ARB350 INDUSTRIAL DESIGN 1
  Scope of problem solving theory; special characteristics of design problems; the task environment, design heuristics; creativity and innovation and general psychological theories of creativity; case studies; visual communication and design process. 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 during the semester.
  Course: BN30
  Prerequisite: ARB246
  Credit Points: 18 Contact Hours: 8 per week

- ARB351 ERGONOMICS FOR INDUSTRIAL DESIGNERS 2
  Person-machine system models; human capabilities; hearing and sound detection theory; vision; and user modelling. Practical exercises cover application of lecture topics to product design.
  Course: BN30
  Prerequisite: ARB251
  Credit Points: 6 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: 12 Contact Hours: 6 per week

- ARB354 COMPUTER-AIDED INDUSTRIAL DESIGN 1
  PC computer operation, introduction to using Windows, overview of use of graphics and CAD by industrial designers in the design process. Application of CAD for engineering drawings and as a 2D presentation tool. Introduction to 3D wireframe modelling concepts.
  Course: BN30
  Credit Points: 6 Contact Hours: 2 per week

- ARB360 INTERIOR DESIGN 1
  Scope of problem-solving theory; special characteristics of design problems; the task environment; the problem space, the solution space and their representation; problem difficulty, recognition and algorithmic methods; generate-and-test methods; heuristics; creativity and innovation. The theoretical base also encompasses theories of and development in art, design and perception. The studio exercises are aimed at a range of interior design problems within the specific boundaries to focus on the systematic process of design and questioning the environmental implication of these processes with emphasis on contextuality and symbolism. These problems historically demand attention for interior design. To extend presentation methods, techniques and materials used to communicate design ideas.
  Course: BN30
  Prerequisite: ARB248
  Corequisites: ARB361
  Credit Points: 18 Contact Hours: 8

- ARB361 INTERIOR TECHNOLOGY 1
  Upgrades the technical drawing skills developed in ARB261 and introduces students to the building codes and by-laws regulating the design and construction of building interiors at the domestic level; issues such as the evolution of building materials and the evaluation of material performance and suitability.
  Course: BN30
  Prerequisite: ARB246
  Corequisites: ARB360
  Credit Points: 12 Contact Hours: 6 per week

- ARB362 FURNITURE & FITTINGS 1
  Fabrics and textiles in interior design; wall to wall carpeting; curtains and blinds; upholstery; in each case materials, properties and techniques are discussed; fabrics and textiles in interior design.
  Course: BN30
  Credit Points: 6 Contact Hours: 2 per week

- ARB363 VISUAL COMMUNICATION FOR INTERIOR DESIGNERS 1
  Visual thinking and drawing and basic rendering skills; rough mock-ups and scale model making.
  Course: BN30
  Prerequisite: ARB248
  Credit Points: 4 Contact Hours: 2 per week

- ARB388 DESIGN SCIENCE 4
  The control of noise and aural conditions in buildings; basic acoustic design and noise control in buildings. Electrical lighting of interiors, lamp characteristics, colour rendering, modelling, lighting quality, simplified lighting design methods, external lighting.
  Courses: AR41, BN30
  Credit Points: 2 Contact Hours: 1 per week

- ARB389 DESIGN SCIENCE 3
  Thermal performance of buildings; energy conservation and low energy design; calculation of heat flow and indoor temperatures under steady state and fluctuating conditions; quantitative monitoring of thermal performance of building elements. Computer-aided planning analysis and environmental control analysis; integration with design.
  Courses: AR41, BN30
  Credit Points: 4 Contact Hours: 2 per week

- ARB391 BUILDING SERVICES 1
  Hydraulics: water; gas; plumbing; drainage and sewage in domestic and low-rise buildings. Fire services; sprinklers; alarms; extinguishers; emergency systems.
  Courses: AR41, BN30
  Credit Points: 4 Contact Hours: 1.5 per week

- ARB392 BUILDING SERVICES 2
  Electricity: supply and transmission systems; substations; metering; rectification. 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: 3 Contact Hours: 1.5 per week

- ARB393 DESIGN 5
  Theory: the building as object, surface, volume, space and sequence; expression of building; criteria of good design in terms of style, function, form, structure, services, context, environment, society, and other relevant issues; design ethics and values. Projects: low to medium rise with emphasis on industry and commerce; integration with architectural science; flow charting; building type analysis.
  Course: AR41
  Credit Points: 8 Contact Hours: 4 per week
■ ARB394 DESIGN 6
See ARB393.
Course: AR41
Credit Points: 8  Contact Hours: 4 per week

■ ARB395 BUILDING CONSTRUCTION 3
Site investigations, earth and rock retaining systems, foundations including piles, bored piles and rafts, underpinning and shoring, medium-rise masonry construction, structural steel concrete and composite structures, service cores, precast concrete, prestressed concrete: systems for floors, roofs, external cladding, partitions, ceilings; waterproofing, corrosion protection, fireproofing; building failures.
Courses: AR41, AR48
Credit Points: 3  Contact Hours: 1.5 per week

■ ARB396 BUILDING CONSTRUCTION 4
See ARB395.
Courses: AR41, AR48
Credit Points: 3  Contact Hours: 1.5 per week

■ ARB440 ARCHITECTURAL DESIGN II
Theory: concepts of design process; systematic methodology in architectural design. Studio: developing skills in site surveys, adjacency analysis, brief formation, application of architectural science to inculcate concerns for safety, comfort, construction, content, form and order.
Courses: AR41, AR48, BN30  Prerequisite: ARB340
Credit Points: 16  Contact Hours: 6 per week

■ ARB441 BUILDING CONSTRUCTION 2
Case studies with lectures and studio work. Each case study will discuss the system characteristics of the problem, the human and environmental factors involved, and the technical systems required. Lectures and studio work are complemented by field studies and workshop practice.
Course: BN30  Prerequisite: ARB341
Credit Points: 16  Contact Hours: 6 per week

■ ARB443 VISUAL COMMUNICATION FOR ARCHITECTS 2
Development of skills in various techniques for presenting architectural designs. Includes rendering and presentation techniques, audiosvisual media, model making and portfolio organisation. The use of manual skills and computer techniques is studied.
Course: BN30  Prerequisite: ARB343
Credit Points: 4  Contact Hours: 2 per week

■ ARB450 INDUSTRIAL DESIGN 2
Design methodologies; process; creativity and product innovation; case studies; environmental impact. The studio exercises are aimed at different product ranges. The complexity of the project increases according to the semester level.
Course: BN30  Prerequisite: ARB350
Credit Points: 18  Contact Hours: 8 per week

■ ARB453 MANUFACTURING TECHNOLOGY 2
Application of engineering mechanisms to products or systems; the performances of mechanical, electrical, hydraulic and pneumatic mechanisms in relation to particular functions; introduction to electronics; design problems in studio using CAD.
Course: BN30  Prerequisite: ARB353
Credit Points: 12  Contact Hours: 6 per week

■ ARB454 COMPUTER-AIDED INDUSTRIAL DESIGN 2
Introduction to 3D Solid modelling concepts, 3D spatial relationships, design documentation, 3D model to 2D engineering drawings and development of skills in the use of CAD for engineering drawings. Design presentation.
Course: BN30  Prerequisite: ARB354
Credit Points: 6  Contact Hours: 2 per week

■ ARB457 ELECTIVE 1
Elective Unit drawn from a range presented by the School and approved by the Course Coordinator.
Course: BN30
Credit Points: 6  Contact Hours: 2 per week

■ ARB460 INTERIOR DESIGN 2
Development of design understanding and processes in order to facilitate the capacity for application of available technologies and philosophies, consistent with encouragement of individual freedom in the forging of intrinsic and innovative approaches in seeking design solutions; to introduce the development of a rigorous and systematic methodology in the design process; to concentrate attention on problems with specific interior design parameters; and to foster an appreciation of design as a capability of human beings. Integrated with this is the introduction of information retrieval skills, using the library and other information services; and assessing, organising and evaluating information. Continues to expose students to a variety of presentation techniques and materials needed to communicate design solutions.
Course: BN30  Prerequisite: ARB360
Credit Points: 18  Contact Hours: 6 per week

■ ARB461 INTERIOR TECHNOLOGY 2
Industrialised interior finishes and construction of joinery and fittings and their interaction with the building shell and services. The notions of interior maintenance and life span economics are introduced.
Course: BN30  Prerequisite: ARB361
Credit Points: 12  Contact Hours: 6 per week

■ ARB462 FURNITURE & FITTINGS 2
The manufacture, assembly and fabrication of furniture, fittings and components; expected performance of materials and furniture items, focuses on functional, maintenance, life span, economic properties.
Course: BN30  Prerequisite: ARB362
Credit Points: 6  Contact Hours: 2 per week

■ ARB464 ARCHITECTURAL INTERIOR SYSTEMS 1
Lighting and acoustic considerations, human sensory and behavioural needs. An outline of systems and guidelines for selection and professional judgment.
Course: BN30  Prerequisite: ARB364
Credit Points: 8  Contact Hours: 5 per week

■ ARB480 DESIGN 7
See ARB493.
Course: AR48
Credit Points: 32  Contact Hours: 5 per week

■ ARB481 PROFESSIONAL STUDIES 1
See ARB495.
Course: AR48
Credit Points: 12  Contact Hours: 3 per week

■ ARB491 HISTORY OF ARCHITECTURE & ART 3
Early Australian colonial architecture; Victorian Australia; gothic and classical revival in Australia; the Australian house; modern architecture in Australia; conservation and preservation; Australian landscape and its influence in architecture.
Courses: AR41, AR48
Credit Points: 4  Contact Hours: 1 per week

■ ARB493 DESIGN 7
Theory: masters of the twentieth century in Europe and the USA; their architectural styles, design philosophies and influence; architects in Australia and their influ-
ence on Australasian architecture. Projects: brief, design, construction, services and landscape: a series of architectural projects of medium to high-rise construction: emphasis on workability and compliance with codes, by-laws and regulations.

Course: AR41
Credit Points: 20 (10 per semester)
Contact Hours: 5 per week

■ ARB495 PROFESSIONAL STUDIES
Specifications; estimates; cost planning and control; codes; standards; building legislation; computing.
Course: AR41
Credit Points: 16 (8 per semester)
Contact Hours: 4 per week

■ ARB497 ADVANCED TECHNOLOGY
Mechanisation of construction; construction machinery; excavation; piling; deep basement construction; high-rise construction systems; steel, reinforced concrete and pre-stressed concrete; framing; walling and flooring.
Special services: energy management and maintenance systems; automated building systems; integration of design, structures, services and construction; decision making and choice of constructional methods and procedure. Prefabrication. Case studies.
Courses: AR41, AR48
Credit Points: 16 (8 per semester)
Contact Hours: 4 per week

■ ARB540 ARCHITECTURAL DESIGN 3
Theory: the building as object, surface, volume, space and sequence: expression of buildings: criteria of good design; design ethics and values. Studio: to develop criteria in design and to apply aesthetic theories in architectural projects, a series of architectural projects of low to medium use with emphasis on industry and commerce.
Courses: AR48, BN30
Prerequisite: ARB440
Credit Points: 18
Contact Hours: 6 per week

■ ARB541 BUILDING CONSTRUCTION 3
Studies will review the construction of non-domestic buildings of intermediate size. Each case study will discuss the system characteristics of the building type, the human and environmental factors which constrain the solution, and the associated building systems. Studio work is complemented by field work.
Course: BN30
Prerequisite: ARB441
Credit Points: 17
Contact Hours: 6.5 per week

■ ARB544 LANDSCAPE ARCHITECTURE IN THE BUILT ENVIRONMENT
Principles and development of landscape architecture, application in architectural design, effect in the conservation and enhancement of the environment, landscape architect’s role in architectural practice.
Courses: AR41, BN30
Credit Points: 2
Contact Hours: 1 per week

■ ARB550 INDUSTRIAL DESIGN 3
Product design in depth. The projects are cross-referenced with other subject areas which will provide an integration of knowledge and skills acquired in the previous semesters. During the design projects, different specialist expertise is included. Lectures cover: case studies; design innovation; design methods.
Course: BN30
Prerequisite: ARB450
Credit Points: 18
Contact Hours: 8 per week

■ ARB553 MANUFACTURING TECHNOLOGY 3
Production techniques in relation to different materials, various methods for finishing operations, various methods for forming, automatic and semi-automatic assembly and quality control methods; production cost. Field studies include visits to manufacturing industries. The application of production techniques in studio design projects using CAD.
Course: BN30
Prerequisite: ARB453
Credit Points: 12
Contact Hours: 5 per week

■ ARB554 COMPUTER-AIDED INDUSTRIAL DESIGN 3
Introduction to simple 3D Surface modelling concepts, introduction to shading, development of these skills for product form evaluations. Development of the use of 3D CAD skills for production of advanced 2D engineering drawings.
Course: BN30
Prerequisite: ARB454
Credit Points: 6
Contact Hours: 2 per week

■ ARB556 PRODUCT ANALYSIS & DEVELOPMENT
Case studies on success and failure of industrial/product design; sources for new product development; system for total design product planning; product status, marketing and process of total design management.
Course: BN30
Credit Points: 6
Contact Hours: 2 per week

■ ARB560 INTERIOR DESIGN 3
Students develop their knowledge of systematic interior design processes and apply knowledge gained in support and corequisite units. Application of the physical and cultural context as well as psychological and sociological needs of the end user. Visual and oral communication techniques employed in the production of design presentations to clients.
Course: BN30
Prerequisite: ARB460
Credit Points: 6
Contact Hours: 7 per week

■ ARB561 INTERIOR TECHNOLOGY 3
Continuation of ARB461; emphasis on commercial construction systems and the impact of regulations; high-rise buildings, the planning of tenancies, partitioning and furniture systems, shopping centres, theatres, medical clinics, taverns, restaurants.
Course: BN30
Prerequisite: ARB461
Credit Points: 12
Contact Hours: 6 per week

■ ARB562 FURNITURE & FITTINGS 3
Principles of ornamental design; decorative metalwork; stained glass; decorative ceramics; plasterwork; carved and inlaid woodwork; lacquer work; printed fabrics and papers; tapestry and embroidery.
Course: BN30
Prerequisite: ARB462
Credit Points: 6
Contact Hours: 2 per week

■ ARB580 DESIGN 8
See ARB593.
Course: AR48
Credit Points: 36
Contact Hours: 6 per week

■ ARB590 ELECTIVE 1A
Selected architectural topics including history, conservation, design theory, management, finance, economics, architectural science, computing, urban design, and courses where approved.
Courses: AR41, AR48
Credit Points: 4
Contact Hours: 2 per week

■ ARB591 HISTORY OF ARCHITECTURE & ART 4
A global perspective of the development of art and architecture of regional interest with particular emphasis
on non-European traditions. Architectural development in the Far East, Southeast 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.

Course: ARB41, ARB48
Contact Hours: 2 per week

ARB593 DESIGN 8
Architectural criticism; main themes selected for design and the realisation, convenience, clarity, intelligibility, expression, technology, context form. Post-occupancy evaluation. Testing methodology; analysis and evaluation of building performance, user-oriented design. A series of architectural projects of medium to high-rise buildings involving general building briefs and programs, environmental impact issues, and post-occupancy analysis.

Course: ARB41
Contact Hours: 2 per week

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

Course: ARB41, ARB48
Contact Hours: 6 (8 per semester)

ARB596 ELECTIVE 1B
See ARB590.

Courses: ARB41, ARB48
Credit Points: 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
Reviews the construction of non-domestic buildings of intermediate size. Each case study will discuss the system characteristics of the building type, the human and environmental factors which constrain the solution, and the associated building systems. Studio work is complemented by field work.

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

ARB645 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: 6
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. Lectures include: case studies, design innovation and design methods.

Course: BN30
Prerequisite: ARB550
Credit Points: 18
Contact Hours: 8 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: 12
Contact Hours: 5 per week

ARB654 COMPUTER-AIDED INDUSTRIAL DESIGN 4
Development of skills in complex 3D Surface modelling techniques, application in design form evaluations and form refinement. Further development of shading techniques and introduction to animation. Advanced design documentation.

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

ARB657 ELECTIVE 3
Elective Unit drawn from a range presented by the School, Faculty or other Faculties at QUT and approved by the Course Coordinator.

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

ARB660 INTERIOR DESIGN 4
Students select and develop a complex design problem from brief stage to developed design studio stage, taking into consideration the content and the needs of the end user. Theory studies are cross-referenced to studio projects and exercises. Visual and oral communication techniques for design presentations to clients.

Course: BN30
Prerequisite: ARB560
Corequisites: ARB661, ARB663
Credit Points: 18
Contact Hours: 7 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
Corequisite: ARB660
Credit Points: 12
Contact Hours: 6 per week

ARB662 FURNITURE & FITTINGS 4
The development of a methodical approach to the choice of loose furniture, furniture systems and interior products: qualitative and qualitative assessment approaches; the understanding of furniture design and its integration into interiors.

Course: BN30
Prerequisite: ARB562
Credit Points: 6
Contact Hours: 2 per week

ARB663 RESEARCH METHODS
An overview of research methodology: differences between various research methods and products.

Courses: ARB48, BN30
Corequisite: ARB660
Credit Points: 6
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
ARP681 PROFESSIONAL STUDIES 3
See ARP695.
Course: AR48
Credit Points: 16 Contact Hours: 2 per week

ARP690 ARCHITECTURAL PROJECT
See ARP693.
Course: AR48
Credit Points: 12 Contact Hours: 6 per week

ARP693 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-towncape, civic and formal planning; urban quality. A comprehensive project of groups of complex buildings as a design vehicle to develop planning skills; brief formation; building programming; quality evaluation; planning and presentation.
Course: AR41
Credit Points: 16 Contact Hours: 5 per week

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 (4 per semester) 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 a proposition, and to conduct research to prove its validity.
Course: AR41
Credit Points: Semester 1: 4; Semester 2: 20 Contact Hours: Semester 1: 2 per week; Semester 2: 5 per week

ARP8795 APPROVED EMPLOYMENT A
See course requirements and notes relating to undergraduate courses – industrial experience for Bachelor of Architecture.
Course: AR48
Credit Points: 36 Contact Hours: 48 recognised weeks within first three years

ARP8796 APPROVED EMPLOYMENT B
See course requirements and notes relating to undergraduate courses industrial experience for Bachelor of Architecture.
Course: AR48
Credit Points: 60 Contact Hours: 72 recognised weeks within second three years

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: AR89
Credit Points: 12 Contact Hours: 2 per week

ARP502 ADVANCED INTERIOR DESIGN 1
Exploration of contemporary ideas, theories, methods; practical application of research, analysis, evaluation and the synthesis of ideas related to interiors; contemporary issues in user-oriented design; the development of advanced information retrieval skills; main topics in this AIRS program are: using the QUT library and other information services; accessing information through indexes and abstracts; computerised information retrieval; current awareness strategies; organising and evaluating information.
Course: AR62
Credit Points: 18 Contact Hours: 6 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

ARP508 PROFESSIONAL STUDIES 1
The role and responsibilities of the interior designer in professional practice; job administration, liability, copyright, designer and client relationships; communication 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. 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: 18 Contact Hours: 6 per week

ARP601 SETTING THE SCENE
Incorporates a series of case studies of significant film and theatre sets; students explore the influence of design on emotive behaviour and interpret the implication of this for interior design of a more conventional kind; use is made of the current projects in the unit Environmental Communications.
Course: AR62
Credit Points: 10 Contact Hours: 3 per week

ARP604 CONSERVATION OF HISTORIC INTERIORS
The ethics and the role of the designer in the conservation of interiors. An introduction to building technologies as required by a practising designer working on conservation and restoration projects.
Course: AR62
Credit Points: 18 Contact Hours: 6 per week

ARP605 PROFESSIONAL STUDIES 2
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: 6 Contact Hours: 2 per week

ARP606 ELECTIVE 1
A selected and approved course of study within the School or elsewhere within the University which enables students to deepen their knowledge in particular areas of interior design. All Electives undertaken shall have the prior approval of the Course Coordinator. No special timetabling arrangements will be made to cater for Electives.
Course: AR62
Credit Points: 6 Contact Hours: 2 per week

ARP607 ELECTIVE 2
A selected and approved course of study within the
School or elsewhere within the University which enables students to deepen their knowledge in particular areas of interior design. All Electives undertaken shall have the prior approval of the Course Coordinator. No special timetabling arrangements will be made to cater for Electives.

Course: AR62
Credit Points: 6  Contact Hours: 2 per week

- **ARP608 THEORY AND CRITICISM**
The unit addresses contemporary theories of design and aesthetics and current issues in order to develop a critical understanding of the profession. The unit will incorporate a series of case studies of significant film and theatre designs. In undertaking the case studies students will be required to explore the influence of design on emotive behaviour and to interpret the implications of this for interior design of a more conventional kind.

Course: AR62
Credit Points: 6  Contact Hours: 2 per week

- ** ARP613 ADVANCED ERGONOMICS 1**
  Human-machine systems and their relations with living and working environments; the importance of ergonomics (human factors) criteria and their application to industrial design. The course consists of series of seminars relevant to case studies concerned. Typical case studies are concentrated on the ergonomic evaluation of consumer products.

Course: AR61
Credit Points: 6  Contact Hours: 2 per week

- **ARP623 ADVANCED ERGONOMICS 2**
  Systematic ergonomic evaluation methods and their application to design problems. Lectures and seminars relevant to case studies on the ergonomic evaluation of the working and living environment, e.g. key-punch operator work station, bus driver work station and ergonomic evaluation of an assembly line.

Course: AR61
Prerequisite: ARP613
Credit Points: 6  Contact Hours: 2 per week

- **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

- ** ARP663 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

- **ARP664 PROFESSIONAL PRACTICE AND MANAGEMENT**
  A series of lectures and seminars exploring the role of professional practice management. Lectures include: meaning of design process, control and the design process, complexity of design problems, type of contracts, design management, design documentation, concept of design evaluation and management, role administration, liability, design protection, designer-client relationships.

Course: AR61
Credit Points: 6  Contact Hours: 2 per week

- **ARP670 ELECTIVE A**
  Elective Unit drawn from a range presented by the School, available within the Faculty, elsewhere at QUT or external unit subject to Course Coordinator's approval.

Course: AR61
Credit Points: 6  Contact Hours: 2 per week

- **ARP672 INDUSTRIAL DESIGN 1**
  This unit is linked with ARP673.

- **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 increase according to the semester level.

Course: AR61
Prerequisite: ARP672
Credit Points: 12  Contact Hours: 6 per week

- **ARP674 INDUSTRIAL DESIGN RESEARCH 1**
  A topic is selected by a student and approved and supervised by industrial design staff. Examples are: microsurgical equipment design, bushfire safety equipment, mobile dental clinic in isolated regions and interactive display in psychological testing.

Course: AR61
Prerequisite: ARP673
Credit Points: 18  Contact Hours: 8 per week

- **ARP675 INDUSTRIAL DESIGN RESEARCH 2**
  This unit depends on the topic selected by a student in the previous semester. Students are responsible for the program as a part of their project work, which are approved and supervised by industrial design staff.

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

- **ARP676 ADVANCED COMPUTER-AIDED INDUSTRIAL DESIGN 1**
  Advanced CAD in the design process. Introduction to the interactive use of the application of CAD/CAM and SLA in the development of finalisation of a design project.

Course: AR61
Credit Points: 6  Contact Hours: 2 per week

- **ARP677 ADVANCED COMPUTER-AIDED INDUSTRIAL DESIGN 2**
  Advanced CAD in design development, analysis and manufacturing (CNC) process. Employing CAD/CAM and SLA in the development, evaluation, finalisation, documentation and presentation of a design project.

Course: AR61
Credit Points: 6  Contact Hours: 2 per week

- ** ARP678 INDUSTRIAL DESIGN THESIS**
  This is a continuation and development of the applied research project done in ARP674 /675 Industrial Design Research 2. Documentation of the research strategy, research data application, design processes, methodologies, project management, final design evaluation, final design solution and business plan preparation. Students are responsible for the project management. This is approved and supervised by industrial design staff.

Course: AR61
Prerequisite: ARP674, ARP675
Credit Points: 24  Contact Hours: 4 per week (full-time), 2 per week (part-time)

- **ARP679 ELECTIVE B**
  Elective Unit drawn from a range available within the Faculty, elsewhere at QUT or external unit subject to approval.

Course: AR61
Credit Points: 12  Contact Hours: 3 per week

- **ARP680 ELECTIVE C**
  Elective Unit drawn from a range available within the Faculty, elsewhere at QUT or external unit subject to approval.
Students enrolled full-time in AT22 Master of Arts (Research) degree undertake a research project as the major component of their studies. This project may take the form of a research thesis or a creative project accompanied by a written component. The creative project could include a visual/performing arts production, or a book-length work of fiction/non-fiction, or a film/multimedia script/production.

### Course: AR61
- **Credit Points:** 12
- **Contact Hours:** 3

**ATN005/1 & ATN005/2 RESEARCH PROJECT FULL-TIME**

Students enrolled full-time in AT22 Master of Arts (Research) degree undertake a research project as the major component of their studies. This project may take the form of a research thesis or a creative project accompanied by a written component. The creative project could include a visual/performing arts production, or a book-length work of fiction/non-fiction, or a film/multimedia script/production.

**Course:** ATN005/1 & ATN005/2
- **Credit Points:** 48 per semester, enrolling in both Semester 1 & 2
- **Contact Hours:** 1 per week

**ATN006/1 & ATN006/2 & ATN006/3 & ATN006/4 RESEARCH PROJECT PART-TIME**

Academy of the Arts, School of Humanities and School of Social Science students enrolled part-time in AT22 Master of Arts (Research) degree undertake a research project as the major component of their studies. This project may take the form of a research thesis or a creative project accompanied by a written component. The creative project could include a visual/performing arts production.

**Course:** ATN006/1 & ATN006/2 & ATN006/3 & ATN006/4
- **Credit Points:** 24 per semester, enrolling in Semesters 1, 2, 3 & 4
- **Contact Hours:** 0.5 per week

**ATN007/1 & ATN007/2 & ATN007/3 & ATN007/4 & ATN007/5 RESEARCH PROJECT PART-TIME**

School of Media and Journalism students enrolled part-time in AT22 Master of Arts (Research) degree undertake a research project as the major component of their studies. This project may take the form of a research thesis or a creative project accompanied by a written component. The creative project could include a book-length work of fiction/non-fiction, or a film/multimedia script/production.

**Course:** ATN007/1 & ATN007/2 & ATN007/3 & ATN007/4 & ATN007/5
- **Credit Points:** 12 per semester enrolling in Semesters 1 & 2; 24 per semester, enrolling in Semesters 3, 4 & 5
- **Contact Hours:** 0.5 per week

**AYB001 ACCOUNTING DISCLOSURE & AUDIT**

Tax effect accounting; consolidations; liquidations; acquisition of assets; company disclosure; overview of auditing and audit reports; ethics, legal liability and audit objectives; overall audit plan and audit program involving: evidence and documentation, materiality and risk, internal controls and the procedures for the audit of various applications – sales, purchases, etc.

**Course:** BSB55, ED50
- **Prerequisite:** AYB121
- **Credit Points:** 12
- **Contact Hours:** 3 per week

**AYB120 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:** BSB55, ED50, IF56, IT20, PU48
- **Prerequisites:** BSB114
- **Credit Points:** 12
- **Contact Hours:** 3 per week

**AYB121 FINANCIAL ACCOUNTING**

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

**Courses:** BSB56, ED50, IF37, NS48
- **Prerequisites:** BSB110
- **Credit Points:** 12
- **Contact Hours:** 4 per week

**AYB220 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:** BSB56, ED50, IF37
- **Prerequisites:** AYB121
- **Credit Points:** 12
- **Contact Hours:** 4 per week

**AYB221 COMPUTERISED ACCOUNTING SYSTEMS**

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

**Courses:** BSB56, ED50, IF37
- **Prerequisites:** BSB110, BSB112
- **Credit Points:** 12
- **Contact Hours:** 4 per week

**AYB222 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:** BSB56
- **Prerequisites:** EFB210, BSB112
- **Credit Points:** 12
- **Contact Hours:** 4 per week

**AYB223 LAW OF BUSINESS ASSOCIATIONS**

The law relating to the establishment, operation and dissolution of business associations; the forms of business associations; partnerships, trusts, companies and voluntary associations. A focus on companies: incorporation requirements, classification, share capital and management issues.

**Courses:** BSB56, BSB112
- **Prerequisites:** AYB120 or AYN410
- **Credit Points:** 12
- **Contact Hours:** 3 per week

**AYB224 MANAGEMENT ACCOUNTING**

The nature of management accounting; cost concepts; cost profit volume analysis; relevant costs and special decisions; flexible budgets; responsibility accounting; job and process costing; introduction to finance; financing decisions: equity versus debt, leasing, investment dividends; introduction to financial maths; understanding the financial press.

**Course:** ED50, BSB56
- **Prerequisite:** BSB110
- **Credit Points:** 12
- **Contact Hours:** 4 per week

**AYB225 MANAGEMENT ACCOUNTING I**

Introduction to managerial accounting, the role of the management accountant, and cost concepts; costing systems including actual/normal/standard systems under job and process costing; introduction to budgeting; accounting for the factors of production: materials, labour and overheads; extension of basic costing systems for multiple products and spoilage; direct and absorption costing; cost-volume profit analysis.

**Courses:** BSB56, IF37, IT20
- **Prerequisite:** BSB110
- **Credit Points:** 12
- **Contact Hours:** 4 per week

**Incompatible with:** AYB224
AYB225 MANAGEMENT ACCOUNTING II
The application of the conceptual framework of the finance paradigm to provide a positive explanation of managerial accounting; interrelationships between managerial accounting, economics of firms, business finance, regulation, organisation behaviour and computer applications; agency theory responsibility accounting and cost allocation; decision-making and relevant costs; pricing techniques; advertising and transfer pricing; performance evaluation.
Courses: BS56, IF37, IT20  Prerequisite: AYB225
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: FNB115 & EFB310

AYB300 ACCOUNTING IN AN INTERNATIONAL ENVIRONMENT
This subject is designed to provide students with an overview of the unique problems presented by alternative corporate management control systems in a multinational environment. Overview of international accounting and cultural influences on international accounting; international patterns of accounting development; comparative international accounting systems and practices; accounting for foreign currency transactions and foreign currency derivatives; translation of foreign currency financial statements; comparative international analysis of financial statements; international financial planning and performance evaluation, international transfer pricing and taxation; external auditing of foreign operations, global accounting issues into the twenty-first century.
Course: BS56  Prerequisite: BSB110
Credit Points: 12  Contact Hours: 3 per week

AYB301 AUDITING
The audit environment; legal liability of auditors; professional ethics; study and evaluation of audit planning and programming, evidence, internal control theory and review techniques; audit program applications: revenue, receivables, cash, inventory; audit in EDP environments and evaluation of EDP controls; computer-assisted audit techniques; computer fraud; sampling techniques: the audit report.
Courses: BS56, ED50, IF37  Prerequisite: AYB220
Credit Points: 12  Contact Hours: 3 per week

AYB302 AUDITING & PROFESSIONAL PRACTICE
Audit concepts and procedures: preparing a system based audit plan; the nature and reasoning behind audit tests of basic implementation of specified statistical sampling techniques; EDP auditing; independence; ethics; legal liability.
Course: BS56  Prerequisite: AYB301
Credit Points: 12  Contact Hours: 4 per week

AYB303 COMMERCIAL & SECURITY 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: BS56  Prerequisite: AYB120 or AYN410
Credit Points: 12  Contact Hours: 3 per week

AYB304 COMMERCIAL LAW
Commercial transactions: viz agency, bailment guarantees, cheques and other negotiable instruments, insurance and banking: aspects of partnerships and company law; especially for EDB students.
Courses: BS56, ED50  Prerequisite: AYB319
Credit Points: 12  Contact Hours: 3 per week

AYB305 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 trou-bled companies.
Course: BS56  Prerequisite: AYB223
Credit Points: 12  Contact Hours: 3 per week

AYB306 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: BS56  Prerequisites: EFB210, BSB112
Credit Points: 12  Contact Hours: 4 per week

AYB307 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: BS56  Prerequisite: BSB112
Credit Points: 12  Contact Hours: 4 per week

AYB308 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: BS56  Prerequisite: BSB112, AYB225
Credit Points: 12  Contact Hours: 4 per week

AYB309 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, BS56  Prerequisite: AYB301, AYB220
Credit Points: 12  Contact Hours: 3 per week

AYB310 COMPUTERISED ACCOUNTING APPLICATIONS
This subject uses software to build various accounting applications and discusses issues related to the use of such applications. Database software will be used to build parts of an accounting information system (for example, general ledger, accounts receivable ledger or accounts payable ledger). Macros will be utilised in spreadsheets software to build automated accounting-related models. Expert systems will be examined by using commercially available software and building basic relevant applications. Issues and recent developments in accounting information systems will also be examined.
Course: BS56  Prerequisite: AYB221
Credit Points: 12  Contact Hours: 3

AYB311 FINANCIAL ACCOUNTING THEORY
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: BS56, IF37  Prerequisite: AYB220
Credit Points: 12  Contact Hours: 4 per week

AYB312 FINANCIAL INSTITUTIONS LAW
The legal framework of banking and other financial transactions: legal constraints upon the operations of finan-
cial institutions; bank-customer relationship; Cheque Act, Credit Act, liability for negligent advice.

Course: BS56 Prerequisite: AYB120 or AYN410
Credit Points: 12 Contact Hours: 3 per week

AYB313 GOVERNMENT ACCOUNTING
The structure of government economic and fiscal activities; elements of government accounting; the concept of public accountability; fiscal federalism and theory of budgeting fund accounting; public accounting of Commonwealth, state and local government levels; zero-based budgets and program budgets; budget strategies and financial decision making; project review; statutory corporations; quangos and committees; government financial reporting; external, internal and efficiency auditing; accounting for government business enterprises.

Course: BS56 Prerequisite: BSB110
Credit Points: 12 Contact Hours: 3 per week

AYB314 INDIRECT TAXATION
Examination of taxes relevant to the conduct of a business other than taxes directly imposed on a taxpayer's income and capital gains. Specific taxes covered include sales tax, payroll tax, land tax, stamp duty, customs and excise duties, and the superannuation guarantee charge.

Course: BS56 Prerequisite: AYB223
Credit Points: 12 Contact Hours: 3 per week

AYB315 INDUSTRIAL LAW
The system of law in Australia; industrial aspects of the Australian constitution; the system of industrial law in Australia; the development and role of law in industrial relations; industrial relations legislation, federal and state, common law; industrial torts; industrial actions; industrial disputes; settlement of disputes; sanctions; unions.

Course: BS56 Prerequisite: MGB207
Credit Points: 12 Contact Hours: 3 per week

AYB316 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 officials.

Course: BS56 Prerequisite: AYB223
Credit Points: 12 Contact Hours: 3 per week

AYB317 INTERNATIONAL BUSINESS LAW
Examination of the law governing the establishment and conduct of international business; business structures, international contracts, competing legal jurisdictions, codes of conduct; an introduction to the taxation consequences of international business.

Course: BS56 Prerequisite: AYB120 or AYN410
Credit Points: 12 Contact Hours: 3 per week

AYB318 INTERNATIONAL TAXATION
The subject introduces the student to the art of applying technical knowledge of taxation law to practical business problems and situations. The role of facts, commercial practice, accounting principles, and professional and ethical considerations is given due emphasis.

Course: BS56 Prerequisite: AYB325, AYB326
Credit Points: 12 Contact Hours: 3 per week

AYB319 LEGAL ENVIRONMENT OF BUSINESS
Consumer protection - state and Commonwealth legislation; trade regulation; restrictive trade practices; consumer credit laws; business finance options; use of a business name; choosing a business structure; establishing a business; starting, buying or franchising a business in Queensland.

Course: BS56, BS81 Prerequisites: AYB220, AYB223
Credit Points: 12 Contact Hours: 3 per week

AYB320 MANAGEMENT ACCOUNTING III
Application of management accounting theory and techniques to solve business problems. Examination of case studies in design of costing systems, budgeting, planning and control, decision-making, pricing and performance evaluation.

Course: BS56, IP37 Prerequisite: AYB225
Credit Points: 12 Contact Hours: 3 per week

AYB321 MANAGEMENT ACCOUNTING THEORY
The development of management accounting as a discipline. Development of theories - conceptual framework; theory of the firm; agency theory; contingency theory; decision theory; organisational behaviour theories; theory of constraints; application of theories within the finance/economics paradigm. The application of these theories will be considered practically within the context of issues such as transfer pricing, cost allocation and the contemporary managerial accounting techniques.

Course: BS56 Prerequisite: AYB225
Credit Points: 12 Contact Hours: 4 per week

AYB322 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: BS56
Credit Points: 12 Contact Hours: 3 per week

AYB323 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: BS56 Prerequisite: AYB326 or as corquisite Credit Points: 12 Contact Hours: 3 per week

AYB324 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, lodgment of returns and tax planning need an understanding of the underlying principles; accordingly, the unit examines: the nature and effect of taxation policy statements and rulings; the self-assessment system and the administrative appeals process; the rights of practitioners and clients in relation to audits and investigations; the Australian Taxation Office.

Course: BS56 Prerequisite: AYB223
Credit Points: 12 Contact Hours: 3 per week

AYB325 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: BS56, BS81 Prerequisites: AYB220, AYB223
Credit Points: 12 Contact Hours: 3 per week

AYB326 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 busi-
ness taxes which are not applied to income.
Course: B556
Prerequisite: AYB325
Credit Points: 12
Contact Hours: 3 per week

■ AYN001 MANAGERIAL ACCOUNTING FOR ENGINEERS
An explanation of accounting concepts and terminology and a coverage of the accounting communication and reporting system of financial statements; using accounting information for special decision-making; financial modelling as a decision support system; how costs are accumulated for manufacturing control purposes; current issues in accounting for manufacturing including activity-based costing, costing for quality, costing for productivity.
Course: ME76
Credit Points: 12
Contact Hours: 3 per week

■ AYN004 ACCOUNTING 1 (PY)
See AYN404 Advanced Company Accounting. Please contact the School of Accountancy office regarding commencement date. This unit runs outside the normal semester timetable.
Courses: BS70, BS87, BS94
Prerequisite: AYN420 or AYN117
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: AYN404 or AYN103

■ AYN401 ACCOUNTING 2 (PY)
This unit satisfies the Professional Year syllabus of the Institute of Chartered Accountants in Australia in applied areas of managerial accounting, finance and auditing. The unit builds upon the undergraduate framework in these areas. Topics are revised annually by the Institute with a focus on applied practice.
Courses: BS70, BS87, BS94
Prerequisite: AYN400 or AYN300
Credit Points: 12
Contact Hours: 3 per week

■ AYN402 ACCOUNTING INFORMATION SYSTEMS (PY)
Examination of 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, BS94
Prerequisite: AYN410 or AYN420
Credit Points: 12
Contact Hours: 3 per week

■ AYN403 ADVANCED COMPANY ACCOUNTING
Consolidated financial statements; changes in degree of ownership; reverse subsidiaries and reciprocal shareholdings; consolidation and the existence of preference shares; translation and consolidation of foreign currency financial statements; consolidated cash flow statements; accounting for joint ventures, foreign currency transactions; segment reporting; trusts, superannuation funds and insurers. Please contact the School of Accountancy office regarding commencement date. This unit runs outside the normal semester timetable.
Courses: BS70, BS87, BS94
Prerequisite: AYN420 or AYN117
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: AYN400 or AYN300

■ AYN405 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, BS94
Credit Points: 12
Contact Hours: 3 per week

■ AYN406 ADVANCED TAXATION
Analysis of the capital gains tax regime, a discrete area of taxation law that is complex in nature and has far-reaching commercial ramifications. The focus is on specific issues that have significant practical relevance.
Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

■ AYN407 AUDIT SAMPLING
Statistical sampling methods in the performance of audits. Discussion centres on relevant statistical concepts rather than on unique computational issues. Topics include: the audit sampling process; auditor decisions and risk; attribute, variable and probability proportional-to-size sampling.
Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

■ AYN408 AUDITING (PY)
Examination at an advanced level of auditing standards and their practical application, judgmental and statistical audit sampling; EDP controls, and computer-assisted audit techniques, and audit reporting.
Courses: BS70, BS87, BS94
Prerequisite: AYN401 or FNN300
Credit Points: 12
Contact Hours: 3 per week

■ AYN409 AUDITING STANDARDS & PRACTICE
An examination of relevant auditing standards and their implications for practice. Case studies develop an analytical approach and the ability to exercise professional judgement in audit problems. Recent journal articles, legal cases and newspaper reports are used in conjunction with the cases.
Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

■ AYN410 BUSINESS LAW & ETHICS
Introduction to business law and to morality in the business context. Interpretation of statutes, law of torts, contract law, consumer protection and the utility of business structures; morality and how it works as an aspect of the business community; the origins of moral belief; and the motives which lead people to abide by what they believe to be morally right and to persuade others to do likewise. The functioning morality in society drawing on psychological, sociological and philosophical perspectives with special emphasis on business aspects of morality.
Courses: BS30, BS78, BS81, BS89, G570, G581
Credit Points: 12
Contact Hours: 3 per week

■ AYN411 COMPANY 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; ethics; the audit report.
Courses: BS81, BS89
Prerequisite: AYN417 or AYN113
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: AYN120

■ AYN412 COMPANY LAW
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 prospectus, directors' duties, incorporation and registration requirements.
Course: BS89
Prerequisite: AYN410 or ALN103
Credit Points: 12
Contact Hours: 3
AYN413 COMPUTER AUDITING
The impact of EDP on controls and auditing; general EDP controls; generalised audit software, static and concurrent computer-assisted audit techniques, special EDP environments and computer fraud.
Courses: BS70, BS87, BS94
Credit Points: 12 Contact Hours: 3 per week

AYN414 COST ACCOUNTING
Introduction to management accounting; the role of the management accountant; cost concepts; costing systems; budgeting; extension of basic costing systems for multiple products and spoilage; direct and absorption costing; cost volume profit analysis.
Courses: BS70, BS87, GS81
Prerequisites: AYN416 or AYN112 or AYN403 or AYN101 or GS202
Credit Points: 12 Contact Hours: 3 per week

AYN415 EXTERNAL REPORTING ISSUES
Issues in external reporting; the extractive industries; long-term construction contracts; segments; foreign currency operations, translations and transactions; leasing; tax-effect accounting; goodwill and unidentifiable intangibles; intercorporate investments and joint ventures; liabilities and off-balance sheet financing; and funds/cash flow statements. Readings from research and professional literature to enhance students’ understanding of professional problems.
Courses: BS70, BS87, BS94
Credit Points: 12 Contact Hours: 3 per week

AYN416 FINANCIAL ACCOUNTING I
An introduction to accounting; recording business transactions; adjusting the accounts; preparing financial statements; completion of the accounting cycle; accounting systems and specialised journals; cash and cash journals; accounting for receivables and payables; accounting for merchandising operations and inventories; non-current assets; partnerships; companies; accounting for non-current liabilities; investments; statement of cashflows; analysis and interpretation of financial statements.
Course: BS30, BS81, BS89, GS81, GS70
Credit Points: 12 Contact Hours: 3 per week

AYN417 FINANCIAL ACCOUNTING II
Accounting function within a company; accounting for company income tax (tax-effect accounting); liquidation; acquisition of assets; consolidated financial statements; equity accounting; disclosure in company financial statements.
Course: BS30, BS81, BS89, GS81, GS70
Prerequisites: AYN416 or AYN112
Credit Points: 12 Contact Hours: 3 per week

AYN418 FINANCIAL ACCOUNTING III
The evolution of accounting theory; the external financial reporting framework; theories of regulation and the corporate 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 defasance, 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.
Courses: BS30, BS81, BS89, GS81, GS70
Prerequisites: AYN417 or AYN113
Credit Points: 12 Contact Hours: 3 per week

AYN419 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, BS80, BS94
Credit Points: 12 Contact Hours: 3 per week

AYN420 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. Please contact the School of Accountancy office regarding commencement date. This unit commences in early January.
Courses: BS70, BS87, BS94
Credit Points: 12 Contact Hours: 3 per week

AYN421 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 and the superannuation guarantee charge.
Courses: BS70, BS87, BS94
Credit Points: 12 Contact Hours: 3 per week

AYN422 INSOLVENCY & RECONSTRUCTION (PY)
Examination of the law and practice of bankruptcy and corporate insolvency; comparisons between deeds of company arrangement, schemes of arrangement and reconstruction, receiverships and liquidation; the rights of secured and unsecured creditors; rights of members and employees; duties and obligations of scheme administrators, receivers and liquidators; collection and distribution of assets; public examination; actions against company officers.
Courses: BS70, BS87, BS94
Credit Points: 12 Contact Hours: 3 per week

AYN423 INTERNAL AUDITING
The techniques used by the internal or operational auditors: the need for efficiency and value-for-money auditing; performance auditing; the internal auditor in large organisations both public and private; ethical considerations.
Courses: BS70, BS87, BS94
Credit Points: 12 Contact Hours: 3 per week

AYN424 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, BS94
Credit Points: 12 Contact Hours: 3 per week

AYN425 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, BS94
Credit Points: 12 Contact Hours: 3 per week

AYN426 LEGAL ENVIRONMENT OF BUSINESS
A study of contemporary issues in Business Law.
A study program for candidates enrolled in the Institute of Chartered Accountants Professional Year for the examination and workshops in the examination module. Topics as prescribed by the Institute are covered in cursory fashion or in depth according to the particular knowledge level requirements specified.

Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN437 TAXATION 2 (PY)

Issues of significance in managerial accounting and finance. This unit is offered when required.

Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN438 TAXATION LAW & PRACTICE

Prerequisite: AYN414
Credit Points: 12
Contact Hours: 3 per week

- AYN439 MANAGEMENT ACCOUNTING

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, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN440 SPECIAL TOPIC - COMMERCIAL LAW

Issues for the management accountant in the new manufacturing environment, viewed from a finance economics perspective. Topics include performance evaluation; decision-making; cost allocation; operations research techniques.

Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN441 MANAGERIAL ACCOUNTING ISSUES B

Issues for the management accountant in the new manufacturing environment, viewed from a finance economics perspective. Topics include performance evaluation; decision-making; cost allocation; operations research techniques.

Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN442 SPECIAL TOPIC - MANAGERIAL ACCOUNTING

Issues of significance in managerial accounting and finance. This unit is offered when required.

Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN443 TAXATION 1B (PY)

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

Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN444 SPECIAL TOPIC - MANAGERIAL ACCOUNTING

The law, policy and practice of financial disclosure; depreciable assets; public examination; actions against company officers.

Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN445 TAXATION 1A (PY)

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

Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN446 TAXATION 1B (PY)

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

Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN447 TAXATION 2 (PY)

A study program for candidates enrolled in the Advanced Taxation module of the Institute of Chartered Accountants Professional Year.

Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN448 TAXATION LAW & PRACTICE

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, BS89, GS70, GS81
Credit Points: 12
Prerequisite: AYN412
Contact Hours: 3 per week

- AYN449 MANAGEMENT ACCOUNTING

Planning and control; decision-making; cost allocation; pricing techniques; transfer pricing; performance evaluation.

Courses: BS89, GS70, GS81
Credit Points: 12
Contact Hours: 3 per week

- AYN450 SPECIAL TOPIC - COMMERCIAL LAW

A study of topical issues in the commercial law area.

Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN451 TAXATION 1B (PY)

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

Courses: BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN452 SPECIAL TOPIC - MANAGERIAL ACCOUNTING

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; ethics; computer auditing; and auditing standards.

Courses: BS50, BS63, BS70, BS87, BS94
Credit Points: 12
Contact Hours: 3 per week

- AYN453 SPECIAL TOPIC - COMMERCIAL LAW

The law, policy and practice of financial disclosure; detailed examination of the rules governing the preparation and audit of financial information, whether for annual accounts, experts' reports, or for use in prospectuses or takeovers. Examines the respective theories governing accountants, auditors' and directors' liabilities. Sources of law considered include the Corporations...
The nature, methodology and development of accounting theory; transaction cost economics; positive accounting; accounting disclosure regulations; incentive problems and contracting explanations for external financial reporting; accounting policy choice and the value of the firm; accounting and the political process.

Courses: BS60, BS63, BS70, BS87, BS94
Credit Points: 12 Contact Hours: 3 per week

■ AYN502 FINANCIAL ACCOUNTING HONOURS
The importance of goal setting and motivation, differences between High School and University study, the student/lecturer relationship, approach to learning questionnaire; study management, clarification of learning goals, benefits of planning to the control of learning; using lectures and prac to your advantage, networking, concept mapping and flow charts; using textbooks and set notes to boost understanding; active versus passive learning skills and the implications of both; professional writing - prac, reports, assignments; critical thinking, problem-solving; concentration and memory; learning and stress management; exam preparation, strategies and techniques.
Courses: BS60, BS94, BS63, BS70, BS87, BS94
Credit Points: 12 Contact Hours: 3 per week

■ AYN503 MANAGERIAL ACCOUNTING HONOURS
The importance of goal setting and motivation, differences between High School and University study, the student/lecturer relationship, approach to learning questionnaire; study management, clarification of learning goals, benefits of planning to the control of learning; using lectures and prac to your advantage, networking, concept mapping and flow charts; using textbooks and set notes to boost understanding; active versus passive learning skills and the implications of both; professional writing - prac, reports, assignments; critical thinking, problem-solving; concentration and memory; learning and stress management; exam preparation, strategies and techniques.
Courses: BS60, BS63, BS70, BS87, BS94
Credit Points: 12 Contact Hours: 3 per week

■ AYN504 TAXATION POLICY HONOURS
A study of the Australian taxation system as it has evolved under the policy-making powers of the Australian government. The system is critically assessed using generally accepted criteria governing the formation of taxation policy. Detailed examination of matters on the current reform agenda.
Courses: BS60, BS70, BS87
Credit Points: 12 Contact Hours: 3 per week

■ AYP400 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

■ AYP401 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

■ AYP402 QUALITY COST ANALYSIS
Accounting language in 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: IF59
Credit Points: 6 Contact Hours: 3 per week

■ BNB001 LEARNING AT UNIVERSITY
The importance of goal setting and motivation, differences between High School and University study, the student/lecturer relationship, approach to learning questionnaire; study management, clarification of learning goals, benefits of planning to the control of learning; using lectures and prac to your advantage, networking, concept mapping and flow charts; using textbooks and set notes to boost understanding; active versus passive learning skills and the implications of both; professional writing - prac, reports, assignments; critical thinking, problem-solving; concentration and memory; learning and stress management; exam preparation, strategies and techniques.
Courses: BS60, BS94, BS63, BS70, BS87, BS94
Credit Points: 12 Contact Hours: 3 per week

■ BNB003 PROFESSIONAL PRACTICE IN ASIA/PACIFIC
Overview of the region; institutional and business environments; guidelines for professional practice overseas; sourcing opportunities; selected case studies.
Courses: CE42, EE44, ME45, IF44
Credit Points: 12 Contact Hours: 3 per week

■ BNB004 TECHNOLOGY & SOCIETY
Introduction of the technologies and philosophies employed by the professions in the faculty; social and ethical aspects of professional practice; introduction of study skills required at university; introduction of the three major engineering disciplines - explanation of their similarities and differences; introduction of the professional groups represented in the Faculty of Built Environment and Engineering; explanation of how these groups interact with engineers and society; develop information retrieval skills; codes of ethics relevant to professional practice.
Courses: CE31, CE42, CE43, EE43, EE44, EE45, ME35, NE45, ME47
Credit Points: 8 Contact Hours: 3 per week

■ BNB100 GENERAL ELECTIVE UNIT
Studies previously completed by students in areas of business or humanities may be acceptable as a Group A elective; applications to have such studies accepted as meeting the Group A elective requirements are considered on an individual basis.
Courses: EE44, ME45
Credit Points: 4 Contact Hours: 2

■ BNT100 INDUSTRIAL EMPLOYMENT 1
Students should engage in at least 15 weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
Courses: CE21
Credit Points: 3 each Contact Hours: 15 weeks each

■ BNT200 INDUSTRIAL EMPLOYMENT 2
Students should engage in at least 15 weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
Courses: CE21
Credit Points: 3 each Contact Hours: 15 weeks each

■ BNT300 INDUSTRIAL EMPLOYMENT 3
Students should engage in at least 15 weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
Courses: CE21
Credit Points: 3 each Contact Hours: 15 weeks each
■ BNT400 INDUSTRIAL EMPLOYMENT 4
Students should engage in at least 15 weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
Courses: CE21
Credit Points: 3 each Contact Hours: 15 weeks each

■ BNT500 INDUSTRIAL EMPLOYMENT 5
Students should engage in at least 15 weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
Courses: CE21
Credit Points: 3 each Contact Hours: 15 weeks each

■ BNT600 INDUSTRIAL EMPLOYMENT 6
Students should engage in at least 15 weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
Courses: CE21
Credit Points: 3 each Contact Hours: 15 weeks each

■ BNT700 INDUSTRIAL EMPLOYMENT 7
Students should engage in at least 15 weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
Courses: CE21
Credit Points: 3 each Contact Hours: 15 weeks each

■ BNT800 INDUSTRIAL EMPLOYMENT 8
Students should engage in at least 15 weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
Courses: CE21
Credit Points: 3 each Contact Hours: 15 weeks each

■ BSB110 ACCOUNTING
A study of the basic accounting process, both financial and managerial, and an introduction to the interpretation of accounting information. This unit covers financial procedures and reporting for sole traders, partnerships, co-operatives, and interpretation of financial statements; planning, control and business decision making.
Courses: AA21, BS50, BS56, ED23, ED50, IF37, IF52, IF54, IS43 IT20, PU48
Credit Points: 12 Contact Hours: 4 per week

■ BSB111 BUSINESS ETHICS
This unit introduces students to a framework of ethical decision making which draws on a variety of ethical theories. The first part of the unit develops the theoretical underpinning of ethics. The second part applies the theoretical concepts to actual business decisions. The third part analyses aspects of the legal environment in the light of ethical reasoning.
Courses: B556
Credit Points: 12 Contact Hours: 3 per week

■ BSB112 BUSINESS TECHNOLOGY AND INFORMATION
Provides students with an introduction to electronic commerce and business systems and with a practical understanding of the computing, communications and information systems technologies underlying electronic business systems used both nationally and internationally. Overview of how to find and retrieve information provided in electronic business. The impact of electronic business in terms of security, privacy, legal issues, Practical experience in using and applying common business software functions such as wordprocessing, graphics, spreadsheet and database to business information problems.
Courses: B556
Credit Points: 12 Contact Hours: 3 per week

■ BSB113 ECONOMICS
In this unit students will be introduced to the key concepts of economics, both micro and macroeconomics, presented in an intuitive and applied fashion. The role of the market and prices in achieving an economically efficient allocation of resources is described. In particular, the markets for products, labour and capital in Australia and its competitors are examined. Current important economic issues, such as the importance of savings for economic growth and the "problem" of the balance of payments and foreign debt are discussed. The use of real Australian data and examples will illustrate the relevance of the topics to Australian business and government and show how these relate to the international economy.
Courses: BS50, BS56
Credit Points: 12 Contact Hours: 3 per week

Incompatible with: EPB116, EPB140, EPB150, EPB172

■ BSB114 GOVERNMENT, BUSINESS AND SOCIETY
This unit will provide a basic grounding in the principles, institutions and functions of government, and their interactions with business and society. Its principal focus is the structure and key features of Australia's constitutional and government framework including the judicial and administrative processes, especially as they affect business. Students also will develop a comparative appreciation of the principles, institutional arrangements and practices of contemporary government in a global context. This will include consideration of law-making and policy processes and the impact of the changing national and international environment.
Courses: BS56
Credit Points: 12 Contact Hours: 3 per week

■ BSB115 MANAGEMENT, PEOPLE AND ORGANISATIONS
The unit provides an introduction to the theories and practice of management and organisations. Emphasis is on the conceptual and people skills that will be needed at all levels of management and in all areas of organisational life. The unit acknowledges that organisations exist in an increasingly international environment where the emphasis will be on knowledge, the ability to learn, to change and to innovate. Organisations are viewed from individual, group, corporate and external environmental perspectives.
Courses: BS56
Credit Points: 12 Contact Hours: 3 per week

■ BSB116 MARKETING AND INTERNATIONAL BUSINESS
This introductory subject focuses on the role and importance of international business and marketing to the contemporary organisation. The subject matter will concentrate on the major decision-making areas of international business and marketing. Emphasis will be given to topics such as international trade, world financial legal systems, globalisation processes, technological change and the opportunities, constraints and problems which challenge the design of marketing strategies in the international business environment. The unit is divided into five sections dealing with: the world financial environment; the legal environment; the physical
environment and the role of technology: the socio-cultural context of international business and marketing, transactional relations. Each section will have a theoretical component and students will be introduced to the relevant international and regional institutions, the major problems confronting international business and marketing and the analytical approaches which may be used in their study.

Courses: B550, B556
Credit Points: 12 Contact Hours: 3 per week

II BSB117 PROFESSIONAL COMMUNICATION AND NEGOTIATION
Introduces students to the principles and applications of communication within the professional context. This unit covers academic and workplace writing, oral presentations, negotiation, and current technology for writing and presentations.

Courses: B550, B556
Credit Points: 12 Contact Hours: 3 per week

Incompatible with: COB160, COB106, COB205

II BSB118 BUSINESS COMMUNICATION & APPLICATION SYSTEMS
Nature and development of information systems; transaction processing and computer applications in business; management information systems, decision support systems, executive information systems and expert systems; security issues; theory and practice of written communication in a professional context.

Courses: IF33, IF38, IF53, IS20, IS43, IT20, IT32, BS56
Credit Points: 12 Contact Hours: 3 per week

Incompatible with: COB160, COB106, COB205

II BSB300 MANAGEMENT, THE FIRM AND INTERNATIONAL BUSINESS
Provides a detailed examination of the impact of the international environment upon management and the firm. Examines how management and the firm responds to change if success is to be achieved in a competitive international market. Focuses upon the concepts of change and efficiency in examining dimensions of management practices in order to assess the capacity of a firm to respond proactively; as well as organisational form, major functional processes, networks and strategic responses.

Courses: B550, B556
Prerequisites: BSB102 or HRN104 or BSB115 and MBS202 or BSB115 and MGB206
Credit Points: 12 Contact Hours: 3 per week

Incompatible with: HRN118

II BSN400 INDUSTRY ANALYSIS
This unit aims to provide students with a detailed understanding of the particular industry or industries within which their organisation operates. A sound understanding of the nature of an industry requires the development of appropriate conceptual, analytical and operational skills. This unit provides the framework within which these dimensions are developed and applied to industries selected by the student for their major assignment.

Credit Points: 12 Contact Hours: 3 per week

II BSN401 MANAGEMENT, THE ORGANISATION AND INTERNATIONAL BUSINESS
Whereas BSN400 is concerned with broad, international trends, this unit aims to provide a detailed examination of the typical impacts of the international environment upon the organisation, its management, structure, operations, and resource capacities. In addition, the unit will provide an introduction to the management issues to be faced by organisations entering into export markets.

Credit Points: 12 Contact Hours: 3 per week

II BSN402 PRODUCT AND SERVICE EVALUATION
A major first step in addressing an organisation's capacity to compete in the global environment is the evaluation of the adequacy of the goods and services it provides. The aim of this unit is to provide students with the ability to select from and apply a range of evaluative frameworks and related techniques suitable in a variety of settings, to a range of products and services.

Prerequisites: BSN408 or EPN108 or GSN101 or 48 credit points in the MBA (Prof)
Credit Points: 12 Contact Hours: 3 per week

II BSN403 PRODUCT AND SERVICE INNOVATION AND DEVELOPMENT
Once the strengths and weaknesses of an organisation's products and services have been identified and evaluated, the task is to determine the appropriate, innovative products and services that will enhance its market position. Models of product innovation and development will be examined, followed by an application of the models in an applied fashion, focusing upon: idea generation and screening; evaluating product and service ideas; financial evaluation; design for new and existing markets; human resource needs and capacities for innovation and development.

Prerequisites: BSB408 or EPN108 or GSN101 or 48 credit points in the MBA (Prof)
Credit Points: 12 Contact Hours: 3 per week

Incompatible with: Seminars in Product Innovation and Development or MKN109

II BSN404 PROJECT I
This unit is designed to permit the student to undertake a research project, subject to the approval of the Course Coordinator.
Course: B94
Credit Points: 12

II BSN405 PROJECT II
This unit is designed to permit the student to undertake a research project, subject to the approval of the Course Coordinator.
Course: B94
Credit Points: 12

II BSN406 PROJECT III
This unit is designed to permit the student to undertake a research project, subject to the approval of the Course Coordinator.
Course: B93, B94
Credit Points: 24

II BSN407 STRATEGIC BUSINESS ANALYSIS
A knowledge of international and domestic industry market trends and their specific impacts upon the organisation provides the basic data for the development of flexible strategic visions and plans. The aim of this unit is to provide an examination of major paradigms in strategic formulation and implementation, developing a synthesis of competing prescriptive and descriptive approaches. It will enable the development of an integrating framework to explore why organisations differ and how these differences, in terms of individual competencies and organisational capacities, provide for sustainable competitive advantage in domestic and international markets.

Prerequisites: BSB408 or EPN108
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: MBA Strategic Management or Business Policy units.

II BSN408 BUSINESS AND THE INTERNATIONAL ENVIRONMENT
Business operates in an increasingly international environment which has direct and rapid impacts upon domestic and other markets for products and services. The aim of this unit is to provide a detailed understanding of
the structure of that environment, its current and important trends. The focus will be on the economic, social and political factors determining the contemporary international business structure and its likely future development.

Course: GS80
Credit Points: 12 Contact Hours: 3 per week Incompatible with: GSN101

BSN409 RESEARCH PROJECT
A major piece of applied research. The research project provides the opportunity to apply and reinforce the education and knowledge gained from the course to resolve a complex business problem in accounting, banking and 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, banking and finance and accounting legal studies or related discipline.

Course: BS94 Prerequisite: BSN500
Credit Points: 24 Contact Hours: 3 per week

BSN500 RESEARCH METHODS
The research methodology used in accounting and economics disciplines; the use of certain research techniques to assist students in their research dissertation and preparation of research papers; aims to develop a capacity to build a theoretical model, to design an appropriate research methodology and to understand and utilise statistical analysis for research purposes. This unit is a prerequisite for BSN501 Dissertation and should be attempted immediately prior to enrolment in BSN501 Dissertation.

Courses: BS50, BS70, BS87
Credit Points: 12 Contact Hours: 3 per week

BSN501 DISSERTATION
Students undertake a study of an issue as the culmination of their Honours program. The dissertation must have a well-developed conceptual foundation and include a primary research component.

Course: BS63
Credit Points: 48

BSN502 RESEARCH METHODOLOGY
The purpose of this study is to provide students with a range of ideas and methods that will enable them to analyse, evaluate and conduct research in discipline areas related to Business. It provides an essential and basic preparation for the development of a thesis or dissertation proposal. Areas of study include: research paradigms; analysis and criticism; research design; data collection; data manipulation and interpretation; presentation.

Courses: BS63, BS85, BS61, BS92
Credit Points: 12 Contact Hours: 3 per week Incompatible with: BSN400

BSN503 RESEARCH SEMINAR
The aim of this unit is for the student to prepare a detailed review of the literature relevant to the thesis or dissertation proposal. Students will be required to prepare and present a detailed seminar paper describing and explaining the results of their review, and its relevance to the thesis or dissertation proposal. The unit is structured into two parts: the first provides a series of lectures from staff advising as to the requirements of a thorough, well-directed literature search and review; the second consists of a series of seminars from students presenting their findings.

Courses: BS63, BS85, BS61, BS92
Credit Points: 12 Contact Hours: 3 per week

BSN600 THESIS
This is the major component of a research Masters and consists of a substantial study of an applied or theoretical issue. Students are expected to present a seminar each semester on their progress to date and, in the final semester, on the outcomes of their study. The thesis is expected to have a sound conceptual and theoretical foundation for the exploration of a significant communication topic using primary research data. The thesis report should be of approximately 50,000 words.

Course: BS80 Contact Hours: 96

CEB106 EXPERIMENTAL DESIGN AND ANALYSIS
Introduction to designing simple laboratory experimental investigations. Production of working drawings for manufacture of testing apparatus. Use of data acquisition software and hardware, including strain gauges, LVDT's and load cells. The role of safety and quality audits in the laboratory.

Course: CE31 Contact Hours: 3

CEB108 APPLIED PHYSICS
Allows students without senior high school physics to obtain a basic grounding in areas such as electricity, magnetism, kinematics and mechanics and their practical applications in civil engineering.

Course: CE31 Contact Hours: 4

CEB170 ENGINEERING SCIENCE

Course: CE31 Contact Hours: 3

CEB184 ENGINEERING MECHANICS 1
Introduction to statics, forces, moments and couples; resolution and resultant of forces acting on a particle or rigid body; equilibrium of particle or rigid body under forces and/or moments; analytical and graphical methods for plane truss analysis; shear force and bending moment in beams; the properties of sections.

Course: CE44 Contact Hours: 21 per week over 4 weeks

CEB185 ENGINEERING MECHANICS 2
Principles of structural mechanics, stress, strain and elasticity; indeterminate structures and compatibility; simple beam theory including the flexure formula and the shear stress formula; torsion of circular sections; stresses in thin-walled pressure vessels; shear force and bending moment diagrams; hydrostatics.

Course: CE42 Corequisite: CEB184 Contact Hours: 8

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

Course: CE42, CE43, IP42 Contact Hours: 5 weeks

CEB201 STEEL STRUCTURES
Structural behaviour and limit state design of steel structures, first as structural elements such as beams, columns, beam-columns and ties, then their connections (bolted and welded) and simple assemblies. Practical details and economy are discussed. Site visit and laboratory testing may be included.

Course: CE42, CE43, IP42 Contact Hours: 3.5 per week
■ CEB202 CONCRETE STRUCTURES 1
Basic principles involved in the limit state design of reinforced concrete structures. The determination of size and reinforcement to resist shear and bending in beams. Anchorage and detailing of reinforcement. Deflections in concrete structures and the analysis of long and short columns in uniaxial bending.
Courses: CE31, CE42, CE43, IF42
Prerequisite: CEB185
Credit Points: 8  Contact Hours: 3.5 per week

■ CEB203 CAD FOR CIVIL ENGINEERS
Using personal computers and networks for civil engineering drafting and design. Software packages such as AutoCad, Civil Cad, Micro-Sof, etc. will be used to prepare plans and designs for engineering projects.
Course: CE31
Credit Points: 8  Contact Hours: 3

■ CEB204 COMPUTER APPLICATIONS
The use and management of information technology related to civil engineering. Information system design and delivery mechanisms for the systems. The use of computing systems for the acquisition, analysis and presentation of data.
Course: CE31
Credit Points: 8  Contact Hours: 3

■ CEB211 HIGHWAY ENGINEERING
Highway geometry including vehicle performance and human factors as they relate to road geometry, geometric design, geometric coordination and use of computer-aided design. Highway pavements including pavement materials and construction processes, pavement cross-sections and drainage, pavement theory and pavement analysis methods. Construction sites will also be visited.
Course: CE42, CE43, IF42, CE31
Prerequisites: CEB293, PSB907
Credit Points: 8  Contact Hours: 4 per week

■ CEB212 ENGINEERING INVESTIGATION ANALYSIS AND REPORTING
Recording, analysing and presenting data are important facets of modern civil engineering practice. Not only do engineers use rapidly changing, microcomputer-based technology to access and analyse data, but they must be able to explain the results of their work in clear reports to their peers and to the public. Skills are developed in these aspects of engineering practice, emphasising the use of microcomputers, microcomputers and their applications in civil engineering; investigation and reporting, and the use of wordprocessors, spreadsheets, databases and computer graphics; development of student confidence and ability in keeping up with this changing technology. Verbal and written presentation techniques of civil engineering investigation topics. Skills taught in this unit will also aid students in most units taught in the curriculum.
Courses: CE42, CE31, CE43, IF42
Prerequisite: MEB181
Credit Points: 8  Contact Hours: 4 per week

■ CEB224 COMPUTER APPLICATIONS
The applications of computers in civil engineering will be studied with emphasis on software packages. This unit will establish the tools essential for CEB225 and CEB226 Civil Projects A & B.
Course: CE31
Credit Points: 8  Contact Hours: 3 per week

■ CEB225 CIVIL PROJECTS A
These units integrate the skills and knowledge developed in earlier units by applying the basic engineering science and technology to complete specific engineering design projects. The objectives of this problem-based learning include both the development of specific design skills and the development of generic skills such as professional problem solving, group management, presentation and communication and professional practice issues such as ethics and social effects.
Course: CE31
Credit Points: 8  Contact Hours: 4 per week

■ CEB226 CIVIL PROJECTS B
These units will integrate the skills and knowledge developed in earlier units by applying the basic engineering science and technology to complete specific engineering design projects. The objectives of this problem-based learning include both the development of specific design skills and the development of generic skills such as professional problem solving, group management, presentation and communication and professional practice issues such as ethics and social effects.
Course: CE31
Credit Points: 8  Contact Hours: 4 per week

■ CEB240 SOIL MECHANICS 1
Description and classification of soil for engineering purposes; moisture/density relationships; compaction; pore pressure, effective stress and suction; shear strength of cohesionless and cohesive soils; lateral earth pressure; earth retaining structures design.
Course: CE42, CE43, IF42, CE31
Prerequisite: CEB185
Credit Points: 8  Contact Hours: 3.5 per week

■ CEB241 SOIL MECHANICS 2
Bearing capacity of shallow foundations; permeability and seepage; surface loading on an elastic medium; pore pressure parameters; consolidation; settlement and design of shallow foundations; computer applications in seepage and consolidation.
Course: CE31, CE42, CE43, IF42
Prerequisite: CEB240
Credit Points: 8  Contact Hours: 3 per week

■ CEB254 STRUCTURAL ENGINEERING 1
Determination of forces and/or bending moment distribution in simple determinate structures, stress distributions and transformations of stresses, strain and second moments of area, deflections of beams by the virtual work method and unsymmetrical bending.
Course: CE42, CE43, IF42, CE31
Prerequisite: CEB185  Corequisite: MAB487
Credit Points: 8  Contact Hours: 3.5 per week

■ CEB255 STRUCTURAL ENGINEERING 2
Analysis of simple determinate structures by moment distribution and sway settlement and temporary affect, plastic analysis of beams, influence line diagram for beam frames and trusses, tension on members and deflections of frames and trusses by virtual work method.  Course: CE43, IF42
Prerequisites: CEB254, MAB487
Credit Points: 8  Contact Hours: 3.5 per week

■ CEB260 FLUID MECHANICS
Fluid mechanics; its relationship to civil engineering practice; fluid properties; fluid statics, pressure, forces, buoyancy and stability; continuity, energy and momentum applied to steady one-dimensional flows; viscosity,
turbulence, boundary layers and fluid dynamics forces; dimensional analysis.

**Course**: CE42, CE43, IF42, CE31
**Prerequisites**: CEB185, MAB187, MAB188
**Credit Points**: 8
**Contact Hours**: 3.5 per week

- **CEB261 HYDRAULIC ENGINEERING 1**
The applications of fluid mechanics to pipe and open channel flow, flow measurement and hydraulic machinery. Topics include: steady flow in pipes, networks, flow measurement, uniform flow in open channels, pump and turbines.

**Courses**: CE42, CE31, CE43, IF42
**Prerequisite**: CEB260
**Corequisite**: MAB487
**Credit Points**: 8
**Contact Hours**: 3.5 per week

- **CEB270 ENVIRONMENTAL SCIENCE**
An introduction to the basic principles of ecology and natural systems. To give an appreciation of the adverse consequences of various types of pollution.

**Courses**: CE42, CE43, CE42, IF42
**Corequisite**: MAB487
**Credit Points**: 8
**Contact Hours**: 3.5 per week

- **CEB292 INDUSTRIAL EXPERIENCE 2**
Students should engage in at least five weeks’ employment, approved by the Head of School. For details see the School’s Industrial Experience Handbook.

**Course**: CE42, CE43, IF42
**Credit Points**: 8
**Contact Hours**: 5 weeks

- **CEB293 CIVIL ENGINEERING MATERIALS**
Physical, chemical and engineering properties of common civil engineering materials. Ferrous and nonferrous metals and alloys, timber, bitumen, cladding materials, polymers, corrosion of materials and protective measures. Selection of materials. Role of quality control in engineering units.

**Courses**: CE42, CE43, IF42
**Prerequisites**: MEB134
**Credit Points**: 8
**Contact Hours**: 3 per week

- **CEB294 ENGINEERING SCIENCE**
This will be designed to strengthen the engineering science background of associates. It will allow for some students to be exempt from parts of the subject in which they have a strong background.

**Courses**: CE31
**Prerequisite**: MEB134
**Credit Points**: 8
**Contact Hours**: 4 per week

- **CEB304 CIVIL ENGINEERING DESIGN 1**
Design project work involving the use of steel and reinforced concrete, geotechnical and highway designs; the influence of construction method to design; students prepare design calculations and sketches with the help of design aids and computer software; problem solving skills using projects.

**Courses**: CE42, CE43, IF42
**Prerequisites**: CEB201, CEB202, CEB211, CEB240, CEB205, CEB214
**Credit Points**: 16
**Contact Hours**: 3.5 per week

- **CEB306 CONCRETE STRUCTURES 2**
Principles involved in the serviceability limit state and ultimate limit state design of prestressed concrete structures. Stress blocks and equivalent loads due to prestress, losses, serviceability limit states of cracking and deflection, ultimate limit states of bending and shear, evaluation of deflections and design.

**Courses**: CE42, CE43, IF42
**Prerequisite**: CEB202
**Credit Points**: 8
**Contact Hours**: 3 per week

- **CEB309 CONSTRUCTION PRACTICE**
Basic procedures of civil engineering construction; provides a foundation for further construction studies; gives a practical perspective to later theoretical units.

**Courses**: CE31, CE42, CE43, IF42
**Prerequisites**: CEB202, CEB293
**Credit Points**: 8
**Contact Hours**: 3.5 per week

- **CEB315 TRAFFIC ENGINEERING**
Traffic theory; traffic behaviour, models; traffic management analysis; unsignalised and signalised intersections, street lighting, signs, markings, barriers, parking. Traffic studies and transport planning.

**Courses**: CE31, CE42, CE43, IF42
**Prerequisite**: CEB211
**Credit Points**: 8
**Contact Hours**: 3 per week

- **CEB316 CONSTRUCTION PLANNING & ECONOMICS**
Manual and computer based methods for the planning and programming of projects. The principles of economic and financial analysis pertaining to the planning and execution of engineering projects.

**Courses**: CE31, CE42, CE43, IF42
**Credit Points**: 8
**Contact Hours**: 3 per week

- **CEB324 GEOTECHNICAL ENGINEERING 1**
Soil slope stability analysis by limit equilibrium, drained and undrained conditions. Tack mechanics; rock properties and shear strength. Application to simple slope stability models. Pile foundations: vertical load soil capacity and settlement. Site investigation and in situ determination of soil properties.

**Courses**: CE42, CE43, IF42
**Prerequisite**: CEB255
**Credit Points**: 8
**Contact Hours**: 3 per week

- **CEB356 STRUCTURAL ENGINEERING 3**
Structural analysis of determinate structures under moving loads using influence lines for beams and trusses. The application of plastic analysis techniques to the analysis of beam, frame and slab structures.

**Courses**: CE42, CE43, IF42
**Prerequisite**: CEB255
**Credit Points**: 8
**Contact Hours**: 3 per week

- **CEB362 HYDRAULIC ENGINEERING 2**
Hydraulics: unsteady flow, movable boundary hydraulics, hydraulic models and hydraulic design of structures. Topics include: steady flow compound open channels with variable roughness; unsteady flow in pipes; unsteady flow in open channel flow; design of hydraulic structures such as transitions, culverts, crests, chutes, etc.; mobile boundary hydraulics; the theory and practice relating to fixed and mobile boundary, natural scale and distorted models.

**Courses**: CE42, CE43, IF42
**Prerequisite**: CEB261
**Corequisite**: MAB893
**Credit Points**: 8
**Contact Hours**: 3 per week

- **CEB364 ENGINEERING SCIENCE 2**

**Courses**: PS47, PS48 SV44
**Prerequisites**: MAB199, MEB221
**Credit Points**: 6
**Contact Hours**: 3 per week

- **CEB371 WATER AND WASTEWATER SYSTEMS**
With CEB370, this unit provides a basic understanding of public health engineering practice and design to design in the area of water and wastewater systems. This is a major application area for both generalist civil engineers and environmental engineers.

**Courses**: CE31, CE42, CE43, IF42
**Prerequisite**: CEB373
**Credit Points**: 8
**Contact Hours**: 3 per week

- **CEB372 ENVIRONMENTAL TECHNOLOGY**

**Courses**: CE31, CE42, CE43
**Prerequisites**: CEB270, SCB246
**Corequisite**: CEB370
**Credit Points**: 8
**Contact Hours**: 3 per week
■ CEB373 PUBLIC HEALTH ENGINEERING I
The principles of public health engineering. Causes and
effects of water pollution, principles of unit processes
and operations of water quality control. An introduction
to air pollution, its causes and control.
Courses: CE31, CE42, CE43, IF42
Prerequisite: SCB246
Credit Points: 8 Contact Hours: 3.5 per week
■ CEB375 ENVIRONMENTAL SCIENCE & TECHNOLOGY
An introduction to the basic principles of ecology and
natural systems. To give an appreciation of the adverse
consequences of various types of pollution.
Course: CE42, CE43 Prerequisite: SCB246
Credit Points: 7 Contact Hours: 3 per week
■ CEB392 INDUSTRIAL EXPERIENCE I
Students should engage in at least five weeks' employment,
approved by the Head of School. For details see
the School's Industrial Experience Handbook.
Course: CE42, CE43 Contact Hours: 5 weeks
■ CEB401 DESIGN PROJECT
Students will work in groups to produce initial studies
and outline designs of typical civil engineering projects.
Students are required to define problems, establish goals
for the project, identify and collect necessary information,
generate alternative solutions and optimise some
of these solutions. Students are to develop an awareness
of the possible impact of civil engineering projects on
ecosystems. Students will prepare and present reports
on aspects of selected projects, including feasibility
studies, environmental and economic assessment. Compulsory
site visits.
Course: CE42, CE43 Prerequisites: CEB316, CEB315, CEB362, CEB341
Credit Points: 8 Contact Hours: 3 per week
■ CEB402 PROFESSIONAL PRACTICE
Engineering organisations, project initiation, documentation,
form of contract, contract administration, arbitration,
safety and insurances, legal responsibilities, ethics.
Preparation in job applications and interview techniques.
Course: CE42, CE43, IF42 Prerequisite: CEB316
Credit Points: 8 Contact Hours: 3 per week
■ CEB407 STRUCTURAL APPLICATIONS
Analysis, design, supervision of construction and performance
of structures. Topics include: structural systems,
modelling, sketching, civil engineering structures,
designing for construction, detailing and lessons from
structural failures, timber structures and the role of testing,
controlling vibrations in structures.
Course: CE42, CE43, IF42 Prerequisites: CEB255, CEB355
Credit Points: 8 Contact Hours: 3 per week
■ CEB408 CIVIL ENGINEERING DESIGN I
Continuation of CEB304, with topics covering structural
and civil engineering design, i.e. municipal civil/structural
projects. Field visits are required. More general
problem-solving skills are developed so graduates can
successfully complete projects other than those covered
in the course.
Course: CE42, CE43, IF42 Prerequisites: CEB293, CEB304, CEB342, CEB371
Credit Points: 16 (8 per semester) Contact Hours: 3 per week
■ CEB464 ENGINEERING SCIENCE I
Rainfall intensity duration frequency relating in Australia;
hydrographs, annual rainfall; stream flow hydrographs, rainfall-runoff relations, including the
rational formula; frequency analysis, open channel flow,
pipelines and culverts; design of stormwater drainage
systems, including major and minor systems; water supply
and sewerage descriptive treatment of sources and
treatment processes.
Course: PS47, PS48 Prerequisite: CEB364
Credit Points: 6 Contact Hours: 3 per week
■ CEB471 ENVIRONMENTAL DESIGN PROJECT
Intended to combine material covered in a number of
disciplinary areas into a realistic environmental engineering
project where the overall scope of a 'real world'
environmental engineering problem is investigated. A
general approach to problem definition and solution is
to be emphasised and the identification and study of
environmental impacts is illustrated by application to a
specific project.
Course: CE42, CE43 Prerequisites: CEB362, CEB316, CEB315, CEB342
Credit Points: 8 Contact Hours: 3 per week
■ CEB475 ENVIRONMENTAL ENGINEERING DESIGN
Continues on from Civil Engineering Design I with the
emphasis shifting to design of projects involving water
quality management, waste management, land management
and other environmental engineering applications.
More general problem-solving skills are to be developed
so that graduates can successfully complete projects
other than those covered in the course. There is special
emphasis on the appropriate use of computers for engi-
neering analysis and design and on the potential use
of computers for monitoring and control of engineering
processes.
Course: CE42, CE43
Prerequisites: CEB304, CEB270, CEB372
Credit Points: 16 (8 per semester) Contact Hours: 4 per week in Semester 1; 3 per week
in Semester 2
■ CEB493 PROJECT (CIVIL)
Students undertake a relatively difficult task in an area
of civil engineering practice requiring research and de-
velopment. Each project will include: a literature review;
problem definition; organisation and execution of a pro-
gram of investigation; critical analysis of investigation;
presentation of a seminar on the work and presentation
of a written report.
Course: CE42, CE43, IF42 Prerequisites: CEB221, CEB304. Completion of at least
250 credit points of the course including an appropriate
combination of units.
Credit Points: 16 (8 per semester) Contact Hours: 3 per week
■ CEB501 CIVIL ENGINEERING PRACTICE I
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 ad-
vertised by the Head of School.
Course: CE42, CE43, IF42 Prerequisites: Students must be in the final year of their
course.
Credit Points: 8 Contact Hours: 3 per week
■ CEB502 PROJECT CONTROL
The planning and management of engineering develop-
ments of significance requires a range of project man-
agement skills relating to the interactions required with
other professional disciplines, clients, government and
the community. This subject provides training and ex-
pense in the application of these inter-disciplinary
skills.
Course: CE42, CE43, IF42  Prerequisite: CEB316  Credit Points: 8  Contact Hours: 3 per week

CEB503 ADVANCED CONSTRUCTION METHODS
Examination of existing practice and technology in the construction industry and insights into current and future developments in construction techniques and plant. Site visits are included.
Course: CE42  Prerequisites: CEB305, CEB309  Credit Points: 8  Contact Hours: 3 per week

CEB505 PROJECT MANAGEMENT & ADMINISTRATION
Using case studies and 'role playing' techniques, students are required to develop solutions to a variety of project management problems. Submit reports and make presentations regarding these exercises.
Course: CE42, CE43, IF42  Prerequisite: CEB316  Credit Points: 8  Contact Hours: 3 per week

CEB506 CIVIL ENGINEERING PRACTICE 2
Lectures, tutorials, practical work and field trips covering current topics in a specified area of civil engineering at an advanced undergraduate level. Unit is offered irregularly. When offered, the unit material will be advertised by the Head of School.
Course: CE42, CE43, IF42  Prerequisites: Students must be in the final year of their course.
Credit Points: 8  Contact Hours: 3 per week

CEB511 TRANSPORT ENGINEERING 2
Students focus on two aspects of transport engineering, rural road upgrading and small urban area transportation planning and road needs. Includes highway upgrading, deficiency analysis, traffic accident analysis, traffic flow simulation, staged development, overcoming lanes, and road intersection design; application of four-step transportation planning models, surveys, zone selection, network development, trip generation, distribution, assignment, model calibration, future year modelling, evaluation and selection of road needs, sensitivity analysis.
Course: CE42, CE43, IF42  Corequisite: CEB512  Credit Points: 8  Contact Hours: 3 per week

CEB512 TRANSPORT ENGINEERING 1
Land use/transport interaction, trip generation, trip distribution, mode choice, transport operations analysis, transport economics, transport capacity, urban road planning principles, urban transit planning, railway, aviation, and bulk commodity systems design. Advanced pavement design techniques.
Course: CE42, CE43, IF42  Prerequisite: CEB313  Credit Points: 8  Contact Hours: 3 per week

CEB520 FINITE ELEMENT METHODS
Finite element, finite difference and similar numerical techniques. Theoretical and modelling considerations are covered in the context of case studies in structures, soil mechanics and hydraulics.
Course: CE42, CE43, IF42  Prerequisite: CEB355  Credit Points: 8  Contact Hours: 3 per week

CEB531 MASONRY DESIGN
Course: CE42, CE43, IF42  Prerequisite: CEB306, CEB355  Corequisite: CEB293  Credit Points: 8  Contact Hours: 3 per week

CEB541 GEOTECHNICAL ENGINEERING 2
Course: CE42, CE43, IF42  Prerequisite: CEB341  Credit Points: 8  Contact Hours: 3 per week

CEB542 GEOTECHNICAL ENGINEERING 3
Development of marginal lands: trafficability; embankments on soft soil; preloading; vertical drainage; vibroflotation; dynamic compaction and methods of deep foundation improvement. Rock excavation and slope stabilisation. Soil improvement, including mechanical and chemical stabilisation, soil reinforcement and other techniques. Anchoring in soil and rock. Earth and rockfill design and construction.
Course: CE42, CE43, IF42  Prerequisite: CEB341  Credit Points: 8  Contact Hours: 3 per week

CEB543 ENVIRONMENTAL GEOHYDROLOGY
An introduction into the investigation and analysis of groundwater flow through porous media, including numerical modelling and contaminant transport.
Course: CE31, CE42, CE43, IF42  Prerequisite: CEB341  Corequisite: CEB408  Credit Points: 8  Contact Hours: 3 per week

CEB551 ADVANCED STRUCTURAL DESIGN
Emphasis on the design of more complex structures. Normally three projects are studied involving some or all of: design in new materials, new analytical techniques, new codes of practice, novel structures.
Course: CE42, CE43, IF42  Prerequisites: CEB201, CEB306, CEB354  Corequisite: CEB261, CEB362  Credit Points: 8  Contact Hours: 3 per week

CEB560 HYDRAULIC ENGINEERING 3
Lectures, tutorial, practical work and site visits examine selected topics in water engineering. Topics chosen from hydrology, mobile bed hydraulics, river hydraulics, hydraulic structures, urban drainage, physical and mathematical modelling.
Course: CE42, CE43, IF42  Prerequisite: CEB261, CEB362  Credit Points: 8  Contact Hours: 3 per week

CEB561 COASTAL ENGINEERING
Coastal engineering: wave theory, recording and analysis, wave generation, coastal processes, tides, surges, etc., currents, sediment movement, foreshore protection; coastal inlets, canal systems; planning and design of coastal structures; hydraulic models.
Course: CE42, CE43, IF42  Prerequisite: CEB261  Corequisite: CEB362  Credit Points: 8  Contact Hours: 3 per week

CEB564 ENGINEERING SCIENCE 4
Road pavement and building footing appraisal methods; earthenworks and reclamation design/testing procedures; local authority/DPD design guidelines for water supply and sewerage reticulation, all-terrain roads; roads; earthenworks, 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 road- works, 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, PS48 Prerequisites: CEB364, MED221 Corequisite: CEB464 Credit Points: 6 Contact Hours: 3 per week

**CEB570 WASTE MANAGEMENT**
Basic solid waste management (domestic, commercial and industrial wastes); the general principles of industrial liquid waste management, with examples of some important industries.

Course: CE42, CE43, IF42 Corequisite: CEB371 Credit Points: 8 Contact Hours: 3 per week

**CEB575 ENVIRONMENTAL IMPACT ASSESSMENT**
Introduction to the techniques of environmental management. Environmental impact assessment and the evaluation of critical environmental problems.

Course: CE42, CE43, IF42 Prerequisites: CEB373, CEB493, SCB246 Credit Points: 8 Contact Hours: 3 per week

**CEB701 CIVIL ENGINEERING QUANTITIES 1**
The measurement of civil engineering works based on the study of SMM of Civil Engineering Quantities. Detailed study of construction methods, plant, specification and measurement of: earthworks (clearing, excavation and filling); roadworks (survey, bulk excavation and filling, pavement construction, kerbing, culverts); and bridges (abatments, superstructure, approach embankments, safety structures, types of bridge structures, foundations, prestressed concrete). It includes a brief introduction to computer applications such as earthwork calculations, etc.

Courses: CN31, CN33 Prerequisite: CNB341 Credit Points: 4 Contact Hours: 2 per week

**CEB901 CIVIL ENGINEERING QUANTITIES 2**
Further study of SMM for industrial engineering construction leading to the measurement of dams, earthworks, storage volumes, etc.; refinery and processing plant, pipework, vessels, tanks, instrumentation, electrical commissioning, scaffold, shut down maintenance; pipelines, environmental assessment, construction, stations; mining, plant and equipment, conveyors, processing plant, etc.; oil and gas, offshore platforms, fabrications, etc.; cost engineering and cost control on engineering projects.

Course: CN33 Prerequisite: CEB701 Credit Points: 4 Contact Hours: 2 per week

**CEP107 CONSTRUCTION MANAGEMENT & ECONOMICS**
The management of operational features of engineering practice. Topics include engineering economics, contracts, plant and labour considerations of concern to the engineer and manager.

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

**CEP109 MUNICIPAL LAW & REGULATIONS**
The legislative framework for municipal engineering in Queensland. The various acts and regulations affecting the practising municipal engineer including powers and responsibilities are covered.

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

**CEP127 ROAD & TRAFFIC ENGINEERING**
Urban traffic management, parking systems, surveys, intersection analysis; the design and evaluation of the urban road network; design of rural roads and pavement structures; pavement management.

Courses: CE63, CE74 Credit Points: 12 Contact Hours: 3 per week

**CEP128 MUNICIPAL ENGINEERING PLANNING**
The principles of town and regional planning for municipal engineers in Queensland. The objectives and methodology of planning, practical problem solving, legislation and other factors of concern to the municipal and development engineer.

Courses: CE63, CE74 Credit Points: 12 Contact Hours: 3 per week

**CEP131 ENGINEERING MANAGEMENT & ADMINISTRATION**
Management principles and functions. Strategic and tactical planning, forecasting, decision-making. Budgeting and controls in organisations, techniques of project control. Human resources, managing change and development. Formulation of policy within a local authority. Local authority internal organisation, management, powers, responsibilities and functions, accounting and budgetary cycles, sources of finance and expenditure patterns.

Courses: CE63, CE74, IF64 Credit Points: 8 Contact Hours: 2 per week

**CEP172 WATER QUALITY ENGINEERING**
Liquid wastes and their effect on receiving waters. Dispersion and decay of pollutants in the water environment. Water quality standards and objectives.

Courses: CE63, CE74 Credit Points: 12 Contact Hours: 3 per week

**CEP174 PUBLIC HEALTH ENGINEERING PRACTICE**
Water supply network analysis, water sources, reservoirs, pumps, water hammer, sewerage systems, pump stations, corrosion, water quality, water and wastewater treatment.

Courses: CE63, CE74 Credit Points: 12 Contact Hours: 2 per week

**CEP180 PROCESS MODELLING**
The 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: 3 per week

**CEP195 ADVANCED TRAFFIC ENGINEERING**
Traffic flow theory and traffic management. Analytical and computer analysis routines for urban intersection design, their background and applications.

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

**CEP218 TRANSPORTATION ENGINEERING**
Techniques for the appraisal of rural and urban area road systems, bus operations, airport design, construction and maintenance.

Courses: CE63, CE74 Credit Points: 12 Contact Hours: 3 per week

**CEP266 ADVANCED TREATMENT PROCESSES**
The design and operation of water and wastewater treatment plants, including conventional and alternative processes. Current practice and development.

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

**CEP277 WASTE MANAGEMENT**
Characteristics and analysis of solid wastes. Collection, storage, transportation, handling, recycling and disposal. Sources and characteristics of industrial liquid wastes. Treatment design methodology. Pilot scale modelling and investigation. Case studies of selected classes of industrial wastes.
The student is required to investigate in depth
struction reporting, contract management, human
state legislation. Development controls. Trends in
Construction planning, organisational structure,
Credit Points:

Transportation planning applications; road needs, urban
transport, local area planning. Macro land use/transporta-
tion and micro urban transportation models; urban
transportation zone selection and data needs; trip gen-
eration; model splits; surveying.
Courses: CE63, CE74
Credit Points: 8 Contact Hours: 2 per week

CEP310 URBAN TRANSPORTATION PLANNING

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
chomels, retention basins, culverts and bridges; erosion,
sedimentation aspects of drainage, costs, planning poli-
cies and the law.
Courses: CE63, CE74
Credit Points: 8 Contact Hours: 2 per week

CEP361 DRAINAGE ENGINEERING

A prescribed program of individual supervised study in
a selected area within the field of municipal engineer-
ing, 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 re-
sults are presented in a major formal report.
Course: CE74
Credit Points: 20 Contact Hours: 5 per week

CEP999 PROJECT A

The student is required to investigate in depth a sub-
stantial approved topic within the range of civil engi-
neering practice and to carry out design, computing,
model or experimental design and construction, experi-
mental work and testing. The results are presented in a
major formal report.
Course: CE74
Credit Points: 36 Contact Hours: 9 per week

CET606 CONSTRUCTION MANAGEMENT

Construction planning, organisational structure, con-
struction reporting, contract management, human rela-
tions, civil engineering plant hire.
Course: CET66
Credit Points: 7 Contact Hours: 3 per week

CET704 CIVIL CONSTRUCTION PRACTICE

Principles of temporary works design; formwork, false
work, scaffolding, shelter, de-watering, excavation and
earthworks, civil engineering plants-the Construction
Safety Act and Regulations.
Course: CET70
Credit Points: 7 Contact Hours: 3 per week

CET707 MUNICIPAL ENGINEERING

Structures and function of local authorities, legislation,
municipal road and street construction, design offices,
traffic management, parking, town planning and subdi-
vision, solid waste management, building practice, other
municipal engineering aspects, field trip to local author-
ity facilities.
Course: CET71
Prerequisite: CET815
Credit Points: 7 Contact Hours: 3 per week

CET735 ADVANCED LABORATORY TESTING 1

Testing work to give experience with a range of equip-
ment and testing procedures. Includes field and labora-
ory testing in a number of selected areas.
Course: CET71
Credit Points: 7 Contact Hours: 3 per week

CET787 STRUCTURAL ENGINEERING DRAWING

Structural engineering drawings covering basic steel
work and reinforced concrete works. Reinforcing sched-
ules together with details of steel connections.
Course: CET71
Prerequisites: CET286, CET853, CET653, MET120
Credit Points: 7 Contact Hours: 3 per week

CET856 ADVANCED CONSTRUCTION TECHNIQUES

History of construction; planning and programming in-
cluding critical path analysis and resource levelling;
contracts; crane selection and safety; case studies; de-
tailed and ‘fast’ estimating techniques.
Course: CET71
Prerequisite: CET706
Credit Points: 7 Contact Hours: 3 per week

CET876 PLANT OPERATION & MAINTENANCE

Operation and maintenance of water quality treatment
plants; scheduling, labour control, workshop organisa-
tion, safety, training, performance monitoring.
Course: CET71
Prerequisite: CET777
Credit Points: 7 Contact Hours: 3 per week

CET887 COMPUTER AIDED DRAFTING

Using mainframe and personal computers for civil and
structural drawing presentations. Output from compu-
ter design programs as examples. Software usage and
limitations, plan compilation and output.
Course: CET71
Prerequisite: CET286
Credit Points: 7 Contact Hours: 3 per week

CET888 STRUCTURAL DRAWING & DESIGN

Minor structural design and layout are undertaken. Prepa-
ration of advanced structural engineering drawings cov-
ering steel, reinforced and prestressed concrete and tim-
er where geometric and physical constraints interact with
the structural design process.
Course: CET71
Prerequisites: CET286, MET120
Corequisite: CET585, CET653, CET787
Credit Points: 7 Contact Hours: 3 per week

CHA10 LABORATORY TECHNIQUES

Introduces safe and proficient procedures in the labora-
tory, and gives practice in the manipulation of common
laboratory apparatus, equipment and reagents. On com-
pletion 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. The program includes a formal treatment of laboratory safety and occupational health.

Course: SC15.
Credit Points: 8

Contact Hours: 3 per week

- **CHA140 CHEMISTRY**
  An integrated course of fundamental chemistry covering: the nature of chemistry; atomic, molecular and nuclear structure; bonding and types of bonds; the structure and nature of matter; molecular formulae, atomic and molecular weights; the periodic classification; reduction/oxidation, chemical equilibria; liquids and solutions and simple phase equilibria in electrolyte solutions; pH and its measurement; carbon chemistry and functional groups; the chemistry and properties of some common laboratory chemicals. Practical applications are emphasised.

  Courses: SC12, SC15
  Prerequisite: CHA140
  Credit Points: 8
  Contact Hours: 3 per week

- **CHA210 ANALYTICAL CHEMISTRY 1**
  A lecture and laboratory program on the theory and techniques of both qualitative and quantitative analysis. Qualitative methods cover anion, cation, as well as simple organic functional group identifications. Titrimetric methods include neutralimetry, redoximetry, precipitation and compleximetry.

  Course: SC12
  Prerequisite: CHA110 or CHA111
  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.

  Courses: SC12
  Prerequisite: CHA111 or CHA110
  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.

  Courses: SC12
  Prerequisite: CHA111 or or CHA110
  Credit Points: 6
  Contact Hours: 3 per week

- **CHA230 CHEMISTRY OF INORGANIC MATERIALS**
  An extension of the basic atomic and molecular theory introduced in CHA145 to include atomic orbitals, orbital shapes and quantum numbers; radioactive breakdown and applications; 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.

  Courses: SC12
  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. Included also is a requirement for completion of a Senior First Aid Certificate.

  Course: SC12, SC15
  Prerequisite: CHA110 or CHA111
  Corequisite: CHA210
  Credit Points: 8
  Contact Hours: 4 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: SC12, SC15
  Prerequisite: CHA140
  Credit Points: 8
  Contact Hours: 3 per week

- **CHA270 PHYSICAL CHEMISTRY 1**
  The first part of an integrated syllabus of physical chemistry; the fundamental aspects of chemical energetics, solution chemistry, equilibria; practical applications.

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

- **CHA271 PHYSICAL AND INORGANIC CHEMISTRY 1**
  This is the first part of an integrated syllabus of physical chemistry covering the fundamental aspects of chemical energies, solution chemistry, equilibria; practical applications. Inorganic chemistry covers atomic theory, the electronic buildup of the elements, bonding and molecular orbitals, and general structure - property relationships for elements and compounds.

  Course: SC15
  Prerequisite: CHA140
  Credit Points: 12
  Contact Hours: 5 per week

- **CHA280 CONSUMER CHEMISTRY**
  A coverage of the chemistry of the 'consumer chemicals' in everyday use in both the home and in the work environment, including foods and food additives, detergents, pesticides, fuels and oils and other products of commercial interest.

  Course: SC15
  Prerequisite: CHA140
  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.

  Courses: SC12
  Prerequisites: CHA218, CHA240
  Corequisite: CHA319
  Credit Points: 8
  Contact Hours: 4 per week

- **CHA319 ANALYTICAL CHEMISTRY 2**
  Lectures and practical work are designed to develop further the basic titrimetric and gravimetric analysis principles introduced in CHA218. The program features the analysis of commercial materials with emphasis on sample dissolution techniques.

  Courses: SC12
  Prerequisite: CHA218
  Credit Points: 6
  Contact Hours: 3 per week

- **CHA320 CHEMICAL PROCESS PRINCIPLES 1**
  Chemical reactions both homogeneous and heterogeneous, unit operations; transport preparation and separation of materials and material and energy balances in chemical processes.

  Courses: SC12
  Prerequisite: CHA270
  Corequisite: 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.

  Courses: SC12
  Prerequisite: CHA250
  Credit Points: 8
  Contact Hours: 3 per week
- CHA368 INDUSTRIAL CHEMISTRY
  The basic aspects of product and quality control, the underlying fundamental chemistry and the chemical technology involved in, for example, the petroleum and petrochemical industry, the polymer, plastics 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.
  Courses: SC12
  Prerequisites: CHA230, CHA250, CHA320
  Credit Points: 8 Contact Hours: 3 per week

- CHA370 PHYSICAL CHEMISTRY 2
  The second part of the integrated syllabus of physical chemistry: chemical kinetics, surface chemistry and elementary electrochemistry.
  Courses: SC12
  Prerequisite: CHA230
  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.
  Courses: SC12
  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.
  Courses: SC12
  Credit Points: 4 Contact Hours: 2 per week

- CHA550 ORGANIC CHEMISTRY 3
  The chemistry and uses of organic compounds encountered in industry, such as agricultural chemicals, fats and oils, waxes, detergents, dyes, drugs, elastomers, fibres, adhesives and cellulose derivatives.
  Courses: SC12
  Prerequisite: CHA350
  Credit Points: 8 Contact Hours: 3 per week

- CHA610 INDUSTRIAL ANALYSIS
  A course involving the use of quantitative techniques in the analysis of commercially important materials, including ores, cement, fertiliser, fats, oils and sugar products.
  Courses: SC12
  Prerequisites: CHA318, CHA319
  Credit Points: 8 Contact Hours: 3 per week

- CHA670 PHYSICAL CHEMISTRY 3
  The third part of the integrated syllabus of physical chemistry: covers the areas of applied electrochemistry, corrosion, distillation and extraction. Practical applications are emphasised.
  Courses: SC12
  Prerequisite: CHA370
  Credit Points: 8 Contact Hours: 3 per week

- CHB001 INTRODUCTORY CHEMISTRY
  For students without a pass in Senior Chemistry this unit combines introductory chemistry with an introduction to laboratory techniques and practice in the manipulation of common elementary laboratory apparatus, equipment and reagents.
  Course: PU49
  Credit Points: 12 Contact Hours: 6 per week

- CHB149 PRINCIPLES OF CHEMISTRY
  Course: CH132
  Prerequisites: Year 12 Chemistry - Sound Achievement or CHB001
  Credit Points: 12 Contact Hours: 6 per week

- CHB182 CHEMISTRY 1
  Chemical stoichiometry: thermodynamic: atomic structure: chemical bonding, chemical reactions: carbon compounds; states of matter; chemical equilibrium; acids and bases; ions and ionic equilibria.
  Courses: ED50, SC30
  Prerequisites: Year 12 Chemistry - Sound Achievement or CHB001
  Credit Points: 12 Contact Hours: 6 per week
  Incompatible with: CHB142
CHB183 CHEMISTRY 1B
Fundamental studies in two of the three sub-discipline areas of chemistry - inorganic chemistry and organic chemistry: the periodic table; acids, bases and salts; chemical reactions and stoichiometry; chemistry of hydrogen; chemistry of oxygen; principles of bonding in compounds of carbon; structural and electrical effects in compounds of carbon; chemical reactivity of organic molecules; radical reactions of organic hydrocarbons; mechanism and industrial significance, halocarbons and industrial solvents; addition reactions of alkenes, mechanism and industrial significance, polymers and plastics.
Course: CHB183
Prerequisites: Year I
Credit Points: 12
Contact Hours: 6 per week

CHB213 CONCEPTS OF ANALYTICAL CHEMISTRY
Scope and limitation of analytical chemistry; role of analytical chemistry in society and technology; laboratory equipment and safety; chemical safety; types of analyses; analytical methodology; data handling; an overview of advanced analytical techniques.
Courses: CHB213, ED50, SC30
Prerequisites: CHB173 or CHB182
Credit Points: 12
Contact Hours: 5 per week

CHB242 CHEMISTRY 2
Physical chemistry: Calorie counting – the underlying principle, first and second laws of thermodynamics; gases and respiration, Boyle’s Law and the breathing process, Charles’ Law, Henry’s Law and oxygen hyperbaric therapy, Graham’s Law; Speed control of chemical and biochemical processes. Organic chemistry: the chemistry of hydrocarbons, stereochemistry, functional group chemistry, polyfunctional compounds, biologically important organic compounds including sugars, polyacrylolic acids, lipids, peptides and proteins, heterocyclic compounds.
Courses: LS56, OP42, PU44, PU49, SC30
Prerequisite: CHB142
Credit Points: 12
Contact Hours: 5 per week
Incompatible with: CHB282

CHB253 CHEMISTRY 2B
Builds on the fundamental concepts studied in Chemistry 1B CHB183 and develops a knowledge of organic chemistry as a tool for understanding the nature of organic chemical change; the use of modern spectroscopic techniques in structure elucidation.
Course: CHB253
Prerequisite: CHB183
Credit Points: 12
Contact Hours: 5 per week

CHB259 ORGANIC CHEMISTRY
The chemistry of carbon; covalent bonding; families of organic compounds, their properties and reactions; biomolecules and polymers, carbohydrates, lipids, proteins, enzymes.
Course: PU49
Prerequisite: CHB001
Credit Points: 12
Contact Hours: 5 per week

CHB282 CHEMISTRY 2
Atomic structure; chemical bonding: thermo-dynamics; oxidation and reduction; electrochemistry; coordination chemistry; metals, metallurgy, transition elements; silicon, silicates, semiconductors; stereochemistry and optical activity; alcohols, phenols, ethers, amines; aldehydes and ketones, carboxylic acids and functional derivatives of carboxylic acids: infrared spectroscopy.
Courses: ED50, SC30
Prerequisite: CHB182
Credit Points: 12
Contact Hours: 6 per week

CHB283 CHEMISTRY 2A
Continuation of the fundamental studies already commenced in two of the three sub-discipline areas of chemistry: Thermodynamics; surface chemistry; equilibrium electrochemistry; liquids and solutions; the Phase Rule. Chemistry of non-metals; chemistry of metals; coordination chemistry; nuclear chemistry.
Course: CHB283
Prerequisites: CHB173, CHB183, MAB200, PHB122
Credit Points: 12
Contact Hours: 5 per week

CHB289 ORGANIC & PHYSICAL CHEMISTRY
Physical chemistry: Calorie counting – the underlying principle, first and second laws of thermodynamics; gases and respiration, Boyle’s Law and the breathing process, Charles Law, Henry’s Law and oxygen hyperbaric therapy, Graham’s Law; Speed control of chemical and biochemical processes. Organic chemistry: the chemistry of hydrocarbons, stereochemistry, functional group chemistry, polyfunctional compounds, biologically important organic compounds including sugars, polyacrylolic acids, lipids, peptides and proteins, heterocyclic compounds.
Course: PU45
Prerequisite: CHB142
Credit Points: 8
Contact Hours: 4 per week
Incompatible with: CHB242, CHB282

CHB313 ANALYTICAL CHEMISTRY 3
Analytical techniques including volumetric glassware, basic laboratory equipment, laboratory balances (toppan and analytical), sampling, sample dissolution principles, neutralimetry; redoximetry; precipitimetry; compleximetry; gravimetry; treatment of results; instrumental methods.
Courses: CHB32, ED50, SC30
Prerequisites: CHB253, CHB282 or CHB283
Credit Points: 12
Contact Hours: 5 per week

CHB333 INORGANIC CHEMISTRY 3
Coordination chemistry; bonding and structure of metal complexes including crystal field theory and valence bond theory; an introduction to group theory; spectroscopic terms; solution chemistry – the structure of water; aqueous solutions; inorganic properties of water; distribution diagrams; hydrolysis; E/H/P diagrams; bioinorganic chemistry – biological significance of ligands and metals; HSAB theory; complex equilibria; applications with examples of selected bioinorganic systems – proteins, haem, etc.; chemistry of lanthanides and actinides; chemistry of selected non-metals; chemistry of precious metals.
Courses: CHB32, ED50, SC30
Prerequisites: CHB282 or CHB283
Credit Points: 12
Contact Hours: 5 per week

CHB346 ENGINEERING CHEMISTRY C
Specialised chemistry unit designed for civil engineers and includes such topics as PH control; the chemistry of materials; polymers and composites; corrosion and its prevention.
Course: CE42
Prerequisites: CHB002 or equivalent
Credit Points: 4
Contact Hours: 2 per week

CHB352 ORGANIC CHEMISTRY 3
Fundamentals of organic reactions; major mechanistic classes, nucleophilic substitution, elimination, electrophilic addition, nucleophilic addition,
electrophilic substitution; ultraviolet spectroscopy: electronic transitions, chromophores, bathochromic and hypsochromic shifts, sampling; infrared spectroscopy: classification of vibrations, effects of: molecular association, conjugation, cumulation, a-halogen, ring and steric strain. Sampling; nuclear magnetic resonance — basic principles, classification of nuclei, the shielding constant. \(^1^H\) spectra, areas and integrals, chemical shifts and coupling. Sampling.

Courses: ED50, SC30  
Prerequisite: CHB282  
Credit Points: 12  
Contact Hours: 5 per week

■ CHB353 ORGANIC CHEMISTRY 3A  
The chemistry of carboxylic acids and their functional derivatives, carbonation chemistry including aldol and Claisen condensations; optical and geometrical isomers, stereocenters, stereochemistry, the sequence rules and nomenclature, the polarimeter and specific rotation; conformation of ethane, butane, small rings, cyclohexane and substituted cyclohexanes; ultraviolet spectroscopy; infrared spectroscopy; nuclear magnetic resonance.

Course: CH32  
Prerequisites: CHB183, CHB283  
Credit Points: 12  
Contact Hours: 5 per week

■ CHB372 PHYSICAL CHEMISTRY 3  
Equilibrium electrochemistry: models of the electrified interface, absolute electrode potential. Ionic absorption, electroweak curves, surface excess, molecule adsorption, phase rule: derivation of phase rule, applications to one component, binary, condensed and ternary systems. Electrode kinetics: second and third laws, free energy and chemical equilibrium ideal systems; chemical kinetics; order and molecularity of reactions, temperature effects. Reaction rate theories, complex reactions; bonding theory: orbitals and energies of the hydrogen atom; many electron atoms, molecular orbitals; spectroscopy: interaction of radiation with matter. Principles, instrumental design and applications of rotational, vibrational and electronic spectroscopy.

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

■ CHB373 PHYSICAL CHEMISTRY 3A  
Equilibrium electrochemistry: applied phase chemistry; applied thermodynamics; second and third laws; kinetics: complex reactions, mechanisms; spectroscopy: interaction of radiation with matter.

Course: CH32  
Prerequisites: CHB282 or CHB283  
Credit Points: 12  
Contact Hours: 5 per week

■ CHB382 CHEMISTRY 3  
Biochemical relevance of pH: instrumental analytical techniques used in the pathology laboratory; the coordination chemistry of biological systems; dyes and staining; thermodynamics and kinetics.

Course: LS36  
Prerequisites: CHB142, CHB242  
Credit Points: 4  
Contact Hours: 2 per week

■ CHB402 CHEMICALS IN SOCIETY  
An introduction to the role of chemistry and its products in our society. Historical and societal aspects are incorporated in the study of a number of relevant applications of chemistry in consumer products. Topics include: chemical hazards, drugs and medicine, water purity, food chemistry, synthetic substances and resources and the environment.

Courses: ED50 only  
Prerequisites: CHB8001 or equivalent  
Credit Points: 12  
Contact Hours: 5 per week

■ CHB411 ENVIRONMENTAL ANALYTICAL CHEMISTRY  
Lectures and practicals in the biological sciences dealing with the principles and application of sampling, and

electrometric/specroscopic/flame separation to the analysis of materials from the biosphere.

Courses: PU42, PU44, SC30  
Prerequisites: CHB242 or CHB282  
Credit Points: 8  
Contact Hours: 4 per week

Incompatible with: A major in Chemistry or CHB313

■ CHB423 CHEMICAL TECHNOLOGY 4  
The chemical industry; process flowsheets, sources and interpretation of data; industrial stoichiometry; materials and energy balance calculations for both principles of particle mechanics and their applications in solids handling, crushing and grinding; classification: solid-liquid separation operations; solid-fluid contacting operations; fluid mechanics and their applications in storage, transport, mixing and dispersing operations; liquid-liquid extraction operations.

Courses: CH32, ED50, SC30  
Prerequisites: PHB122, CHB373 or CHB372  
Credit Points: 12  
Contact Hours: 5 per week

■ CHB453 ORGANIC CHEMISTRY 4  
A critical analysis of the chemistry of five and six-membered heterocyclic systems with a single hetero atom; preparation, stability and applications to organic synthesis of the main group organometallic compounds: rearrangement reactions which involve 1, 2-shifts to electron-deficient elements; principles and practice of thin-layer chromatography, gas-liquid and high performance liquid chromatography in the separation and analysis of organic compounds.

Courses: CH32, ED50, SC30  
Prerequisites: CHB352 or CHB353  
Credit Points: 12  
Contact Hours: 5 per week

■ CHB466 ENVIRONMENTAL CHEMISTRY  

Course: CE42  
Credit Points: 6  
Contact Hours: 3 per week

■ CHB473 PHYSICAL CHEMISTRY 4  
Thermodynamics: surface chemistry; dynamic electrochemistry; chemical kinetics.

Courses: CH32, ED50, SC30  
Prerequisites: CHB372 or CHB373  
Credit Points: 12  
Contact Hours: 5 per week

■ CHB513 INSTRUMENTAL ANALYSIS 5  
Quality assurance, data analysis, trace analysis, methods reliability, accuracy, precision, sensitivity, selectivity, limit of detection, comparative studies; atomic spectroscopy, theory and instrumentation; mass spectrometry, introductory theory and instrumentation; liquid chromatography, ion chromatography, practices and principles.

Courses: CH32, SC30  
Prerequisites: CHB313, CHB372, CHB373, CHB453  
Credit Points: 12  
Contact Hours: 5 per week

■ CHB523 CHEMICAL TECHNOLOGY 5  
Principles of heat transfer and their applications in heat exchange and evaporative operations; distillation; principles of mass transfer in gas absorption psychrometry, drying and membrane operations. Physical property (thermodynamic and transport) estimation techniques for gases, liquids and solids. Introduction to process simulation and analysis with the aid of Aspen software.

Courses: CH32, SC30  
Prerequisites: CHB423, CHB473  
Credit Points: 12  
Contact Hours: 5 per week
[CHB833 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; laser and inorganic chemistry.
Courses: CH32, SC30
Prerequisite: CHB333
Credit Points: 12 Contact Hours: 5 per week

[CHB853 ORGANIC CHEMISTRY 5]
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

[CHB873 PHYSICAL CHEMISTRY 5]
Kinetics; colloid chemistry; phase equilibria; quantum mechanics; statistical mechanics.
Courses: CH32, SC30
Prerequisite: CHB473
Credit Points: 12 Contact Hours: 5 per week

[CHB603 PROJECT]
A variety of chemical problems reflecting teaching, research and consultancy interest of the staff.
Courses: CH32, SC30
Prerequisites: One of CHB573, CHB553 or CHB533 and CHB513 or CHB523
Credit Points: 12 Contact Hours: 5 per week

[CHB613 INSTRUMENTAL ANALYSIS 6]
Instrumental analysis including the principles and practices of XRF, thermal analysis, electrometric methods including voltammetry, amperometry; data acquisition, methods of automated analysis, flow-based analysers, robotics, computer networks, laboratory information management systems, chemical databases; chemometrics, optimisation techniques, multiple regressions, advanced quality assurance, inter-laboratory comparisons; computer interfacing, microprocessor controlled instruments, A/D-A converters, I/O methods including polling, interrupt techniques, direct memory access.
Courses: CH32, SC30
Prerequisite: CHB453
Credit Points: 12 Contact Hours: 5 per week

[CHB623 CHEMICAL TECHNOLOGY 6]
Courses: CH32, SC30
Prerequisite: CHB513
Credit Points: 12 Contact Hours: 5 per week

[CHB643 APPLIED SPECTROSCOPY]
Nuclear magnetic resonance spectroscopy; vibrational spectroscopy; remote spectroscopy; UV/vis and fluorescence spectrosopies.
Courses: CH32, ED50, SC30
Prerequisites: CHB372 or CHB373 and CHB352 or CHB353
Credit Points: 12 Contact Hours: 5 per week

[CHB653 APPLIED BIOLOGICAL CHEMISTRY]
The emerging importance of secondary plant metabolites in medicine; the main biosynthetic pathways leading to secondary plant metabolites; mechanistic aspects of enzyme reactions and the importance of phosphate; a detailed study of a selection from the main biosynthetic pathways; structural determination and synthesis of selected secondary metabolites.
Courses: CH32, SC30
Prerequisite: CHB553
Credit Points: 12 Contact Hours: 5 per week

[CHB663 ENVIRONMENTAL CHEMISTRY]
Toxicology; water quality, its assessment; modelling reactions in water bodies; air quality; criteria pollutants and health effects; indoor pollutants; monitoring; dispersion of pollutants; control techniques.
Courses: CH32, ED50, SC30
Prerequisites: CHB372 or CHB373
Credit Points: 12 Contact Hours: 5 per week

[CHB693 MATERIALS CHEMISTRY]
Properties of materials; metals and alloys; metallic corrosion; cements, ceramics and glasses; polymers and composites.
Courses: CH32, ED50, SC30
Prerequisite: CHB473
Credit Points: 12 Contact Hours: 5 per week

[CHB880 ELECTIVE STUDIES 2]
Provides students with a further opportunity to undertake advanced studies on a topic of particular relevance to their research project; tailored to suit individual students but the topics studied would normally be in specific areas of physical chemistry, analytical chemistry, inorganic chemistry or organic chemistry but may be in a different area from that chosen in CHB740. A supervised reading program is involved and the unit may also include a formal lecture program. Relevant material from other accredited courses may be included as part or all of the requirement for this unit as directed by the Course Coordinator and Head of School.
Course: SC60
Credit Points: 6 Contact Hours: 5 per week

[CHN701 TOPICS IN ADVANCED CHEMISTRY 1]
A selection of advanced topics in the areas of physical, organic and inorganic chemistry. The topics offered reflect the expertise of the academic staff as well as the needs of the students. Both units are assessed at the end of the year.
Course: SC60
Credit Points: 24 Contact Hours: 6 per week

[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: 12

[CHN710 CHEMICAL INSTRUMENTATION]
Chemical instrumentation and electronics required for advanced level operation of scientific instrumentation.
Course: SC80
Credit Points: 12

[CHN720 CHEMOMETRICS]
The concepts of chemical data acquisition and interpre-
Sound

This laboratory based unit provides instruction and explanations of the principles and practices necessary for the optimum execution of bioseparations (cell disruption and separation, membrane technology, chromatographic techniques, electro-chemical separation and new bio-separation techniques). Instruction includes case studies and Aspen bio-process simulation.

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

■ CHNS01 TOPICS IN ADVANCED CHEMISTRY 2
See CHN701.
Course: SC80
Credit Points: 12

■ CHP120 BIOCHEMICAL ENGINEERING
The application of biological organisms, systems and processes to productive level activities; specific areas are in fermentation, bioprocessing and enzyme technology. Topics include: fermentation processes; microbial physiology and environmental factors in processing operations; fermentation kinetics and modelling; aeration and agitation; sterilisation; bio-reactors; and scale-up. Other topics are selected from animal cell culture, protein biotechnology, downstream processing and bio-process economics.
Courses: LS65, LS70, SC60, SC80
Credit Points: 12
Contact Hours: 5 per week

■ CHP220 PRINCIPLES OF BIOPROCESSING
The principles and practices necessary for the optimum and safe production of biogicals and biological chemicals (e.g. organic chemicals, pharmaceuticals, proteins, etc.) derived from biological systems. An emphasis is placed on utilising recombinant organisms (microbial, plant, animal and insect cells). Such systems create special technical problems and challenges in bioprocessing and these are examined at the productive (fermentation and induction) and bioseparations levels in an integrated way. Where appropriate, such bioprocess analyses consider possible alternatives on a cost-effectiveness basis.
Course: LS70
Credit Points: 12
Contact Hours: 4 per week

■ CHP320 DOWNSTREAM PROCESSING
Introduction to the fundamental problems of separation operations important to the recovery of commercial products from biological processes. Topics include: cell recovery and disruption, membrane technology, chromatographic techniques, electro-chemical separation and new bio-separation techniques. Instruction includes case studies and Aspen bio-process simulation.
Course: LS70
Credit Points: 12
Contact Hours: 5 per week

■ CHP420 BIOPROCESS ENGINEERING LABORATORY
This laboratory based unit provides instruction and training of bioprocess operations through experimental work linked to explanatory tutorials. Experiments focus on fermentation operations utilising microbial, plant, animal and insect cells (e.g. cell kinetics, product formation, mass transfer problems), applied enzymology, and bioseparations (cell disruption and separation, membrane and chromatographic techniques). In the case of recombinant organisms an integrated approach is taken for fermentation, protein induction, and bioseparation.

There is the opportunity for either a small project or a process plant design.
Course: LS70
Credit Points: 12
Contact Hours: 4 per week

■ CHP691 ENVIRONMENTAL CHEMISTRY
The nature and composition of natural and polluted waters; metal ions, gases, redox equilibria complexation and microbial transformation of chemicals in water; water pollution and trace-level substances in water. Environmental chemistry of soils; acid-base equilibria and ion-exchange; chemicals in soil. The nature and composition of the atmosphere; chemical and photochemical reactions in the atmosphere; the oxides of carbon, sulph.
Courses: CE63, CE74
Prerequisites: Year 12 Chemistry - Sound Achievement or CHH001
Credit Points: 8
Contact Hours: 5 per week

■ CHP920 TECHNOLOGY ASSESSMENT & FORECASTING
Technology assessment processes and strategies comprising: problem definition; technology analysis; societal, economic, and environmental description and impact analysis; legal and regulatory requirements and consequences and policy implications and analysis. Technological forecasting, substitution and change. This includes the use of quantitative planning models, optimisation techniques and simulation methods; scenario portrayal; case study analysis.
Course: IFP4
Credit Points: 12
Contact Hours: 3 per week

■ CH5200 CHEMISTRY
Introduction to general and organic chemistry; atoms, molecules, ions; chemical bonding; chemical reactions and equations; solution chemistry; acids, bases and chemical equilibrium; gases; electrochemistry and nuclear chemistry; basic chemistry of organic compounds, aliphatic and aromatic.
Course: BN10
Credit Points: 6
Contact Hours: 3 per week

■ CNB001 PROFESSIONAL PRACTICE 1A
The wide range of experiences and responsibilities will provide for the student a greater understanding of the material they are exposed to in the course. It is not possible to detail for each semester the experience required due to the varied employment opportunities available to quantity surveyors in the professional offices and in the construction industry. Approved employment could be with a professional quantity surveying firm. Approved experience with other employers must be under the supervision of a qualified quantity surveyor. This could be with a building/civil engineering contractor, property developer, building or project management consultant, public authorities or major corporate bodies.
Course: CN43 Prerequisites: Final 3 part-time years
Credit Points: 9
Contact Hours: 3 per week

■ CNB002 PROFESSIONAL PRACTICE 2A
The wide range of experiences and responsibilities will provide for the student a greater understanding of the material they are exposed to in the course. It is not possible to detail for each semester the experience required due to the varied employment opportunities available to quantity surveyors in the professional offices and in the construction industry. Approved employment could be with a professional quantity surveying firm. Approved experience with other employers must be under the supervision of a qualified quantity surveyor. This could be with a building/civil engineering contractor, property developer, building or project management consultant, public authorities or major corporate bodies.
Course: CN43
The wide range of experiences and responsibilities whilst in approved employment will provide for the student a greater understanding of the material they are exposed to in the course. It is not possible to detail for each semester the experience required due to the varied employment opportunities in the construction industry. Approved employment would be with a building/civil engineering contractor; property developer; building and project management consultant; contracting sub-contractor or supplier; building research; tertiary education; local, state and federal government control and supervisory positions; corporate bodies involved in property maintenance and management.

Course: CNB003 Professional Practice 1A
Credit Points: 9  Contact Hours: 3 per week

Course: CNB004 Professional Practice 2A
Credit Points: 9  Contact Hours: 3 per week

Course: CNB005 Measurement of Construction 1
Introduction to quantity surveying including the work of the quantity surveyor and his/her 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 of roofers, plasterer, joiner, painter and decorator.

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

Course: CNB006 Measurement of Construction 2
The process and methods of taking off and billing quantities for the trades of excavator, concreter, bricklayer and blocklayer, and carpenter.

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

Course: 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 for the trades of excavator, concreter, bricklayer and blocklayer, underpinning, pier and beam, RC frame and suspended slabs.

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

Course: CNB10 Measurement of Construction 4
Detailed study and instruction in the process and methods of taking off and billing quantities for the trades of asphalt and built-up roofing, mason, structural steel and precast concrete.

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

Course: 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, PI42  Corequisite: CNB253
Credit Points: 4  Contact Hours: 2 per week

Course: 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, 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
Corequisite: CNB254
Credit Points: 4  Contact Hours: 2 per week

Course: CNB021 Professional Practice 1
The wide range of experiences and responsibilities whilst in approved employment will provide for the student a greater understanding of the material they are exposed to in the course. It is not possible to detail for each semester the experience required due to the varied employment opportunities in the construction industry. Approved employment would be with a building/civil engineering contractor; property developer; building and project management consultant; contracting sub-contractor or supplier; building research; tertiary education; local, state and federal government control and supervisory positions; corporate bodies involved in property maintenance and management.

Course: CNB021 Prerequisites: In final 3 part-time years
Credit Points: 9  Contact Hours: 3 per week

Course: CNB022 Professional Practice 2
The wide range of experiences and responsibilities whilst in approved employment will provide for the student a greater understanding of the material they are exposed to in the course. It is not possible to detail for each semester the experience required due to the varied employment opportunities in the construction industry. Approved employment would be with a building/civil engineering contractor; property developer; building and project management consultant; contracting sub-contractor or supplier; building research; tertiary education; local, state and federal government control and supervisory positions; corporate bodies involved in property maintenance and management.

Course: CNB021 Prerequisites: In final 3 part-time years
Credit Points: 9  Contact Hours: 3 per week
**CNB023 PROFESSIONAL PRACTICE 3**
The wide range of experiences and responsibilities whilst in approved employment will provide for the student a greater understanding of the material they are exposed to in the course. It is not possible to detail for each semester the experience required due to the varied employment opportunities in the construction industry. Approved employment would be with a building/civil engineering contractor; property developer; building and project management consultant; contracting sub-contractor or supplier; building research; tertiary education; local, state and federal government control and supervisory positions; corporate bodies involved in property maintenance and management.

Course: CN41 Prerequisites: In final 3 part-time years Credit Points: CNB021: 12; CNB022: 12; CNB023: 9; CNB024: 9 Contact Hours: 3 per week

**CNB024 PROFESSIONAL PRACTICE 4**
The wide range of experiences and responsibilities whilst in approved employment will provide for the student a greater understanding of the material they are exposed to in the course. It is not possible to detail for each semester the experience required due to the varied employment opportunities in the construction industry. Approved employment would be with a building/civil engineering contractor; property developer; building and project management consultant; contracting sub-contractor or supplier; building research; tertiary education; local, state and federal government control and supervisory positions; corporate bodies involved in property maintenance and management.

Course: CN41 Prerequisites: In final 3 part-time years Credit Points: CNB021: 12; CNB022: 12; CNB023: 9; CNB024: 9 Contact Hours: 3 per week

**CNB031 PROFESSIONAL PRACTICE 1**
The wide range of experiences and responsibilities will provide for the student a greater understanding of the material they are exposed to in the course. It is not possible to detail for each semester the experience required due to the varied employment opportunities available to quantity surveyors in the professional offices and in the construction industry. Approved employment could be with a professional quantity surveying firm. Approved experience with other employers must be under the supervision of a qualified quantity surveyor. This could be with a building/civil engineering contractor; property developer; building or project management consultant; public authorities or major corporate bodies.

Course: CN43 Prerequisites: In final 3 part-time years Credit Points: CNB031: 12; CNB032: 12; CNB033: 9; CNB034: 9 Contact Hours: 3 per week

**CNB034 PROFESSIONAL PRACTICE 4**
The wide range of experiences and responsibilities will provide for the student a greater understanding of the material they are exposed to in the course. It is not possible to detail for each semester the experience required due to the varied employment opportunities available to quantity surveyors in the professional offices and in the construction industry. Approved employment could be with a professional quantity surveying firm. Approved experience with other employers must be under the supervision of a qualified quantity surveyor. This could be with a building/civil engineering contractor; property developer; building or project management consultant; public authorities or major corporate bodies.

Course: CN43 Prerequisites: In final 3 part-time years Credit Points: CNB031: 12; CNB032: 12; CNB033: 9; CNB034: 9 Contact Hours: 3 per week

**CNB103 MATERIAL SCIENCE 1**
Properties, manufacture, use and analysis of timber, steel, concrete and clay products; investigation of their strength, density, hardness, porosity, plasticity, elasticity and deterioration; investigation and protection against corrosion and fire.

Courses: CN31, CN33 Corequisite: CNB151 Credit Points: 4 Contact Hours: 2 per week

**CNB104 MATERIAL SCIENCE 2**
Physical and chemical properties of materials and their effect on construction; strength and durability of construction; laboratory and field testing of bricks, mortar, brickwork, concrete, timber, steel; protection of material against corrosion and fire.

Courses: CN31, CN33 Corequisite: CNB154 Credit Points: 4 Contact Hours: 2 per week

**CNB112 CONSTRUCTION 2**
A continuation of Construction 1 covering masonry buildings including cavity brick, brick veneer, single skin masonry block construction, external cladding and internal linings, all types of roof covering including Super 6 C.F.C., concrete and clay tiles, corrugated and steel tray roof sheetings, slates and shingles, flashings, gutters and downpipes, function and construction of timber and metal windows, doors, stairs, fireplaces, light steel framed construction and pole houses, applied rendered finishes. Environmental science, comfort situations in varying climatic zones and their effect on building construction. Drafting typical details and working drawings.

Courses: CN41, CN43 Prerequisite: CNB111 Corequisite: CNB114 Credit Points: 12 Contact Hours: 5 per week
CNB113 BUILDING TECHNOLOGY 1
A study of the structural materials used in construction—timber, stone, brickwork, concrete, steel and aluminium through an understanding of the basic properties of each. The bias is towards those characteristics which affect the user rather than to the needs of a designer. Particular emphasis is given to the problems which arise through the manufacturing, storage and installation processes. Significance of subject to needs of constructors; statics; bending theory for simple and continuous beams, approximate analysis methods; properties of sections; load transfer; design of simple timber and steel beams and columns for model projects; W33 framing for member sizing, tiedown and timber connection.
Courses: CN41, CN43 Corequisite: CNB111 Credit Points: 8 Contact Hours: 4 per week

CNB114 BUILDING TECHNOLOGY 2
The materials covered in Building Technology 1 are investigated to greater depth through theoretical study and testing. Laboratory work is conducted during the latter part of the subject to reinforce the theoretical concepts and to demonstrate testing procedures. Concepts of masonry design; design theory for reinforced concrete; design of simple concrete footings, slabs on ground, beams, columns, suspended slabs; design of ground slab for Construction subject project; concept of psc design.
Courses: CN41, CN43 Corequisite: CNB113 Credit Points: 8 Contact Hours: 4 per week

CNB116 MEASUREMENT 1
Introduction to Quantity Surveying including the work of a Quantity Surveyor and his/her relationship with other members of the building industry. Introduction to the methodology of "taking off", investigating the various systems with particular emphasis on the one-step method. A study of measurement and formulae involved in the calculation of length and volume. Detailed study of "Introduction" to SMM and detailed study and instructions in the process and methods of taking off and billing quantities in the trades finishes, roofing, doors, windows, hardware, glazing and painting.
Courses: CN41, CN43 Corequisite: CNB112 Credit Points: 6 Contact Hours: 3 per week

CNB118 BUILDING SERVICES 1
A study of macro services to the community including water supply, sewerage, power, gas, telephone and other public services. Requirements of headwork and reticulations. A study of sanitation, septic tanks, absorption and transpiration beds, stormwater and sewerage disposal and garbage and refuse disposal. Hydraulic engineering services associated with buildings. Water supply (including fire fighting and hot water), sewerage and sanitary plumbing with a study of relevant Acts and laws, including sizing and testing of main and gravity-fed services.
Courses: CN41, CN43 Corequisite: CNB111 Credit Points: 6 Contact Hours: 2 per week

CNB119 CONSTRUCTION 1
Materials, methods and construction in single and two-storey domestic structures with part of ground floor below ground level, site information and investigation, foundations including strip and beam footings and slab on ground, light timber framing code for walls, roofs and suspended floors taking into account the environmental, structural and aesthetic requirements; accounting for costs, dimensional requirements, statutory regulations, life and adaptability and manufacturing and erection requirements; instruction in various types of drawings and mapping used in offices, methods of setting out office drawings for sketch presentation, geometric, perspective and setting out office drawings and details, freehand drawing and sketching; lettering, linework, material indication use of instruments, scales and drawing materials; environmental science, comfort situations in varying climatic zones and their effect on building construction.
Courses: CN41, CN43 Prerequisite: CNB113 Credit Points: 12 Contact Hours: 6 per week

CNB121 PROFESSIONAL STUDIES A
Legal system and principles of property law: the institutions of the law; the courts, parliament and the judiciary; the doctrines and methodology of the law including the doctrine of precedence, interpretation of statutes and regulations; law of property—ownership and possession, estates and interests in land, easement, rights and restrictive covenants; party walls, boundary walls, fences and encroachments. Manufacturing systems: the role of manufacturing in the Australian economy; modern concepts in manufacturing systems design; the interrelationship between design, materials selection, manufacturing technologies in relation to product quality and quantity.
Courses: CN41, CN43 Corequisite: CNB119 Credit Points: 8 Contact Hours: 3 per week

CNB124 PROFESSIONAL STUDIES B
The syllabus is project based and student centred, with the student undertaking major pieces of work individually within a group. The student is encouraged to make use of all sources both within and outside the university and to communicate with the community, professionals, practitioners and government officials, etc. The integrated study project work programme will provide a framework with a clear statement of aims and objectives for each part of the program. The projects suggested here for Professional Studies 1-3 relate to construction projects/processes whose emphasis progress from technology to building economics to management experience/problems. The project in the first year will draw together mainly rudimentary technology subjects, centred around cottage construction. The project will indicate how related materials from the year's subjects will be developed by student groups and individuals.
Courses: CN41, CN43 Prerequisites: ITB270, CNB117, CNB111, CNB113, CNB165 Corequisites: CNB112, CNB114, CNB116, CNB118, PSB910 Credit Points: 8 Contact Hours: 3 per week

CNB131 MEASUREMENT OF CONSTRUCTION I
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 Corequisite: 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  Credit Points: 4  Contact Hours: 2 per week

**CNB151 CONSTRUCTION 1**
Materials, methods and construction in single and two-storey domestic structures, site information and investigation, foundations, columns, upper floors, external and internal walls, finishes, etc. Environmental, structural and aesthetic requirements accounting for costs, dimensional requirements, statutory regulations, life and adaptability and manufacturing and erection requirements; draughting typical details and working drawings; environmental science, comfort situations in varying climatic zones and their effects.
Courses: CN31, CN33  Corequisites: 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  Corequisites: 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. Drafting: preparation of construction details and drawings.
Courses: CN31, CN33  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, 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

**CNB211 CONSTRUCTION 3**
Study of materials, methods and construction of low-rise residential, commercial and industrial projects, including equipment handling and site management requirements. Such structures to be examined with regard to the environmental, structural and aesthetic requirements taking account of constraints such as costs, dimensional requirements, statutory regulations, life, adaptability, manufacturing and erection requirements. Low-rise commercial: structural elements including foundations, retaining walls, load-bearing masonry construction, reinforced concrete suspended slabs, and walls; structural steel roof trusses, etc., parapet, balconies and balustrades. Sheet metal and built-up roofing, rainwater goods. Fire and sound resistant materials, components and construction. Suspended, fire and spray finish ceiling. Fittings and built in furniture, etc. Light industrial: Raft, pier and pile foundations and earthworks, including equipment. Structural steel systems including portal frames, girder, trusses, etc. Roof lights. Sheet external wall cladding. Industrial horizontal, vertical, sliding, folding and roller shutter doors. Special floor finishes. Handling equipment. Formwork design: objectives in building formwork, understanding quality, safety and control. Formwork planning, reuse, erecting and stripping schedules. Types of facing material, hardware and fasteners. Loads and pressures on forms and use of design tables. Formwork drawing, detailing, building and erecting. Special techniques and prestressing/post tensioning. Proprietary formwork and falswork.
Courses: CN41, CN43  Prerequisites: CNB113, CNB112, CNB114, CNB119  Corequisites: CNB213, CNB217, CNB218  Credit Points: 12  Contact Hours: 4 per week

**CNB212 CONSTRUCTION 4**
Building construction: A study of the construction techniques peculiar to multi-storeyed buildings and the implications of working on a major city site. The scope covers site investigation, deep basement excavation, dewatering and construction, structural frame construction, cladding, outfitting and finishes and the significance of services on the construction process. Evolution of building. A study of civilisations from prehistoric to modern times examining systems of construction and their relationship to building techniques and economic value.
Courses: CN41, CN43  Prerequisites: CNB211, CNB213, CNB221  Credit Points: 9  Contact Hours: 5 per week

**CNB213 BUILDING TECHNOLOGY 3**
A study of the non-structural materials used to enclose and decorate buildings, building boards, plaster, glass, alfresco, plastics, non-ferrous metals, concrete products and paint. The behaviour of materials in service will be
examined which includes the effect of ageing, incompatibility, repair and cleaning techniques, and the effects of fire on structural materials. Implications of maintenance and quality inspection. Portal behaviour; design of simple steel connections, plastic versus elastic design; structural bracing; truss analysis; stability of structures; during construction; stability of crane loads; during construction; stability of multi-storey buildings; loading and design of simple retaining structures. Concrete practice wind load conditions on high rise structures. Multi-rise framed structures.

Courses: CN41, CN43
Prerequisites: CNB113, CNB114
Corequisite: CNB211
Credit Points: 6
Contact Hours: 4 per week

■ CNB215 MEASUREMENT 2
Detailed study and instruction in the process and methods of taking off and billing quantities in the SMM trades, groundworks 4.1 to 4.3, concrete 6.1 to 6.4 masonry, woodwork, partitions for simple buildings having a single storey having both suspended and slab on ground construction.

Courses: CN41, CN43
Prerequisites: CNB116, CNB112, CNB119
Corequisite: CNB211
Credit Points: 6
Contact Hours: 3 per week

■ CNB216 MEASUREMENT 3
Detailed study and instruction in the process and methods of taking off and billing quantities in the SMM trades, groundworks 4.4, piling 5.2.2, concrete 6.1 to 6.8, structural steel, suspended ceilings, membrane and asphalt roofing, demolition, stonework in multi storey buildings having minor basements, underpinning and reinforced concrete and steel frame with built-up roofing systems.

Courses: CN41, CN43
Prerequisite: CNB215
Corequisite: CNB212
Credit Points: 6
Contact Hours: 3 per week

■ CNB217 BUILDING SERVICES 2
Minimum standards of ventilation, centrifugal and axial flow fan applications; ductwork-accessories, layout, construction and installation; requirements for human comfort in air conditioning; the ASHRAE Comfort Chart; principles of refrigeration; air-conditioning systems, composition, cost, application, construction and installation; heating, fuel types, efficiency, capital and annual costs; effect of building ordinances. Mechanical estimating: types, tenders, preliminaries, trade awards and wage rates. Take off procedure, costing and estimating make-up calculations. System costs in relation to building floor area, operating and maintenance costs, builder’s allowance for each system.

Courses: CN41, CN43
Corequisite: CNB211
Credit Points: 6
Contact Hours: 3 per week

■ CNB218 BUILDING SERVICES 3
Electrical terminology and formula, three-phase concept. Supply Authority Distribution System, line diagrams, high voltage transfer, transformers, load profile, Authority Requirement, Light and Power Acts, Tariffs and metering, energy management, electrical safety, SAA Wiring Rules, maximum demand, diversity, tables, cable sizing and voltage drop, points per circuit, fault levels, fuses, breakers and switchboards. Wiring types, busbars, wiring systems, space required, computer and data systems, fibre optics, accessories. Secure, computer power supplies. Lighting, types, design methods, emergency and evacuation systems. Building Supervisory System, justification, hardware, software. Electrical plans, specifications, symbols, CAD, Lighting Protection System, Contractor licensing, testing, tools and appliances. Energy management, solar energy, ice storage, control systems and energy audits. Electrical estimating: types, tenders, preliminaries, trade award and wage rates. Take off procedure, costing and estimating make-up calculations. System costs in relation to building floor area, operating and maintenance cost, builder’s allowance for each system.

Courses: CN41, CN43
Prerequisites: CNB118, CNB211
Corequisite: CNB212
Credit Points: 6
Contact Hours: 3 per week

■ CNB219 ECONOMICS OF THE CONSTRUCTION INDUSTRY
The economic problem, wants, resources, scarcity, choice; economic systems, features of the macroeconomy; supply and demand characteristics; goods market, factor markets, competitive market structures, business concentration; operations of the construction industry, nature of output; nature of firms, revenue analysis via pricing mechanisms, sales forecasting; production function; break-even analysis; business cycle and fluctuations in the construction industry, failure of construction firms; government stabilisation policies and effect on the construction industry; structure change in the Australian and world economies.

Courses: CN41, CN43
Contact Hours: 2 per week

■ CNB220 CONSTRUCTION MANAGEMENT
Industry participants and their roles. Basic management principles: planning, leading, organising and controlling. Forms of project delivery, reviewing contract documentation. Site management skills including site organisational structure, site controls, site communications, reporting, project engineering and negotiation skills as applied to subcontractors and suppliers, commissioning and handing over the site. Company marketing and negotiation skills. Analysis of project design and construction technique on project buildability and their effect on site management and organisation. Stress management techniques.

Courses: CN41, CN43
Prerequisites: CNB121, CNB219
Corequisite: CNB212
Credit Points: 6
Contact Hours: 2 per week

■ CNB221 BUILDING LEGISLATION
Passing and resolving Acts, regulations and by-laws; knowledgeable site representatives; study of Building Code of Australia, Queensland Home Building Code and Standard Building By-Laws which control the design, construction of building works in Queensland; emphasis on Building Codes in the by-laws; a study of the Acts Interpretation Act, and Town Planning Acts. The study of the Workplace Health and Safety Act 1989/90, the regulations that apply and codes of practice. The application of the requirements of this legislation to the production of a Site Safety Management Plan incorporating a “systems” approach in minimising exposure of the individual or company to prosecution. Practical demonstrations in good scaffolding practice. Case studies in addressing safety on building sites.

Courses: CN41, CN43
Corequisite: CNB211
Credit Points: 6
Contact Hours: 2 per week

■ CNB222 ESTIMATING 1
A study of the techniques used in the preparation of detailed estimates of cost for simple structures covering the trades of mason, carpenter, joiner, bricklayer, plumber, drainer, tile, plasterer and painter. The industrial overhead applicable to labour and materials are discussed and labour costs are calculated from current awards. The subject draws heavily on the student’s knowledge of...
construction and on the sequencing of tasks.

Courses: CN41, CN43  Prerequisite: CNB215
Corequisites: CNB212, CNB216
Credit Points: 6  Contact Hours: 2 per week

■ CNB223 APPLIED COMPUTING 1
A further study of the computer software programs which can be used in the construction and property development processes. Designed to coordinate the practical aspects of the lecture material presented each semester so that students both develop essential practical skills and benefit from cross-fertilisation of the individual subjects. The programs used include spreadsheet and database software packages. Applied material is drawn from statistics, quantitative operation research methods, and other current subject matter in years 1 and 2 of the course.

Courses: CN41, CN43  Prerequisite: 1TB270
Credit Points: 6  Contact Hours: 2 per week

■ CNB224 PROFESSIONAL STUDIES 2
The project in the second year will draw together more advanced but mainly technology-type subjects. Added breadth is provided with measurement, estimating, building law and management subjects. The project will be a medium high rise residential or commercial project (10 storeys) situated in a commercial zone close to the inner city.

Courses: CN41, CN43
Prerequisites: CNB124, CNB211, CNB212, CNB213, CNB215, CNB217, CNB223
Corequisites: CNB212, CNB216, CNB218, CNB220, CNB222, CNB226
Credit Points: 9  Contact Hours: 3 per week

■ CNB226 TORTS AND CONTRACT LAW
Law of tort - negligence, professional negligence, duty of care, liability, occupier liabilities; nuisance, fraud and conversion; basic principles, elements, formation and discharge of a contract. Elements of contract, offer, acceptance, certainty and consideration, content of a valid contract, misrepresentation, collateral contract, implied terms; formal requirements and part performance; contract documents and their interpretations remedies for breach of contract; recovery of payment of work done, concept of entire contract substantial performances and quantum meruit.

Courses: CN41, CN43
Prerequisite: CNB121, CNB211
Corequisite: CNB220
Credit Points: 6  Contact Hours: 3 per week

■ CNB243 LAW 1 BUILDING ACTS & REGULATIONS
Passing and resolving Acts, regulations and by-laws; knowledgeable site representatives; study of building code of Australia, Queensland Home Building Code and Standard Building by-laws which control the design, construction and building works in Queensland; emphasis on building codes in the by-laws; a study of the Health Act, Factories and Shops Act, Liquor Act, Acts Interpretation Act, Fire Safety Act and Town Planning acts.

Courses: CN31, CN33  Corequisite: 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, concrete, bricklayer, blocklayer and carpenter for simple building.

Courses: CN31, CN33
Prerequisites: CNB131, CNB151, CNB154
Corequisite: CNB235
Credit Points: 6  Contact Hours: 3 per week

■ CNB246 MEASUREMENT OF CONSTRUCTION 2B
Methods of taking off and billing quantities in more complex building in the trades of asphalter, built-up roofing, demolition, mason, structural steel and precast concrete.

Courses: CN31, CN33
Prerequisites: CNB146, CNB245, CNB253
Corequisite: CNB254
Credit Points: 8  Contact Hours: 4 per week

■ CNB247 MATERIAL SCIENCE 3
Atomic structure and bonding and its effects on a material's engineering property; elementary metallurgy of iron and steel; non-ferrous metals and alloys; joining of metals, fatigue, creep, brittle and ductile fracture, corrosion and protection; properties, manufacture, use and analysis of fibrous cement, wood products, ceramics, polymers, paints, sealants and mastic products; investigation into the material's strength, density, hardness, porosity, plasticity, elasticity, deterioration, optical, electrical, thermal and acoustical properties.

Courses: CN31, CN33
Prerequisites: CNB103, CNB104
Corequisite: CNB253
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
Prerequisites: CNB103, CNB104, CNB154
Corequisites: CNB247, CNB259
Credit Points: 10  Contact Hours: 5 per week

■ CNB254 CONSTRUCTION 4
An extension of CNB253 dealing with multi-storey commercial buildings.

Courses: CN31, CN33  Prerequisite: CNB253
Credit Points: 12  Contact Hours: 6 per week

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

Courses: CN31, CN33
Prerequisites: CNB103, CNB104, CNB145, CNB146
Corequisite: CNB253
Credit Points: 4  Contact Hours: 2 per week

■ CNB261 BUILDING STUDIES 3
The materials and construction of a range of structures from industrial single to multi-storey residential buildings: substructure, columns and upper floors, staircases, roof, external and internal walls, windows and doors, finishes, fire protection and fittings. Environmental, structural, aesthetic, cost, statutory, dimensional, manufacturing and erection requirements. Drafting: preparation of typical details and working drawings. Material science: a study of the non-structure materials such as building boards, ceramics, glass, plastics, paint from the manufacturing process through to the effects of ageing and problems of cleaning, repair and maintenance.

Courses: CN32
Prerequisite: CNB162
Credit Points: 9  Contact Hours: 3 per week
CNB262 BUILDING STUDIES 4
An extension of CNB261 dealing with multi-storey commercial buildings. It also looks at design appraisal: effect of design on user comfort, safety, energy usage, orientation, materials, layout, services, ageing and aesthetic composition.
Course: CN32
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
Credit Points: 8
Contact Hours: 3 per week

CNB301 PM1 ADVANCED CONSTRUCTION METHODS
Construction and site management problems encountered by a project manager; case studies having unusual construction problems or techniques; site planning and organisation of projects; material handling and site equipment selection.
Courses: CN31, CN33
Prerequisites: CNB341, CNB254
Corequisite: CNB440
Credit Points: 4
Contact Hours: 2 per week

CNB311 CONSTRUCTION 5
Civil engineering construction (building): A study of those aspects of civil engineering construction which impinge on building and land development. The emphasis is placed on an understanding of the efficacy of competing methods including plant selection rather than on a quantified solution. The areas covered are bulk excavation, detailed excavation, dewatering, foundations, pipelines, tunnels, roadworks, bridges and marine structures. Basic weather prediction and the organisation of work in remote locations. Building services — lifts, acoustics, etc. Transportation of people and goods, passenger, goods and service lifts, planning, disposition, control systems and construction; regulatory requirements, approximate traffic calculations; escalators and moving walks, use, widths and ratings, regulatory requirements and construction; planning of lift contracts and sprinklers, detectors, alarms, extinguishers; communication systems; intrusion alarm systems. Building acoustics: external noise propagation, calculations and control for complex source/environment integration. External noise control by insertion, absorption and transmission loss. The management of noise in the built environment.
Courses: CN41, CN43
Prerequisites: CNB212
Credit Points: 9
Contact Hours: 5 per week

CNB312 MEASUREMENT 4
Detailed study and instruction in the process and methods of taking off and billing quantities in: The SMM trade groundworks 4.4 and 4.5, piling, concrete 6.5 and 6.7 for the more complex basements and foundation stabilisation systems as encountered in inner city projects and innovative structural systems for columns, floors and walls. Hydraulics and drainage, electrical and mechanical installations, external elements.
Course: CN43
Prerequisites: CNB212, CNB311, CNB118, CNB216, CNB217, CNB218
Credit Points: 9
Contact Hours: 4 per week

CNB313 TIME MANAGEMENT 1
The subject is designed to develop skills in construction planning and control techniques. The planning techniques studied include bar charts, critical path networks, (arrow, precedence and time scale formats). Updating, control and reporting techniques. Line of balance planning method.
Courses: CN41, CN43
Prerequisites: CNB212, CNB216, CNB214, CNB220
Corequisite: CNB323
Credit Points: 9
Contact Hours: 4 per week

CNB314 CONTRACT ADMINISTRATION 1
Contractual arrangements and delivery systems. Contract planning and control. Reporting and control systems, contract documentation. Risk allocation and planning to avoid disputes. End cost budgeting, forecasting and control techniques.
Course: CN43
Prerequisites: CNB323, CNB319, CNB327, CNB313, CNB214, CNB315, CNB321
Credit Points: 6
Contact Hours: 3 per week

CNB315 CONSTRUCTION BUSINESS MANAGEMENT
Courses: CN41, CN43
Prerequisites: CNB220
Credit Points: 6
Contact Hours: 3 per week

CNB316 VALUATIONS & INVESTMENT THEORY
Nature of value: effect of supply and demand of land and buildings; investment values and occupational values; types of landed property, incidents of their tenure, outgoings and comparison with other forms of investment; rates of interest required from different types of property; calculating rental value and net income and capitalisation of net income; use of valuation tables; capital investment theory of NPV and IRR choice of discount rates, uncertainty and decision theory and financial cashflows.
Courses: CN41, CN43
Prerequisites: 2nd half of course
Credit Points: 6
Contact Hours: 3 per week

CNB317 CONSTRUCTION MANAGEMENT 2
Control and control systems, cost planning, cost reporting and forecasting, administration of the financial requirements of the head contract, preparation of cash flows. Purchasing (including tender preparation and the letting of subcontractors, placing of orders and subsequent administration of both). Project liquidity, working capital and turnover and general site administration. Insurances. Finalising subcontracts, archiving and final accounts. Overview of standard contracts and administration of variations, delays, time extensions and prolongation costs, progress claims etc. Contract drafting for sub and main contracts including contract specification. Principles and application of rise and fall.
Courses: CN41, CN43
Prerequisites: CNB220, CNB214
The third-year project will deal mainly with Building Specification. The subject concludes with an evaluation of variations, together with the consequences of unbalanced rates. The project will be a low rise commercial building in the inner city area. The students will be provided with preliminary and working drawings and specifications.

Course: CN43
Prerequisites: CNB224, CNB311, CNB313, CNB315, CNB319, CNB323, CNB327, CNB321
Corequisites: CNB312, CNB320, CNB314, CNB332, CNB316, CNB318
Credit Points: 9
Contact Hours: 3 per week

■ CNB325 BUILDING ECONOMICS

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

Course: CN41
Prerequisites: CNB216, CNB318, CNB217, CNB218, CNB220
Corequisites: CNB323, CNB311
Credit Points: 6
Contact Hours: 2 per week

■ CNB326 TIME MANAGEMENT 1

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

Course: CN41
Prerequisites: CNB313, CNB318, CNB217, CNB218, CNB317, CNB323
Credit Points: 8
Contact Hours: 4 per week

■ CNB327 BUILDING ECONOMICS 2

Case studies covering the following fully worked examples: tax depreciation schedule on an office and a hotel, value methods and study of office development, replacement insurance valuation both on office and retail development, elemental analysis of a number of commercial developments. Hands on experience, by students to use related computer software to calculate the above studies and analyses.

Course: CN43
Prerequisite: CNB327
Corequisite: CNB314
Credit Points: 6
Contact Hours: 3 per week

■ CNB322 CONSTRUCTION MANAGEMENT CASE STUDY

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

Course: CN43
Prerequisite: CNB311
Corequisites: CNB200, CNB214
Credit Points: 6
Contact Hours: 3 per week

■ CNB323 ESTIMATING 2

The subject builds on the procedures covered in CNB222, Estimating 1 to assess the cost of more complex work and introduce more advanced methods of pricing. The work includes deep basement excavation, foundations, concrete framing, suspended floors, steel erection, precast and prestressed concrete erection. Later lectures cover the preliminary items and the development of a tender submission from the basic estimate. The problems of obtaining and assessing sub contract prices and the evaluation of variations are discussed, together with the consequences of unbalanced rates. The subject concludes with an introduction to the methods used to produce preliminary estimates from concepts and early designs. Demonstration of computer estimating software.

Courses: CN41, CN43
Prerequisites: CNB216, CNB212, CNB222
Credit Points: 6
Contact Hours: 2 per week

■ CNB324 PROFESSIONAL STUDIES 3A

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

Course: CN43
Prerequisites: CNB224, CNB311, CNB313, CNB315, CNB319, CNB323, CNB327, CNB321
Corequisites: CNB312, CNB320, CNB314, CNB332, CNB316, CNB318
Credit Points: 9
Contact Hours: 3 per week

■ CNB328 CONSTRUCTION MANAGEMENT 3

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

Course: CN41
Prerequisites: CNB317, CNB221
Corequisites: CNB326, CNB318, CNB322
Credit Points: 8
Contact Hours: 3 per week

■ CNB329 BUILDING CONTRACTS AND ARBITRATION LAW

Contents of building contracts and contract documents, with particular reference to and consideration of the major provisions in Standard Forms of Building Contract; aspects covered include tenders, subcontractors, role of the architect, variations, time for completion and exten-
tion of time, claims and payments, determination and arbitration; arbitration: the agreement, comparison with actions at law, reference by consent, appointment of an arbitrator; conduct of an arbitration, powers and duties, rule of evidence, enforcement of an award, costs.

Courses: CN41, CN43
Prerequisites: CNB121, CNB226 Corequisites: CNB317
Credit Points: 6  Contact Hours: 3 per week

■ CNB330 APPLIED COMPUTING 2
Computer software programs which can be used in the construction and property development processes. The unit is designed to coordinate the practical aspects of the lecture material presented each semester so that students both develop essential practical skills and benefit from cross-fertilisation of the individual subjects. The programs reinforce the applied subjects which are taken in the course and may include software packages covering construction business management; construction administration and cost control; estimating, cost planning and billing, etc.

Course: CN41
Prerequisites: CNB315, CNB317, CNB323, CNB325
Corequisites: CNB328, CNB316
Credit Points: 6  Contact Hours: 3 per week

■ CNB332 APPLIED COMPUTING 2A
Computer applications for the preparation of bills of quantities using software packages; hands-on experience in setting up of base accounts, trades, headings; measurement input; editing, correction and data manipulation; report generation in various bill of quantities formats; pricing using estimated and/or tendered rates; elemental analyses; use of computer in measurement of non-traditional contractual systems; specification and preambles development.

Course: CN43
Prerequisites: CNB327, CNB319, CNB323, CNB216
Corequisites: CNB312, CNB316
Credit Points: 6  Contact Hours: 3 per week

■ CNB334 PROFESSIONAL STUDIES 3
The third year project will deal mainly with Building Economics and Management subjects. The project will be a high-rise building in the inner city area. The students will be provided with working drawings, specifications, bills of quantities and contract conditions. Estimating and building economics: Prepare an estimate to erect the building. Carry out a bulk check and prepare a preliminary network to determine time related overheads and completion date for the tender. Submit tender. Prepare basic critical path network etc. and prepare cost plan for project.

Course: CN41
Prerequisites: CNB224, CNB311, CNB313, CNB315, CNB317, CNB321, CNB323, CNB325
Corequisites: CNB326, CNB322, CNB328, CNB330, CNB316, CNB318
Credit Points: 8  Contact Hours: 3 per week

■ CNB341 BUILDING & CIVIL ENGINEERING CONSTRUCTION
Large project bulk excavation, earth and rock retaining systems, rock excavation and explosive handling; dewatering, pile driving, bored pier and special foundation construction; demolition of structures; roadworks, techniques, stabilised construction, surface sealing and associated bridge construction; falswork 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 mechanisms, 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: 3 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 transmission beds, stormwater and sewerage disposal and garbage and refuse disposal. Hydraulic engineering services associated with buildings. Water supply (including fire fighting and hot water), sewerage and sanitary plumbing with a study of relevant Acts and laws, including sizing and testing of main and gravity-fed services.

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

■ CNB362 PROPERTY AGENCY
Characteristics of the Australian property market, the nature of the marketing problems. The marketing plan: the mix, implementation of plan and sales forecast; pricing decisions, approach to selling; consideration of sales particulars and auction catalogues. Promotional decisions: determination of budget size; media decision and sales promotion; technological advances and market changes. Real estate brokerage and the application of marketing principles to residential, commercial, industrial, special and overseas properties. Negotiation skills development.

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

■ CNB363 VALUATION 3
Valuation formula; time value concepts; investment approach, basic capitalisation and cash flow techniques. Assumptions, Practical applications of investment approach to suburban and CBD properties.

Course: CN32  Prerequisite: CNB268
Credit Points: 9  Contact Hours: 3 per week

■ CNB364 VALUATION 4
See CNB363.

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

■ CNB367 REAL ESTATE ACCOUNTING 1

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

**CNB368 REAL ESTATE ACCOUNTING 2**

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

**CNB401 BUILDING ECONOMICS & COST PLANNING**
Cost control building outputs and costs; comparison of cost planning and approximate estimating; cost implications of design variables, perimeter/floor area ratio, size of building, circulation space, storey height, cost, effects of site conditions, prefabrication and standardisation; approximate estimating, types and uses; measurement of variations, adjustment of prime costs and provisional sums; cost analyses, indices and data, applications and use of cost analyses; progress payments and final accounts.

Course: CN31  Prerequisites: CNB010, CNB013, CNB014, CNB254, CNB443, CNB444, CNB446, CNB540  Credit Points: 4  Contact Hours: 2 per week

**CNB403 BUILDING MANAGEMENT 1**
Management in principle, planning, leading, organising, controlling and applied communication; fundamentals of management; roles of policy maker and executive; accountability; problem solving; organisation structures and relationships, formal and informal structures; management in practice, building industry participants, client to builder; systems in the building industry; contract, and head office management of small and large contracts; management, job description, contracts, plant, estimating, purchasing, planning and accounting section; tenders and contracts; controlling incoming work, securing contracts.

Courses: CN31, CN33  Corequisite: CNB253  Credit Points: 4  Contact Hours: 2 per week

**CNB404 BUILDING MANAGEMENT 2**
More advanced management principles and their application to site administration and management.

Courses: CN31, CN33  Prerequisite: CNB403  Credit Points: 4  Contact Hours: 2 per week

**CNB405 PROJECT EQUIPMENT & SAFETY**
Construction Safety Act 1971-73 and regulations; fixed, mobile and portable equipment, hoarding, gantries, scaffolding; crane, hoist and other relevant code; responsibilities and certification of site operatives; safety problems in erection, demolition and excavation work; accident investigation, analysis and preventive techniques; frequency and severity rates and training, management responsibilities.

Course: CN31  Corequisite: CNB254  Credit Points: 4  Contact Hours: 2 per week

**CNB411 DEVELOPMENT PROCESS 1**
Development sectors covering commercial offices (high and low rise, CBD and suburban), retail (CBD, secondary, regional, strip and festival), industrial, infrastructure, short term accommodation and leisure (3-5 star hotels, integrated resorts, motels, golf courses and marinas). Residential land subdivisions both small (under 20 ha) and large, medium and high density housing including a systematic critique of AMCORD (Australian Model Code of Residential Development) and its effects on lot yields and service efficiencies. Development of building approval process, rezoning, political influences in the development process, changing social needs and the effects on development, feasibility studies, development budget control, taxation, development financing and the development process, legal development structures, marketing and selling, commissioning leading development teams, planning for client satisfaction and development sensitivities.

Courses: CN41, CN43  Prerequisites: CNB313, CNB316, CNB318, CNB315, CNB325, CNB311, CNB327, CNB321  Credit Points: 9  Contact Hours: 3 per week

**CNB412 DEVELOPMENT PROCESS 2**
Case studies on the following type of developments: CBD office, suburban office, hotels, integrated resorts, motels, golf courses, marinas, retail centres (CBD, regional, secondary, strip and festival), medium and high density housing, infrastructure and industrial, small and large residential subdivisions, retail and retirement villages.

Courses: CN41, CN43  Prerequisite: CNB411  Credit Points: 6  Contact Hours: 2 per week

**CNB414 CIVIL ENGINEERING QUANTITIES**
Introduction to the measurement of civil engineering works based on the study of the SMM of Civil Engineering Quantities. Detailed study of methods, plant, specification and measurement of: earthworks, clearing, compaction and dredging; roadworks (survey, bulk excavation and filling, pavement construction, kerbing, culverts); and bridges (foundations, abutments, superstructure, approach embankments, safety structures). Study of dam construction (earthworks, storage volumes, etc.). A brief introduction to computer applications such as earthwork calculations, etc. An investigation into the method of measuring the quantity of materials involved in major industrial complexes such as: refinery and processing plant, including pipework, vessels, tanks, instrumentation, electrical, commissioning, scaffold, shutdown maintenance; pipelines, etc. Mining, plant and equipment, conveyors, processing plant etc; oil and gas, offshore platforms, fabrications, etc. Introduction to cost engineering and cost control on major engineering projects. Estimating procedures used for this type of construction.

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

**CNB415 CONTRACT ADMINISTRATION 2**
Nominated sub-contractors and supplier; adjustment of PC and provisional sums; variations; rise and fall; progress claims and payments. Retentions and bank guarantees. Delays and extensions of time; prolongation costs and liquidated damages; practical completion; completion. Final certificate. Insurances.
Course: CN41  Prerequisites: Final year subjects  Credit Points: 9  Contact Hours: 3 per week

- **CBN416 CONSTRUCTION MANAGEMENT 4**
  - Basis of employment (common law and statutory), construction industry infrastructure, conciliation and arbitration, the awards, alternative systems, negotiation with unions, ancillary legislation (Workplace Health and Safety, Equal Employment Opportunity, etc.). Interpersonal skills, roles, expectations. Group interaction and dynamics, social motives and sources and resolution of conflict. Practical application of behavioural studies through case studies drawn from the building industry. Communications. Working with others. Team roles and work groups. Assertiveness, motivation.
  
  Course: CN41  Prerequisite: CBN328  Credit Points: 12  Contact Hours: 4 per week

- **CBN417 RESEARCH PROJECT 1**
  - This unit is linked with CBN418.

- **CBN418 RESEARCH PROJECT 2**
  - History of building research; definition of research; Australian and international building research organisations; nature of the building industry and implications for research; future developments in building research; research management; research process. Development and presentation of a bibliographic report on any topic within the ambit of construction management.
  
  Courses: CN41, CN43  Prerequisites: Final year subject  Credit Points: 12  Contact Hours: 4 per week

- **CBN419 APPLIED COMPUTING 3**
  - Computer software programs which can be used in the construction and property development processes. The unit is designed to coordinate the practical aspects of the lecture material presented each semester so that students both develop essential practical skills and benefit from cross fertilisation of the individual subjects. The programs reinforce the applied subjects which are taken in year 3 of the full-time course and may include software packages covering: time and resource management; financial investment; project management.
  
  Course: CN41  Prerequisites: CBN326, CBN328, CBN316  Corequisite: CBN411  Credit Points: 9  Contact Hours: 2.5 per week

- **CBN421 ELECTIVE 1**
  - The student will choose elective units to extend and expand an area of knowledge or experience to develop in depth a particular professional expertise. These subjects may be drawn from any relevant Faculty within the QUT. The electives are to be approved by the Course Coordinator prior to enrolment.
  
  Course: CN43  Prerequisites: Final year subjects  Credit Points: 9  Contact Hours: 3 per week

- **CBN422 ELECTIVE 2**
  - The student will choose elective units to extend and expand an area of knowledge or experience to develop in depth a particular professional expertise. These subjects may be drawn from any relevant Faculty within the QUT. The electives are to be approved by the Course Coordinator prior to enrolment.
  
  Course: CN43  Prerequisites: Final year subjects  Credit Points: 9  Contact Hours: 3 per week

- **CBN431 ELECTIVE 1**
  - The student will choose elective units to extend and expand an area of knowledge or experience to develop in depth a particular professional expertise. These subjects may be drawn from any relevant Faculty within the QUT. The electives are to be approved by the Course Coordinator prior to enrolment.
  
  Course: CN41  Prerequisites: Final year subjects  Credit Points: 9  Contact Hours: 3 per week

- **CBN432 ELECTIVE 2**
  - The student will choose elective units to extend and expand an area of knowledge or experience to develop in depth a particular professional expertise. These subjects may be drawn from any relevant Faculty within the QUT. The electives are to be approved by the Course Coordinator prior to enrolment.
  
  Course: CN41  Prerequisites: Final year subjects  Credit Points: 9  Contact Hours: 3 per week

- **CBN440 LAW 3 BUILDING CONTRACTS**
  - Building and engineering agreements, practices relating to the building industry; contract law, elements, formation and discharge of a contract; contents of a valid contract, misrepresentation, collateral contract implied terms; contract documents and their interpretation; breach of contract; major provisions in Australian standard forms of building contract.
  
  Courses: CN31, CN33  Corequisite: CBN404  Credit Points: 6  Contact Hours: 1 per week

- **CBN442 VALUATION & DILAPIDATIONS**
  - Nature of value; effect of supply and demand of land and buildings; investment value and occupational value; types of landed property, incidents of their tenure, outgoings and comparison with other forms of investment; rates of interest required from different types of property; calculating rental value and net income and capitalisation of net income; use of valuation tables; liability for dilapidations; legal and equitable waste; implied, express contract covenants and statutory obligations to repair between landlord and tenant; landlords' remedies for breach of covenant to repair; liability for injuries to third parties.
  
  Courses: CN31, CN33  Prerequisites: CBN013, CBN014  Credit Points: 6  Contact Hours: 2 per week in Semester 1, 1 per week in Semester 2

- **CBN443 BUILDING SERVICES 3**
  - Transportation of people and goods; passenger, goods and service lifts; planning disposition, control systems and construction; regulatory requirements, approximate traffic calculations; escalators and moving walks, use, widths and ratings, regulatory requirements and construction; planning of lift contracts and ancillary building work; cost of lifts; fire protection, sprinklers, detectors, alarms, extinguishers; telephone and sound systems; intrusion alarm systems; clock and time systems; acoustics.
  
  Courses: CN31, CN33  Prerequisites: CBN013, CBN014  Corequisite: CBN253  Credit Points: 5  Contact Hours: 2.5 per week

- **CBN444 MECHANICAL & ELECTRICAL ESTIMATING**
  - Mechanical and electrical systems, parameters influencing their design and application; types estimates and tenders; preliminaries, trade awards and wage rates; take off procedures, costing and estimating make-up calculations; system costs in relation to total building, floor area, operating and maintenance cost, builders allowance for each system.
  
  Courses: CN31, CN33  Prerequisites: CBN013, CBN014  Credit Points: 4  Contact Hours: 2 per week

- **CBN446 ESTIMATING 1**
  - Building trades award and wages rates; hourly rate build
up for equipment and trade services; calculation of preliminaries for a small suburban project.

Courses: CN31, CN33
Prerequisites: CNB006, CNB253
Corequisite: CNB254
Credit Points: 5  Contact Hours: 2.5 per week

■ CNB451 COMPUTER SOFTWARE APPLICATIONS 1
Preparation of bills of quantities using computer software packages; hands-on experience in set-up of base accounts, trades, headings; measurement input; editing, correction and data manipulation; report generation in various bill of quantities formats; pricing using estimated and/or tendered rates; elemental analyses; computer measurement of contractual systems; specification and preambles development.

Course: CN33
Prerequisites: CNB010, 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
Prerequisites: 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, excavation, concreter, piling systems, structural systems in suspended slabs and walls.

Course: CN33
Prerequisites: CNB010, CNB246, CNB254, CNB341
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
Prerequisites: 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
Prerequisites: CNB268
Credit Points: 8  Contact Hours: 3 per week

■ CNB465 PROPERTY INVESTMENT ANALYSIS 1
Investment principles and strategy, property investment financing and evaluation, property investment market, time value of money concepts, cash flow techniques over time, application of CF techniques to property, feasibility studies, market analysis, risk analysis applied to property; the structure of detailed risk and return viability studies; portfolio theory applied to property; computer applications.

Courses: CN32, PS47
Prerequisites: CNB363, CNB667
Credit Points: 8  Contact Hours: 3 per week

■ CNB466 PROPERTY INVESTMENT ANALYSIS 2
See CNB465.
Course: CN32
Prerequisites: CNB363, CNB465, CNB667
Credit Points: 8  Contact Hours: 3 per week

■ CNB470 VALUATION 6 RURAL
See CNB464.
Course: CN32
Prerequisite: CNB464
Credit Points: 8  Contact Hours: 3 per week

■ CNB471 PROPERTY PRACTICE LAW
Legal concepts and statutory requirements relevant to the property professional; legislation governing property valuation and real estate practice; the effect of relevant statutes on real property; standard real property contracts; law of torts; negligence; arbitration.

Courses: CN32, CN81
Prerequisite: CNB342
Credit Points: 8  Contact Hours: 2.5 per week

■ CNB472 PROPERTY TAXATION ISSUES
The implications of taxation on the overall profitability of property investments and developments. The distinction between developer and investor, project funding, the interpretation of ordinary income and capital gains tax. Deductions for project expenditure, in particular interest, negative gearing, depreciation and building amortisation.

Courses: CN32, CN81
Prerequisite: CNB368
Credit Points: 8  Contact Hours: 2 per week

■ CNB501 BUILDING MANAGEMENT 3
Construction accounting methods and management of on and off-site financial transactions; construction industry accounting procedures, profit and balance sheets.

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

■ CNB502 BUILDING MANAGEMENT 4
Search and selection of construction projects; the discount rate cost of capital, return on investment; cash flows and contract mark-up; risk uncertainty and inflation in capital investment decisions; analysis and interpretation of financial statements; sources of funds and classifications; bidding theory and strategy; prescribed payments taxation system.

Courses: CN31, CN33
Prerequisites: CNB404, CNB501
Credit Points: 4  Contact Hours: 2 per week

■ CNB520 SPECIFICATIONS
Compilation of specifications complementing architectural documents; definitions, objects and purpose of a specification; specification as a contract legal and working document; reference material and specification writing; use of master specifications; outright and performance specifications and preparation of specified bills of quantities.

Course: CN33
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: CN31 Prerequisites: CNB440, CNB530
Credit Points: 5 Contact Hours: 2.5 per week

■ CNB527 PM2 QUANTITATIVE TECHNIQUES
Operations research techniques applied to the construction industry; linear programming; transportation and assignment methods; dynamic programming, decision trees; descriptive and inductive statistical methods applied to the construction/development industry and research; frequency distributions, measures of central tendency, dispersion; probability of variance, correlation and regression sampling.

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

■ CNB540 ESTIMATING 2
Build up of typical rates for demolition, dewatering, piling, underpinning, shoring/formwork to columns, beams, walls and slab systems; reinforcement tying and fixing; concrete placing rates; precast erection; scaffolding, gantries, hoists and cranes, etc.; calculations of preliminaries for country and city projects.

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

■ CNB543 LAW 4 TORTS & ARBITRATIONS
Law of tort, negligence, professional negligence, duty of care, liability, occupiers' liability, nuisance, fraud and conversion; arbitration, nature of and comparison with actions of law; reference by consent; the arbitration agreement, parties subject matter; appointment of arbitrators; conduct of an arbitration; powers and duties of an arbitrator; rules of evidence; validity of publication and enforcement of an award; costs.

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

■ CNB548 PM4 CONSTRUCTION PLANNING TECHNIQUES 2
Resource management; basic and production planning techniques; planning and control for various types of projects; misuse and abuse of planning and legal problems associated with CPM.

Course: CN31
Prerequisites: CNB013, CNB014, CNB545
Credit Points: 8 Contact Hours: 4 per week

■ CNB550 PMS 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
Prerequisites: 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

■ CNB568 REAL ESTATE PRACTICE
Management concepts in real estate; a business plan: office administration: staff recruitment and training; trust accounts; a composite real estate practice.
Courses: CN32, CN81, PS47
Credit Points: 5 Contact Hours: 2.5 per week

**CNB601 FORMWORK DESIGN & CONSTRUCTION**
Formwork building, quality, safety, control; formwork planning, re-use, materials and hardware; cost hire or buy; erecting and stripping; scheduling, loads and pressures on slabs, beams, column and wall forms; form design and design tables; formwork drawing and detailing; building and erecting formwork, architectural forms, precast concrete; special techniques and pre-stressing; propriety formwork systems, simple falsework design.
Courses: CN31, CN81 Prerequisite: CNB146 Corequisite: 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 collective; construction conciliation and arbitration systems; strikes and lockouts; workmen compensation act and regulations, etc.
Courses: CN31, CN33 Credit Points: 4 Contact Hours: 2 per week

**CNB606 FM8 LAND DEVELOPMENT STUDIES**
The structure, operation and control of the land development industry including the politico-economic framework; land use plans and approval mechanisms of subdivided land; financial aspect of development projects, trends and prospects in the housing development industry.
Course: CN31 Prerequisite: CNB623 Corequisite: CNB624 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; cashflow analysis; quality and safety 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 alternative, value engineering, marketability, income and outgoings; cost and time control from sketch design to completion; tender procedures and negotiations, contract documentation; leasing, brochures, publicly, letting agents, targets; authorisation of payments, monthly reports, coordination meetings; financing projects and cash flow.
Courses: CN31, CN33 Prerequisite: CNB301, CNB343, CNB401, CNB502, CNB540, CNB545, CNB550 Credit Points: 4 Contact Hours: 2 per week

**CNB624 PM7 BUILDING DEVELOPMENT TECHNIQUES 2**
See CNB623.
Courses: CN31, CN32, CN33 Prerequisite: CNB623 Credit Points: 4 Contact Hours: 2 per week

**CNB625 LAND DEVELOPMENT STUDIES**
See CNB606.
Courses: CN32, CN81 Corequisite: CNB623 Credit Points: 4 Contact Hours: 2 per week

**CNB642 APPLIED COMPUTER TECHNIQUES**
Evaluation of a range of commercial computer programs designed for the construction industry.

Course: CN31 Prerequisite: CNB548, CNB550 Credit Points: 6 Contact Hours: 3 per week

**CNB643 LAW 5 COMMERCIAL LAW**
The law as it effects 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 Prerequisite: CNB404, CNB502 Credit Points: 3 Contact Hours: 1.5 per week

**CNB647 COST PLANNING & COST CONTROL I**
The significance of construction economics for the client, the professions, the industry and society; historical development, need for and main aims of cost control; compiling cost and approximate estimating; cost implication of design variable, shape, size, perimeter, storey height; cost implications of construction methods of site and market conditions, 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 Prerequisite: CNB623 Corequisite: CNB452 Credit Points: 4 Contact Hours: 2 per week

**CNB648 COST PLANNING & COST CONTROL II**
Continuation of CNB647.
Courses: CN33 Prerequisite: CNB647 Corequisite: CNB452 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.
Courses: CN31, CN33 Prerequisite: Final year Credit Points: 18 Contact Hours: 4.5 per week

**CNB661 RESEARCH DISSERTATION I**
Develop an ability to disseminate and evaluate information and specialised knowledge and acquire an understanding of research methodology. Encompasses the definition, history, financing, future prospects and management of research. Students select a research subject, test its workability, develop procedures, prepare an outline for the study, draft the preliminary section and, after a series of critiques, present a bibliographic report, prepare a case study or project based upon an unusual or complex process within a relevant professional area, prepare a report and give an oral presentation.
Course: CN32 Credit Points: 8 Contact Hours: 4 per week

**CNB662 RESEARCH DISSERTATION 2**
See CNB661.
Course: CN32 Prerequisite: CNB661 Credit Points: 8 Contact Hours: 4 per week

**CNB663 PROPERTY DEVELOPMENT I**
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.
The role and importance of property management. The 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 tenancies. Tenancy agreements, management records and accounts. Insurance. Cash flow and credit control.

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

■ CNB665 PROPERTY MANAGEMENT 1
The role and importance of property management. The legal and physical parameters governing the establishment, holding, use and income generation of property assets. Theoretical and practical knowledge of the operation of components of property management. The management of residential, retail, industrial and commercial buildings. Main statutory provisions relating to tenancies. Tenancy agreements, management records and accounts. Insurance. Cash flow and credit control.

Courses: CN32, Prerequisite: CNB663
Credit Points: 6
Contact Hours: 2 per week

■ CNB666 PROPERTY MANAGEMENT 2
See CNB665.

Courses: CN32, PS47
Prerequisite: CNB665
Credit Points: 8
Contact Hours: 3 per week

■ CNB667 APPLIED COMPUTER TECHNIQUES
Designed to give students hands-on experience and to demonstrate contemporary commercial software. On completion, students should be able to evaluate a range of commercial and non-commercial computer programs designed for the property development and construction industry. Covers accounting and cost control packages; feasibility studies; maintenance packages; CPM, network analysis techniques.

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

■ CNN441 DISSERTATION
See CNN442.

Courses: CN77
Credit Points: 48

■ CNN442 DISSERTATION
The dissertation may be of a research or investigative nature on any approved area related to project management or property development. Suitable topics will be discussed and arranged with students each year. Each student will need to negotiate a suitable topic with a supervisor and will be examined by means of a dissertation by that supervisor and the unit moderator. Incorporates IFN001 Advanced Information Retrieval Skills which must be taken.

Courses: CN77
Credit Points: 48

■ CNP400 MANAGEMENT OF TECHNOLOGY
Introduces key concepts in management of technology and shows how these can be implemented. Furthers the understanding of the role of technology and its efficient management to build and maintain a competitive edge in business. Management of technology links engineering, science and management principles to identify, choose and implement the most effective means of attaining compatibility between internal skills and resources of an organisation and its competitive, economic and social environment. Course covers technology and competitive advantage, technological trends and forecasting, acquisition of technology and managing the technical function. Advanced use of industry case studies and assignments.

Course: BS81
Credit Points: 12
Contact Hours: 2.5 per week

■ CNP402 PRINCIPLES OF VALUATION

Courses: CN64, CN77, CN81
Credit Points: 6
Contact Hours: 2 per week

■ CNP403 PROPERTY MAINTENANCE & ASSET MANAGEMENT
Technological, legal and financial factors in property maintenance, including taxation issues; the nature and importance of building maintenance; concept of building maintenance, liability for defects; capital, maintenance and running costs; quality control; government policy; planning of maintenance including inspections, long and short term; maintenance policies, cycles and profits, maintenance audits, maintenance manuals; building stock age and conditions, statistics; maintenance standards: application, attitude, quality control, responsibility; statutory requirements: Building Act, defective premises, Factories Act, fire precautions, health and safety; cost control: estimates and budgets, performance measures; life cycle costing.

Courses: CN64, CN77, CN81
Credit Points: 6
Contact Hours: 2 per week

■ CNP404 ADVANCED LAND DEVELOPMENT
The structure, operation and control of the land development industry including the politico-economic framework; land use plans and approval mechanisms of subdivisible land; financial aspect of development projects, trends and prospects in the housing development industry. Advanced assessment.

Courses: CN64, CN77, CN81
Credit Points: 6
Contact Hours: 2 per week

■ CNP406 INTERNATIONAL PROJECT MANAGEMENT
Examines international trends in project management from the perspective of the Australian project manager. Compares technical, managerial, economic and cultural concepts and issues related to project management in the global marketplace. Discusses emerging opportunities and misconceptions, with particular reference to the Asia-Pacific region. Provides the opportunity for international and local students to exchange ideas through the use of applied case studies and discussion groups. Lectures supported by a series of specialist industry lecturers.

Courses: CN64, CN77, CN81
Credit Points: 6
Contact Hours: 2 per week

■ CNP417 DESIGN MANAGEMENT
The nature of design and the factors which influence the process of design. It includes planning, managing and controlling the design process from inception to detailed
Courses: CN64, CN77, CN81
Credit Points: 6 Contact Hours: 2 per week

**CNP422 SPECIALIST VALUATIONS**
Theory of value, valuation types and approaches, practical approaches to the following valuation types: rating, compensation for compulsory purchase, investment, own-use, property assets, portfolios, public and specialist properties. Assessment of potential.

Courses: CN64, CN77, CN81
Credit Points: 6 Contact Hours: 2 per week

**CNP426 PROJECT DEVELOPMENT**
Site selection and acquisition; securing the land; authority negotiation and approvals; authority approvals; resource planning; acquisition/procurement; project coordination; construction management; commissioning and occupation; property management; project finalisation; post control evaluations; project management objectives of cost time and quality; process overview; project stages; management principles; feasibility/justification; preliminary brief; development objective, motivation and needs; feasibility studies; project feasibility/justification; finance for projects; marketing.

Courses: CN64, CN77, CN81
Credit Points: 6 Contact Hours: 2 per week

**CNP429 COST MANAGEMENT & ECONOMICS**
Financial statements; investment decisions; economic evaluation; financing decisions; life cycle costing; control systems; management accounting and reporting; information systems; cost planning theories and techniques; the economy.

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

Courses: CN64, CN77, CN81
Credit Points: 6 Contact Hours: 2 per week

**CNP431 PROJECT MANAGEMENT**
Introduction to theory of project management in the areas of communication, management and organisation as it applies to the project situation. Communication: process, skills, environment, applications; management theory and organisation theory. Negotiation, Project team building. Motivation theory. Construction and project leadership. Change. Strategic management and planning. Personnel. Decision-making strategies. Stress management. A series of case studies will be used to integrate the issues.

Courses: CN64, CN77, CN81
Credit Points: 12 Contact Hours: 2 per week

**CNP433 PROJECT MANAGEMENT LAW**
Introduction to the legal system; contract law; elements of contract; contents of valid contract; legal issues and problems associated with project management contracts; arbitration; property law; international law; planning law.

Courses: CN64, CN77, CN81
Credit Points: 12 Contact Hours: 2 per week

**CNP434 TIME MANAGEMENT**
Use of planning techniques for project control; effective planning; PERT; CPM; bar charts and line of balance; arrow networks; precedence networks; time and control cost; resource control and levelling; computer software; control and reporting techniques. Emphasis is on the development of practical skills, based on established theory, immediately applicable to the project management or development industry.

Courses: CN64, CN77, CN81
Credit Points: 6 Contact Hours: 2 per week

**CNP437 FIELD TRIP**
An experiential field trip in an adventure-style environment. The emphasis is on team building, working in a stressful environment, communication skills, personal discovery and extension and building trust and relationships. The activities will be oriented to achieving greater awareness of and competence in the above areas. Students are required to contribute towards the cost of this externally offered unit.

Courses: CN64, CN77, CN81
Credit Points: 6 Contact Hours: 2 per week

**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; NPVs and IRRs and their applications; cash flow assumptions and rates of return; practical cash flow applications and spreadsheets; financial feasibility study models; tax issues related to property investment; property type selection.

Courses: CN64, CN77, CN81
Credit Points: 6 Contact Hours: 2 per week

**CNP439 PROPERTY MANAGEMENT**
The motivation, instrumentation and application of property management for commercial and industrial real estate, including lease construction, rental valuations, rent review, review types, budgeting, ongoings and physical management. Trends and prospects.

Courses: CN64, CN77, CN81
Credit Points: 6 Contact Hours: 2 per week

**CNP667 APPLIED COMPUTING**
The application of computer programs in the financial and physical management process of property development, project management and investment.

Courses: CN64, CN77, CN81
Prerequisite: CNB363
Credit Points: 6 Contact Hours: 2 per week

**COB001 COMMUNICATION SKILLS I**
A course in English language skills for organising, writing and presenting in Australian academic contexts. Students gain practical experience in writing and presenting reports and seminars as well as essays, letters, memos. Special emphasis is given to clear appropriate expression, logical organisation and relevant content.

Prerequisites: IELTS of 6.0 but not more than 6.5 or equivalent
Credit Points: 12 Contact Hours: 3 per week

**COB002 PROFESSIONAL COMMUNICATION**
Communicating successfully orally and in writing in professional situations. An understanding of the concepts and skills required for effective formal reporting and
The principles of, and strategies for, writing effective persuasive writing, oral reporting and persuasive speaking, group decision making and meeting procedures, leadership and participation.

Credit Points: 6 Contact Hours: 2 per week

- **COB003 PROFESSIONAL WRITING**
The principles of, and strategies for, writing effective technical documents. Practical understanding of written language: organising ideas, and presenting those ideas in a cohesive text using generic features appropriate to the technical professions.

Courses: BS30, AR48, AR41, SY34

Credit Points: 6 Contact Hours: 1.5 per week

- **COB004 PROFESSIONAL WRITING AND LEARNING AT UNIVERSITY**
The principles of, and strategies for, writing effective technical documents. Practical understanding of written language, organising ideas, presenting ideas cohesively using appropriate generic features. Developing effective learning strategies. Planning and controlling knowledge acquisition effectively.

Courses: CN41, CN31, CN32, CN33, CN43

Credit Points: 8 Contact Hours: 3 per week

- **COB005 TECHNICAL AND SCIENTIFIC WRITING**
The development of writing skills for scientists and technological professionals, based on a practical and theoretical understanding of scientific and technical discourse.

Credit Points: 12 Contact Hours: 3 per week

- **COB006 COMMUNICATION SKILLS II**
Principles and strategies that enable students who have reached an English Language level equivalent to IELTS 6.5 to cope with the rhetorical demands of academic written and spoken communication within the university culture.

Prerequisites: IELTS 6.5 or equivalent

Credit Points: 12 Contact Hours: 3 per week

- **COB007 INTERPERSONAL COMMUNICATION**
The principles of, and strategies for, effective interpersonal communication.

Courses: ME35, PU48

Credit Points: 8 Contact Hours: 2 per week

Incompatible with: COB164

- **COB170 BUSINESS COMMUNICATION**
The way in which electronic production and transmission is complementing traditional methods of communication in organisations.

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

- **COB171 COMMUNICATION TECHNOLOGY**
Concepts and applications of communication technology which impact on information processing and communication in organisations.

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

Incompatible with: COB118

- **COB172 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

- **COB173 TEXT FORMATTING**

Course: ED50

Credit Points: 12 Contact Hours: 3 per week

- **COB200 BUSINESS COMMUNICATION AND TECHNOLOGY**
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

- **COB201 COMMUNICATION FOR DIVERSITY: GENDER AND ETHNICITY IN THE WORKPLACE**
This unit focuses on issues of gender and ethnicity in the workplace. Students examine the cultural context of the Australian workplace so that they can identify barriers to effective communication for working in and managing a diverse workforce. By analysing barriers and conditions which impinge on full participation of women in the workforce, and on people of different cultural backgrounds, they are encouraged to develop effective communicative strategies to deal with difference. Using the concept of diversity as a stepping off point, the subject will also focus on managing effective intercultural communication.

Courses: BS50, BS56

Prerequisites: BSB115 or 96 credit points of approved prior study

Credit Points: 12 Contact Hours: 3 per week

- **COB203 COMMUNICATION RESEARCH METHODS**
The research methods dealt with include observation, group discussions, experimental studies, qualitative research and survey research. Special applications for communications research are considered and ethical issues discussed. Students will carry out projects using some of these methods, carry out elementary statistical procedures, analyse the results, and present their conclusions.

Courses: BS50, BS56

Prerequisites: COB216

Credit Points: 12 Contact Hours: 3 per week

Incompatible with: COB204

- **COB204 COMMUNICATION TECHNOLOGY FOR ORGANISATIONS**
The unit examines the process of adoption and implementation of new communication technologies within national and international business organisations. In particular, students will examine the role of the new communication technologies in managing and changing communication relationships within and between organisations.

Courses: BS50, BS56

Prerequisites: BSB112

Credit Points: 12 Contact Hours: 3 per week

Incompatible with: COB123, COB209, COB118, COB204

- **COB205 GROUP COMMUNICATION: THEORY AND PRACTICE**
This unit offers exploration and practice in interpersonal and communication skills such as listening, assertion and negotiation. Business and media interviewing and small group communication in organisational settings provide the focus for study. Interpersonal and group communication theory is a theoretical base for analysing communication performance. Students practise problem-solving strategies by rehearsing vocational situations.

Courses: BS50, BS56

Credit Points: 12 Contact Hours: 3 per week

- **COB206 INDEPENDENT STUDY**
An opportunity for advanced level undergraduate stu-
Clerk to undertake individual research in an area which is complementary to their course work.
Courses: BS50, BS56
Credit Points: 12 Contact Hours: 3 per week

* COB207 INTEGRATED MARKETING COMMUNICATION
In past decades many marketeers separated the various marketing and promotional functions. They planned and managed them separately with separate budgets, separate goals and objectives, and separate views of the market. Today many companies recognise the concept of integrated marketing communications which coordinates the various promotional elements along with other marketing activities that communicate with customers. Integrated marketing communications requires a 'total' approach to planning marketing and promotion programs and coordinating communication functions.
Courses: BS50, BS56
Credit Points: 12 Contact Hours: 3 per week

* COB208 INTERCULTURAL COMMUNICATION AND DIVERSITY
This unit introduces the student to intercultural communication and diversity issues. It shows how enhanced appreciation and sensitivity to these issues can help an organisation improve morale, profitability and productivity. It relates the consequences to economic and global issues. The unit shows how the individual can appreciate differences and even find a career in the specialty that cuts across organisations, countries and cultures.
Courses: BS50, BS56
Prerequisites: BSB115 and BSB114 or 96 credit points of approved prior study
Credit Points: 12 Contact Hours: 3 per week

* COB209 ISSUES IN COMMUNICATION TECHNOLOGY
The impact of communication technology on work structures and job design; the social issues resulting from its adoption and implementation.
Courses: ED50
Credit Points: 12 Contact Hours: 3 per week

* COB211 MASTERING THE INFORMATION ENVIRONMENT
This unit introduces students to the central importance of information-gathering and information-processing behaviours in business settings. Grounded in social psychological theory, the subject encourages students to develop understanding and critical insights concerning their own information-gathering-processing behaviours. Also addressed are information-gathering and processing behaviours as key coping strategies as individuals interact, and seek control over, their business and social environments. The particular information needs of businesses in emerging electronic environments are also addressed.
Courses: BS50, BS56
Prerequisites: BSB112 or 96 credit points of approved prior study
Credit Points: 12 Contact Hours: 3 per week

* COB212 OFFICE PROCEDURES
Communication technology and its impact on functions and operational procedures in offices.
Courses: ED50
Credit Points: 12 Contact Hours: 3 per week

* COB213 STRATEGIC SPEECH COMMUNICATION
This unit is based in rhetorical and group communication theory and informed by a knowledge of semiotics, specifically the way sign systems both create and interpret social meaning. Through these theories it introduces students to a fuller understanding of the verbal and non-verbal languages of communication. Theory and practice are interrelated to develop understanding and self-reflexivity within students concerning their own communication skills. This approach has the intention of guiding them to become effective persuaders, opinion leaders, and facilitators of both creative problem-solving and conflict management in groups within the workplace.
Courses: BS50, BS56
Prerequisites: BSB117 or 48 credit points of approved prior study
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: COB134

* COB214 SUPERVISED PROJECT
An individual research project investigating an approved aspect of communication technology.
Courses: ED50
Credit Points: 12 Contact Hours: 3 per week

* COB215 SUPERVISION AND 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 of the technology on these roles and duties.
Course: ED50
Credit Points: 12 Contact Hours: 3 per week

* COB216 THEORETICAL PERSPECTIVES ON COMMUNICATION
This course surveys the intellectual foundations of the communication discipline and provides an introduction to sophisticated and systematic explanations of communication and its consequences. Applications to the problems and opportunities encountered in the areas of organisational communication, public relations and advertising will be stressed.
Courses: BS50, BS56
Prerequisites: BSB115, BSB114
Credit Points: 12 Contact Hours: 3 per week

* COB217 WRITING FOR THE COMMUNICATION PROFESSIONS
This unit grounds students in the key components of formal English grammar in order to enhance their understanding of writing at the word, sentence and paragraph level. The unit builds on students' intuitive understanding of how words work and equips them to work as writers and editors with a command of language structure and style.
Courses: BS50, BS56
Prerequisites: BSB117 or 48 credit points of approved prior study
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: COB138

* COB300 ADVANCED ADVERTISING
An expansion and addition of theoretical perspective and skills gained in the prerequisite units. 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.
Courses: BS50, BS56
Prerequisites: COB308 and COB305 or COB317
Credit Points: 12 Contact Hours: 3 per week

* COB301 ADVANCED COMMUNICATION PRACTICE
This unit will draw on a broad range of theories of communication which have informed student development to this point. This knowledge can be used as background for student projects which are relevant to public relations, advertising and organisational communication. The theo-
of rhetoric, semiotics, group dynamics and interpersonal communication will be foregrounded as those theories which particularly contribute to an understanding which develops expertise in the speech presentation area.

Courses: BS50, BS56
Prerequisites: COB213 or 96 credit points of approved prior study
Credit Points: 12
Contact Hours: 3 per week

**COB302 ADVANCED INTEGRATED MARKETING COMMUNICATION**

The unit develops the theoretical basis of integrated marketing communication in an applied framework. Students develop integrated marketing communications plans for real organisations and present these plans with recommendations for implementation.

Courses: BS50, BS56
Credit Points: 12
Contact Hours: 3 per week

**COB303 ADVERTISING CAMPAIGNS**

Students will be briefed to prepare and document three advertising campaigns. The subjects of these campaigns will be drawn from actual industry marketing situations.

Courses: BS50, BS56
Prerequisites: COB306, COB304
Credit Points: 12
Contact Hours: 3 per week

**COB304 ADVERTISING COPYWRITING**

This unit is an important base for further study in advertising. Students are introduced to the principles, theory, and practice relating to the creation of advertisements. The role of the copywriter in the advertising process is examined as is the relationship between copy and art. Practical work involves the writing, setting and presentation of copy for print advertising for manufacturers, service industries and the retail sector. Case briefs for assignments are presented to students by advertisers or advertising agency executives. Finished presentations are then made to these specialists.

Courses: BS50, BS56
Prerequisites: COB306, COB304
Credit Points: 12
Contact Hours: 3 per week

**COB305 ADVERTISING COPYWRITING – ELECTRONIC**

The unit consists of a series of lectures, tutorials, and practical assignments designed to develop appreciation of the specific theoretical and production factors concerning advertising copywriting involved in television, radio and industry related to audio visual presentations.

Courses: BS50, BS56
Prerequisite: COB304
Credit Points: 12
Contact Hours: 3 per week

**COB306 ADVERTISING MANAGEMENT**

The purpose of this unit is to provide the students with an understanding of the managerial side of the advertising profession and to equip them with the tools they need to make executive decisions in advertising. Students will examine the process of setting appropriate advertising objectives, designing a program of advertising research, the social environment and regulation of advertising, managerial participation in the creative and media planning process, account management in an advertising agency, client-company management and the advertising process, completing theoretical concepts of ‘how advertising works’.

Courses: BS50, BS56
Prerequisites: COB308, COB203
Credit Points: 12
Contact Hours: 3 per week

**COB307 ADVERTISING REGULATION AND ETHICS**

The unit introduces students to and familiarises them with the various laws, regulations, standards, and codes which apply to all forms of advertising in Australia. Students will examine selected contentious advertisements, some of which have been found to breach the current laws and self-regulation codes. They will also examine guidelines of the Trade Practices Commission with respect to current topical claims made in advertising, e.g. ‘environmentally friendly’, ‘made in Australia’, ‘price’ and general comparative claims. The unit will also cover specific problems in relation to advertising claims made in respect of certain ‘products’ e.g. food, real estate and credit.

Courses: BS50, BS56
Prerequisite: COB308
Credit Points: 12
Contact Hours: 3 per week

**COB308 ADVERTISING THEORY AND PRACTICE**

This subject serves as an introduction to later units in the communication course, and is a prerequisite for further advertising units. It is also a useful elective unit for management and accounting students. The principles of advertising give students an overview of the advertising industry. The unit traverses the interrelationship of the institutions of advertising, the advertisers, the advertising agencies, and the media. It details methods of determining advertising budgets, establishing target audiences, interpreting audience ratings, and circulation figures, and enables students to gain a preliminary understanding of the creative functions of the advertising industry. It also shows the ethical and legal side of advertising and its important role in today’s society.

Courses: BS50, BS56
Prerequisites: COB216 or 96 credit points of approved prior study
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: MKB116

**COB309 APPLIED COMMUNICATION RESEARCH**

This unit follows up the Research Unit. Students demonstrate that they understand and can integrate communication principles used in the specialisations of organisational communication, public relations and advertising, through a wide variety of contexts, situations and problems. They participate in and present a project that demonstrates an understanding of applied communication research in designing communication responses to problems in local, national and international organisations. In addition, they will analyse a broad range of applied communication projects through national and international case studies. In effect, the unit highlights how communication challenges arise through competing interests of various publics and how effective messages, written texts, speeches, media presentations and campaigns have the capacity to impact on society.

Courses: BS50, BS56
Prerequisite: COB203
Credit Points: 12
Contact Hours: 3 per week

**COB310 COMMUNICATION ISSUES**

The unit examines the social structure and dynamics that influence the individual’s perception and decoding of messages; attitude formation; consumer choice; behaviour change; and responses to professionally mediated communication. It uses a changing range of contemporary issues as a focus of applied theory. This course raises student awareness of contemporary issues that shape and respond to social practice, explaining how to track the emergence and development of these issues. A major focus of the unit involves a specific examination of the impact of communication technology on social discourse. The unit culminates in the creation of a theoretical base for the appropriate targeting of messages in the practice of public relations, advertising and organisational communication.

Courses: BS50, BS56
Prerequisites: COB318 or COB308 or COB325
Credit Points: 12  Contact Hours: 3 per week

■ COB311 COMMUNICATION PRACTICE: INTERPERSONAL & PRESENTATIONAL STRATEGIES
The unit explores interpersonal and presentational communication skills and how these interact with, and influence, attitudes and behaviours within organisations. It also looks at the concept and realities of power in organisational life. Theoretical bases of rhetoric, semiotics, and interpersonal communication will be foregrounded as they contribute to an understanding of strategic communication in a variety of workplace contexts. Theory and practice of different genres of spoken communication will be examined to develop understanding and self-reflexivity within students. Topics relating to organisational communication, public relations and advertising will inform content, practice and assessment.
Courses: BS50, BS56
Prerequisites: COB213 or 96 credit points of approved prior study
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: COB158

■ COB312 COMPUTER MEDIATED COMMUNICATION
Information access and distribution; organisational networks; computerised text analysis and style replications; the human-machine interface and interpersonal relationships.
Courses: BS50, BS56
Credit Points: 12  Contact Hours: 3 per week

■ COB313 CONSULTING FOR THE COMMUNICATION SPECIALIST
This unit identifies and critically analyses organisational communication issues through planning a course of action; using research to monitor change; applying problem-solving skills. It is tailored for students who have completed most of the organisational communication major and is designed as an advanced level preparation for employment in the field. The student defines, analyses and makes recommendations to resolve a communication difficulty or problem that is relevant to an organisation. It requires that the student make pragmatic connections to a real issue.
Courses: BS50, BS56
Prerequisites: COB203, COB318
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: COB102

■ COB314 CORPORATE WRITING AND EDITING
This unit deals with current principles and practices in writing corporate documents. Students will develop an understanding of language and style to allow them to make the sophisticated rhetorical choices necessary in professional writing and publishing. Topics covered include the content, style and presentation of corporate documents, reader considerations and influences of new technology on corporate culture.
Courses: BS50, BS56
Prerequisites: COB217 or 96 credit points of approved prior study
Credit Points: 12  Contact Hours: 3 per week

■ COB315 DIRECT RESPONSE ADVERTISING
This unit builds upon the underlying philosophies and practice of direct marketing and direct response advertising in its various forms. A major focus will be on the creative aspects of direct marketing and direct response advertising including developing creative strategies, copywriting, effective direct response ads, and applying appropriate techniques. Skills in the appropriate areas will be taught and practised. There is a considerable emphasis on practical work.
Courses: BS50, BS56
Prerequisite: COB306
Credit Points: 12  Contact Hours: 3 per week

■ COB316 GOVERNMENT AND 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, BS56
Credit Points: 12  Contact Hours: 3 per week

■ COB317 MEDIA PLANNING
Topics of study include the following: costing and scheduling media, qualitative and quantitative factors affecting media selection and use, market targeting, researching the media plan, planning media strategy, coordinating media, media options, concepts of media decision-making, media exposure, media comparisons, media trends, and the computer.
Courses: BS50, BS56
Prerequisite: COB306
Credit Points: 12  Contact Hours: 3 per week

■ COB318 ORGANISATIONAL COMMUNICATION
This unit identifies and explores a range of issues of importance in organisations: organisational culture, power and politics, influence strategies, organisational change, managing diversity, including issues of gender and intercultural communication, impact of technology and ethics. Both traditional and critical perspectives on managing communication will be explored.
Courses: BS50, BS56
Prerequisite: COB316
Credit Points: 12  Contact Hours: 3 per week

■ COB319 PRINCIPLES OF DIRECT MARKETING
This unit focuses on the basic principles and practices of direct marketing and its role in the marketing mix. The unit matter will cover the essential elements of direct marketing with emphasis on direct mail, telemarketing, direct response advertising, fund-raising, database marketing, financial considerations, and legal and ethical issues will be covered. Emphasis will be given to the practical elements of direct marketing and hence a number of field visits are incorporated in this unit to ensure the appropriate skill mix is learnt.
Courses: BS50, BS56
Credit Points: 12  Contact Hours: 3 per week

■ COB320 PROFESSIONAL ADVERTISING PRACTICE
This subject places students in an industry environment where they are required to work in the four major areas of advertising: advertising management, production, creative and media planning. Students are required to write a report and relate their experience in an advertising agency to the course they have undertaken. QUT
Courses: BS50, BS56
Prerequisites: COB309
Credit Points: 12  Contact Hours: 3 per week

■ COB321 PROFESSIONAL PUBLIC RELATIONS PRACTICE
Students must undertake 160 hours of field experience within a relevant public relations function in an organisation or consultancy. Seminars are conducted before and after the work experience to prepare the students for the work environment and to analyse the work experience.
Courses: BS50, BS56
Credit Points: 12  Contact Hours: 3 per week
■ COB323 PUBLIC RELATIONS CAMPAIGNS
This is a specialist public relations unit allowing students to implement the tactical subjects taken throughout the public relations course, in a strategic and focused manner. It is practice-based and the lecture program consists of topics covering client relations, use of research, objectives-setting, the managing of campaigns, problem-solving, planning and organising special events and media relations. Specialist practitioners are invited to impart their experience in the field. The major assignment is a campaign for a community organisation which is conducted with students working in small groups.
Courses: BS50, BS56
Prerequisites: COB324, COB309
Credit Points: 12  Contact Hours: 3 per week

■ COB324 PUBLIC RELATIONS ISSUES & STRATEGIC PLANNING
The subject consists of four modules: public relations in the context of strategic management; the issues management trinity: government, business and community; strategic public relations research; and strategic public relations planning.
Courses: BS50, BS56
Prerequisites: COB324, COB203
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: MKB133

■ COB325 PUBLIC RELATIONS THEORY & PRACTICE
This subject introduces the theory and practice of public relations. The history, theories, models and management of public relations activities and processes are covered, including methods of communicating with different groups within society. Students are introduced to areas of specialisation including employee relations, corporate identity development, community relations, financial relations, media liaison and government relations.
Courses: BS50, BS56
Prerequisites: BS517, COB216 or 96 credit points of approved prior study
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: MKB124

■ COB326 PUBLIC RELATIONS WRITING
This subject develops students' abilities to plan, write and manage written and oral communication in the public relations context. It builds on earlier writing subjects to enable students to respond to specialist communication settings, media and audiences, increasing their ability to evaluate communication requirements and their flexibility in meeting these varying requirements. The subject offers a broad perspective on organising and developing writing functions in corporate settings, particularly with respect to corporate speechwriting and house newsletters and magazines, as well as providing the opportunity to advance public relations writing abilities.
Courses: BS50, BS56
Prerequisite: COB327
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: MKB120

■ COB327 PUBLICATION MANAGEMENT
This subject analyses the steps involved in communicating in print and managing this process. It focuses on the role of the communication consultant to negotiate tension between a client's specifications and an audience's requirements, and oversee the management of resources to produce a tangible product, as a valuable element in a communication program. The subject offers students the opportunity to produce a 'real life' brochure for a client. Desktop publishing training is an adjunct to this subject, and is required for assignments.
Courses: BS50, BS56
Prerequisites: COB329
Credit Points: 12  Contact Hours: 3 per week

■ COB328 PUBLICITY AND PROMOTION - ELECTRONIC
Production skills in video as they apply to public relations in organisations. Students produce a video news release for a client organisation. This includes scripting, presenting and production management. Techniques for producing and placing community service announcements are explored.
Courses: BS50, BS56
Credit Points: 12  Contact Hours: 3 per week

■ COB329 PUBLICITY METHODS
This subject focuses on the tools and methods public relations practitioners use to obtain publicity for their organisation or client. Students are taught to write media releases, media alerts and material for media kits for both print and electronic media. Integral to all elements of the subject is the identification of newsworthiness and how this differs for different audiences and media. The students work 'hands on' in tutorials with various scenarios. 'Real World' clients are used for student assessment.
Courses: BS50, BS56
Prerequisites: COB217, COB325
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: MKB129

■ COB330 SPECIAL TOPIC - COMMUNICATION
This unit allows students to undertake studies in a special area of interest in the field of communication.
Courses: BS50, BS56
Credit Points: 12  Contact Hours: 3 per week

■ COB332 ISSUES IN PUBLISHING
The processes involved in book and magazine publishing; changing media habits and literacy skills of consumers; the impact of technology and business; strategic positioning; editorial concepts and steps in production.
Courses: BS50, BS56
Prerequisites: COB217 or 96 credit points of approved prior study
Credit Points: 12  Contact Hours: 3 per week

■ COB333 PUBLICITY AND PROMOTION - PRINT
This subject 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 subject. Guest lecturers join the class to discuss aspects of media relations, news photography and publicity planning.
Courses: BS50, BS56
Credit Points: 12  Contact Hours: 3 per week

■ CON001 PROFESSIONAL COMMUNICATION
Oral and written presentation. Planning and organising ideas. Structuring reports, and oral presentations. Improving cohesion, clarity and style. Integrating written and oral communication.
Course: PS67
Credit Points: 4  Contact Hours: 2 per week

■ CON400 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 communica-
communication programs and systems.

Courses: BS93, BS88
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: CON103

■ CON401 ADVANCED ORGANISATIONAL COMMUNICATION

Organisational communication focuses on how people relate with each other in modern organisational settings, from small businesses to multi-national organisations in the public and private sector. Drawing together theories of communication as they apply to workplace settings, the subject provides the opportunity to analyse and reflect on the role of communication in constructing the conditions for achieving productivity for organisations and rewards for employee participation.

Courses: BS93, BS88
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: CON102

■ CON402 CASE STUDY DEVELOPMENT

This unit teaches the individual how to develop an effective and persuasive case study. The study consists of three phases: (a) researching and analysing, (b) writing and strategically preparing, and (c) presenting. The case study development enhances the individual's critical thinking and builds one's presentational skills. The person will research a business, industry, or campaign to identify the critical problems or innovative solutions. Based on the research, the person will construct a report that emphasises significant issues. The report will incorporate appropriate presentational formats to highlight the issues.

Courses: BS93, BS88
Prerequisites: CON406 or CON420
Credit Points: 12 Contact Hours: 3 per week

■ CON403 COMMUNICATING BREAKTHROUGH SERVICE

Breakthrough service goes beyond merely 'good' service to reach the point of 'having no second' as a competitor. The world's best practice companies reach this point and become the benchmark for their respective industries. This course shows individuals the relationship between breakthrough service and increased profit, productivity and morale. The course demonstrates how the organisation can communicate the importance of profitability related to service, customer satisfaction that makes a difference, corporate cultures that motivate employees to engage in breakthrough service, and corporate values that lay the foundation for breakthrough service.

Course: BS93
Credit Points: 12 Contact Hours: 3 per week

■ CON404 COMMUNICATION PRACTICE FOR PROFESSIONALS

This unit covers key theoretical principles and practical applications of presentation and writing skills in the workplace. Topics include theories of language and communication, structuring and designing for an audience, analysis of documents and speech presentations, managing and mentoring the writing and presentation skills (including media interviews) of staff, and preparation for staff training and consulting in these roles.

Course: BS88
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: COB217, COB213

■ CON405 COMMUNICATION PROJECT

Students in the coursework Masters program undertake a study of an applied or theoretical communication issue. This will be based on the published literature and may also involve primary research. Students may wish to undertake a study of a communication issue or problem in a particular organisation or industry. Project supervision will be arranged by the Course Coordinator through consultation with the student and available staff members. The report should be of approximately 7000 words.

Course: BS88
Credit Points: 24
Prerequisites: CON402

■ CON406 COMMUNICATION STRATEGIES

Communication theory put into practice. Examples of policy and plans; how to produce the appropriate change through communication. The ethics of persuasion and the problems of cooperation explored in the process of policy formation and planning. Students take into account the social implications of producing change, the role of the change agent and ways to monitor the effects in Australia as well as developing societies.

Courses: BS63, BS92, BS93, BS88
Prerequisites: Undergraduate degree in Communication
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: CON101

■ CON407 COMMUNICATION TECHNOLOGY AND GLOBAL NETWORKS

This unit examines the technical principles and organisational features of contemporary and emerging communication technologies, and specifically focuses on global networks used for interpersonal and inter-organisational purposes within national and international communities. Theories of planned and unplanned change are applied to assess the social and economic impact of these technologies. Among the topics to be addressed are information society, participatory forms of social change, the integration of interactive media through the global transmission of data in digital form, and the organisational applications of high-definition video.

Courses: BS63, BS88, BS92, BS93
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: COP108

■ CON408 CRISIS COMMUNICATION

This subject examines the strategic management of crisis communication including pre-crisis planning, issues identification, audience prioritisation, strategy formulation, tactical planning and implementation and evaluation. The subject covers both internal and external communication during times of crisis. Pre-crisis issues management will be addressed as well as proactive and defensive communication strategies during crisis. The subject will demonstrate the application of general communication tools to a specialisation area.

Course: BS93
Credit Points: 12 Contact Hours: 3 per week

■ CON409 FINANCIAL COMMUNICATION

The unit reviews all aspects of the public relations function in communicating with financial markets. Specific focus is placed on how publicly listed companies meet both regulatory and marketing requirements in communicating with external audiences. Suitable communication tools will be examined for use in ongoing investor relations programs as well as in specialist situations including financial communication during takeover and capital raising periods.

Courses: BS88, BS93
Credit Points: 12 Contact Hours: 3 per week

■ CON410 INTERPERSONAL COMMUNICATION AND NEGOTIATION

This unit explores the theory and practice of interpersonal communication and negotiation. It focuses on the role of interpersonal and group skills in the development of effective work teams. Current understandings of the dynamics of power and participation in communication
processes in organisations will be used to contextualise the experience of the individual and the group. An analysis of the possibilities of, and the constraints on, effective interpersonal communication will be undertaken to provide the opportunity for students to develop strategies to support workplace practice.

Course: BS88
Credit Points: 12  Contact Hours: 3 per week

**CON411 INDEPENDENT STUDY UNIT**
An opportunity for advanced postgraduate students to undertake individual research in an area which is complementary to their course work.

Course: BS73

**CON412 INTERNATIONAL ADVERTISING**
The unit considers the assertion by Levitt that companies should globalise marketing and advertising strategies by applying the same strategy in all foreign and domestic markets. This viewpoint is contrasted by theorists such as Kashani, and Murray, who suggest that a number of factors necessitate the development of separate strategies in some international advertising situations. Issues of international advertising will be discussed, including regulatory requirements for comparative advertising, children's advertising, media availability and local production considerations.

Course: BS88
Credit Points: 12  Contact Hours: 3 per week

**CON413 ISSUES IN INTERCULTURAL COMMUNICATION**
This unit addresses issues which are related to: culture as a determinant of human behaviour (stereotypes, typifications and human uniqueness); the dynamics of intercultural contact for interpersonal cooperation and/or competition; the implications of cultural diversity for societal enrichment or disintegration; the consequences for self identity in and interconnected world.

Courses: BS88, BS93
Credit Points: 12  Contact Hours: 3 per week

**CON414 PUBLIC COMMUNICATION CAMPAIGNS**
This unit explores the scope and context of public communication campaigns - how they are constructed, their assumptions and research methods underpinning them, and asks students to consider whether campaign planning and evaluation is as effective as it might be. The unit also explores community activities to develop a public issue, and community consultation as a process.

Courses: BS88, BS93
Credit Points: 12  Contact Hours: 3 per week

**CON415 PUBLIC RELATIONS MANAGEMENT**
This unit provides an understanding of the theory and practice of public relations. The history, theories, models and management of public relations activities and processes are covered including methods of communicating with different groups within society. Students will explore areas of specialisation including issues management, community consultation, crisis management, community relations, media liaison and government relations.

Course: BS88
Credit Points: 12  Contact Hours: 3 per week

**CON416 READINGS IN COMMUNICATION**
This unit provides students with the opportunity to explore in depth the literature on a particular topic or area of communication under the direction of a supervisor. The readings should integrate and consolidate aspects of the studies undertaken in the course to date. Students are required to meet regularly with the supervisor for discussion and advice and to submit a paper of 3,500 to 4,000 words at the end of semester.

Course: BS93
Prerequisites: CON418 or CON413 or CON409
Credit Points: 12  Contact Hours: 3 per week

**CON417 SEMINAR IN ADVERTISING MANAGEMENT**
This unit empowers students to make effective management decisions within the advertising process. It examines the setting of advertising objectives, and the need for coordination of these with marketing, communication and organisational objectives. It develops a sound understanding of advertising regulations and ethics, budgeting, research and campaign coordination. It further examines management's participation in the creative, media and production processes, and the contribution of advertising management to the cohesion and creativity of the agency.

Course: BS88
Credit Points: 12  Contact Hours: 3 per week

**CON418 SEMINAR IN MEDIA STRATEGY**
One of the ultimate determinants of the effectiveness of any advertising campaign is the media strategy. This unit examines ways to improve efficiency in media planning, buying, coordination and research. It examines concepts of media decision making, market targeting through the creative use of media, and strategic planning. It explores current media campaigns, and encourages the development of a more creative and integrated approach to media.

Courses: BS88, BS93
Credit Points: 12  Contact Hours: 3 per week

**CON419 STRATEGIES FOR CREATIVE ADVERTISING**
This unit develops the implications arising from current theories of creative advertising. The unit requires students to develop an advanced applied and theoretical perspective of creative strategy. Areas for advanced discussion include the development of a creative process versus the concept of 'illumination', creative verification, and the use of appeals and execution styles, and how they affect the creative impact of a campaign or advertisement, and the message development of the communication process.

Courses: BS88, BS93
Credit Points: 12  Contact Hours: 3 per week

**CON420 THEORIES OF HUMAN COMMUNICATION**
This course surveys the intellectual currents that inform the communication discipline. As communication is a multidisciplinary study, a wide range of theories, methods and contexts will be covered. This course will provide a foundation for understanding communication in a more sophisticated and systematic way, and will apply that understanding to real-life business situations.

Course: BS88
Credit Points: 12  Contact Hours: 3 per week

Incompatible with: COB216, COB113

**CON421 SEMINAR IN INTEGRATED MARKETING COMMUNICATION**
Students will be developing the theoretical concepts of integrated marketing communication in a practical environment. Issues include budgeting, planning and evaluation of integrated marketing communication programs.

Courses: BS85, BS61
Prerequisites: 48 credit points of approved prior study.
Credit Points: 12  Contact Hours: 3 per week

**CON422 LANGUAGE AND POWER**
This largely theoretical unit adopts a discourse approach to language. That is, the unit assumes that language is
fundamental in shaping relations of power through its constructive effects in shaping social and individual identity and its constitutive effects in presenting reality in particular culturally specific ways. The unit initially develops a theoretical understanding of how language use differs in various sites according to the participants, the context and the focus of activity for which the language is being used. From this, students are introduced to a variety of discourse analysis methods such as Speech Act Theory, Sociolinguistics and Conversation Analysis.

Courses: BS72, BS92, BS93
Credit Points: 12  Contact Hours: 3 per week

■ CON423 ADVANCED CORPORATE WRITING

This unit deals with current principles and practices in writing and designing corporate documents both on paper and online. Topics covered include the content, style and presentation of corporate documents such as memos, letters, reports, proposals, submissions, job portfolios, organisational policy and procedural manuals, and newsletter articles. Emphasis is placed on the politics of corporate writing, and the influence of new technologies such as Email on corporate culture.

Courses: BS72, BS92, BS93
Credit Points: 12  Contact Hours: 3 per week

■ CON424 PUBLIC RELATIONS METHODS

This unit examines theories underpinning mass media and links these with the practice of public relations media tactics. Students analyse techniques and skills used in liaison with electronic media, print media, trade media and news media. Producing and evaluating communication materials such as news releases, features and media kits forms an important part of the unit. Students will develop strategic thinking through analysis of contemporary media case studies.

Courses: BS88
Credit Points: 12  Contact Hours: 3 per week

■ CON500 RESEARCH METHODS

The purpose of this study is to provide students with a range of ideas and methods that will enable them to analyse, evaluate and conduct research in discipline areas related to business. It provides an essential and basic preparation for the development of a dissertation proposal. Areas of study cover both qualitative and quantitative approaches and include: research paradigms; analysis and criticism; research design; data collection; data manipulation and interpretation; and presentation.

Courses: BS63, BS92
Credit Points: 12  Contact Hours: 3 per week

■ CON501 RESEARCH SEMINAR

Designed to prepare students for writing their thesis: group instruction in techniques of thesis writing and what is involved in preparing a literature review and thesis proposal. Students choose a topic, have it approved and choose a supervisor under whose guidance they will undertake a literature review.

Courses: BS63, BS92  Corequisite: CON500  Contact Hours: 3 per week  Incompatible with: BSP102

■ CPB330 ABORIGINAL & TORRES STRAIT ISLANDER EDUCATION POLICY

Historical, economic, social factors influencing the position of Aborigines and Torres Strait Islanders; cultural factors and educational policies and programs; development of policies and programs appropriate for these people.

Courses: ED37, ED50, ED51, ED52, ED54
Credit Points: 12  Contact Hours: 3 per week

■ CPB331 ASIAN CULTURE & EDUCATION

Provides pre-service teachers with knowledge and skills for working in the Asian context of Australian education. Content includes: cultural forms in Asia; contemporary socio-political developments; past and present educational strategies; promoting informed Asian awareness in curriculum and classrooms.

Courses: ED37, ED50, ED51, ED52, ED54  Credit Points: 12  Contact Hours: 3 per week

■ CPB332 SCHOOL-COMMUNITY RELATIONS

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

Courses: ED37, ED50, ED51, ED52, ED54  Credit Points: 12  Contact Hours: 3 per week

■ CPB333 POLICY MAKING AND CHANGING SCHOOL PRACTICES

The relevance of contemporary policy initiatives for classroom and school practices; how policy may be used strategically to enhance professional practice and to provide skills in critical policy analysis. How beginning teachers may respond critically and constructively to pressures within devolved education systems to participate in policy formation, assessment and implementation.

Courses: ED37, ED50, ED51, ED52, ED54
Credit Points: 12  Contact Hours: 3 per week

■ CPB334 POWERFUL TEACHERS, POWERFUL STUDENTS

Thematic questions about teaching: understanding the current notion of teacher/student power; ways of understanding teacher/student power and teaching through powerful and empowering teaching/learning models; the practical knowledge needed to empower beginning teachers.

Courses: ED37, ED50, ED51, ED52, ED54
Credit Points: 12  Contact Hours: 3 per week

■ CPB335 TEACHER AS RESEARCHER

The role that research can play in improving teachers' everyday practice. Draws on advocacy models of research to develop actual strategies by which practitioners can inform their own educational work and evaluate its effectiveness.

Courses: ED37, ED50, ED51, ED52, ED54
Credit Points: 12  Contact Hours: 3 per week

■ CPB336 EDUCATION & CULTURAL DIVERSITY

The complex issues involved in catering for cultural diversity in schools and other education settings and strategies for professional practice in contexts of cultural diversity. Contents include: cultural change in education; racism in schooling; curriculum issues; English as a second language; school-community relations.

Courses: ED37, ED50, ED51, ED52, ED54
Credit Points: 12  Contact Hours: 3 per week

■ CPB337 GENDER & EDUCATION

The significance of gender issues in education, together with knowledge of relevant research and policy developments. There will be an emphasis on the implications for school organisation, curriculum and teaching strategies.

Courses: ED37, ED50, ED51, ED52, NS48, ED54
Credit Points: 12  Contact Hours: 3 per week

■ CPB338 IDENTIFYING & RESPONDING TO STUDENT DIFFERENCES

The range of perceptions and reactions to individual differences; the psychological explanations for the sociocultural contexts of difference in schools; perspectives on the identification and classification of special
educational needs. From a commitment to social justice and equity, it examines policy initiatives which impact on learners and teachers; identifies appropriate strategies.

Courses: ED37, ED50, ED51, ED52, ED54
Credit Points: 12 Contact Hours: 3 per week

- **CPB339 TEACHING ABORIGINAL & TORRES STRAIT ISLANDER STUDENTS**

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

Courses: ED37, ED50, ED51, ED52, ED53, ED54
Credit Points: 12 Contact Hours: 3 per week

- **CPB340 CONTEXT OF ADULT AND WORKPLACE EDUCATION**

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

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

- **CPB341 COMMUNITY, LEADERSHIP & CITIZENSHIP**

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

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

- **CPB342 EDUCATION IN CONTEXT**

Education and change in a post-modern society; the implications for education of the complex and diverse nature of Australian society; the role of policy making in meeting the educational challenges of the 1990s.

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

- **CPB343 UNDERSTANDING EDUCATIONAL PRACTICES**

The social, cultural, historical and political contexts of schooling; technologies, practices and strategies employed by schools; the curriculum as a contested site; the place of schooling in the modern state. Critical reflection by students is encouraged, allowing them to engage with others as co-theorists in pedagogical work.

Courses: ED50, ED51, ED52, ED53, ED54
Credit Points: 12 Contact Hours: 3 per week

- **CPB420 CONTEMPORARY ISSUES IN EDUCATION**

The cultural and social contexts and psychological factors relevant to the processes of education and schooling in an era of change; application of the principles of social justice to the evaluation of education policy and practice, and analysis of social and personal action relevant to educational change.

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

- **CPB421 PHILOSOPHICAL PERSPECTIVES ON SCHOOLING**

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

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

- **CPB422 PHILOSOPHY IN THE CLASSROOM**

Philosophical belief systems underlying approaches to learning, knowledge and curriculum. Justice and fairness to both teachers and students in the classroom. Current developments in classroom practices.

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

- **CPB423 SOCIETY, SOCIAL POLICY & EDUCATION**

Education as social policy; historic, economic and political context of educational policy making; education and social justice; policy, change and practice.

Course: ED26, ED50, ED51, ED52, ED54
Credit Points: 12 Contact Hours: 3 per week

- **CPB424 SOCIOLOGY OF THE SCHOOL**

An analysis of schools and classrooms within a social context; students draw implications to assist them in carrying out their teaching and administration practices more effectively.

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

- **CPB425 AESTHETIC EDUCATION**

An examination of aesthetics, both traditional and contemporary, and the relevance they have for understanding the role the arts play 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

- **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, ED50, ED51, ED52, ED54, ED61
Credit Points: 12 Contact Hours: 3 per week

- **CPB443 COMPARATIVE & INTERNATIONAL EDUCATION**

Australia’s identity in the international community has significant implications for education. The major international issues in education are introduced through studies of global developments and by comparing Australian education with other cultures; develops skills and knowledge appropriate for teachers of the 1990s and the next century.

Courses: ED26, ED61
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; Abo-
rigorous culture and education: current initiatives; participation of Aborignes in policies and programs.
Courses: ED26, ED61
Credit Points: 12 Contact Hours: 3 per week

- **CPN602 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, ED50, ED51, ED52, ED54, ED61
Credit Points: 12 Contact Hours: 3 per week

- **CPN604 EQUITY AND EDUCATION MANAGEMENT ISSUES AND STRATEGIES**
An examination of the theory and practice of equity policies at all levels of educational management. Particular emphasis on issues of gender and educational leadership, disability, race, and ethnicity.
Courses: ED13, ED11, ED61
Credit Points: 12

- **CPN605 ORGANISATIONAL CULTURES AND EDUCATION LEADERSHIP**
An investigation of the dimensions of culture in educational organisations undergoing change through examining key issues that are covered with economic rationalism and social justice, strategic planning/management and leadership, cultural analysis and design and particular devolution and accountability.
Courses: ED35, ED36, ED37
Credit Points: 12

- **CPN606 EDUCATIONAL LEADERSHIP, POWER AND CAREERS**
Issues in the changing nature of work relating to class, race and gender as determined by the power structure within society and organisations. A personal understanding of the concept of career that encourages individuals to proactively reconsider their own life stream in the discontinuous, changing world of the 1990s is the focus.
Courses: ED13, ED11, ED61
Credit Points: 12

- **CPN607 GLOBAL CHANGE, DIVERSITY AND EDUCATION**
An introduction to policy approaches in education used in post-colonial nation-states, especially those in the Third World and in the Asia-Pacific region. It asserts that many of these nation-states are 'dependent cultures' and that education is framed by Western models. Alternative modes of education and policy in the international setting are explored.
Courses: ED13, ED11, ED61, IP64
Credit Points: 12

- **CPN608 GENDER EQUITY AND EDUCATION POLICY**
Gender-equity is an important component of recent educational reform. The theories and policies underlying its adoption in educational systems and the socio-cultural contexts which have shaped its adoption.
Courses: ED13, ED11, ED61, IF64
Credit Points: 12

- **CPN609 POLICY FOR PRACTITIONERS**
Policy analysis is an important component of contemporary educational practice. No change to schooling practices is contemplated when underpinned with a policy shift. Introduces students to skills of policy writing and analysis, and places these skills in the socio-economic and cultural context in which they arise.
Courses: ED13, ED11, IP64
Credit Points: 12

- **CPN610 YOUTH POLICIES AND POST-COMPULSORY EDUCATION**
Post-compulsory education, a feature of recent policy formation, has brought into renewed focus the nature of 'youth' as a category of concern. The degree to which 'youth' as a category is understood in the new post-compulsory policies (Finn, Carmichael and Mayer) is examined.
Courses: ED13, ED11, ED61, IF64
Credit Points: 12

- **CPN611 POLICIES AND PRACTICES FOR INCLUSIVE EDUCATION**
The socio-cultural, organisational, curriculum and pedagogical contexts of child care and education with a focus on the ways in which special needs are socially constructed and the ways in which this is manifested in educational settings. Identification of procedures conducive to the formation, articulation and implementation of inclusive educational policies and practices in a range of educational and child care settings. Children's disruptive and challenging behaviours.
Courses: ED13, ED11
Credit Points: 12

- **CPP411 UNDERSTANDING EDUCATION IN CONTEMPORARY AUSTRALIA**
The teacher as a professional; classroom practice; school culture and organisation; national issues affecting schooling.
Courses: ED35, ED36, ED37
Credit Points: 12 Contact Hours: 3 per week

- **CPP412 UNDERSTANDING EDUCATION IN CONTEMPORARY AUSTRALIA**
The teacher as a professional; classroom practice; school culture and organisation; national issues affecting schooling.
Course: ED37
Credit Points: 12 Contact Hours: 3 per week

- **CPP501 SOCIO-CULTURAL ISSUES IN EDUCATION**
Examines socio-cultural contexts of schooling; the pastoral care and special needs industries; resistance and disruption in schools; disability and integration.
Course: ED24
Credit Points: 12 Contact Hours: 3 per week

- **CUB330 EDUCATION LAW AND THE BEGINNING TEACHER**
Legal literacy; sources of education law; students' and teachers' rights and responsibilities; school-based accidents; educational malpractice.
Courses: ED37, ED30, ED31, ED52, ED54
Credit Points: 12 Contact Hours: 3 per week

- **CUB331 MAINSTREAM INTEGRATION OF CHILDREN WITH DISABILITIES**
Historical and philosophical analysis of the evolution of education and education policy related to children with special needs and disabilities. Individuals exhibiting
Students undertake to complete two final modules. The nature of all common forms of adult education, with particular emphasis on workplace and community settings; analyses key concepts and views of leading adult educators, and relates them to current attempts in Australia to provide effective forms of post-compulsory education and training.

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

■ CUB333 FIELD EXPERIENCE 1
Module One of this unit gives participants an understanding of the basic principles of self-directed learning and action learning, both of which underpin the Field Experience Program. Participants will also develop practical skills and understanding with respect to determining the education or training needs of adults. The student achieves the required performance criteria in a workplace situation.

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

■ CUB333 FIELD EXPERIENCE 2
Students undertake to complete any two of a specified set of modules. The modules are based on the Workplace Trainer Competency Standards Category 2. The students achieve the required performance criteria in a workplace situation.

Course: ED54
Credit Points: 12
Contact Hours: 20 day placement; pre- and post-tutorials

■ CUB334 LAW IN THE ADULT AND WORKPLACE ENVIRONMENT
Recent legal and legislative developments mean that employers and employees require greater awareness of their legal responsibilities in all workplace environments. This unit provides a level of legal literacy appropriate to sound legal risk management in workplace settings.

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

■ CUB345 EARLY CHILDHOOD PRACTICES 1
Within the focus of the teacher and children learning together, the following topics are introduced: the planning cycle; why observe? what/when/how?; techniques of recording observable behaviour with specific emphasis on language and thinking; creating positive language environments; play as a means of learning; basic skills development; integration: communication; classroom management; use of technology and educational design, strategies and techniques is developed. (Students will need easy access to computer and modem.)

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

■ CUB350 EARLY CHILDHOOD PRACTICES 2
Continuing the interactive focus, there will be further development of Year 2, Semester 1 topics in order to deepen understanding and extend teaching strategies relating to conflict management and discipline; the monitoring of children's progress; the creation of positive learning environments, especially for children from birth to 3 years.
Courses: ED43, ED52  Prerequisite: CUB351  Credit Points: 12  Contact Hours: 2.5 per week

- CUB353 EARLY CHILDHOOD PRACTICES 4
Further analysis of the complexities of interactions within learning environments, particularly relating to: maths/science; the arts; teaching strategies for the appropriate use of technology within the educational setting with emphasis on creating learning centres for children 5-8 years.
Courses: ED43, ED52  Prerequisite: CUB352  Credit Points: 12  Contact Hours: 2.5 per week

- CUB354 EARLY CHILDHOOD PRACTICES 5
Within the focus of negotiation, and the teacher-child-parent-community, this unit reviews and analyses a variety of teaching approaches in early childhood, extending strategies for supporting children's play with a particular emphasis on literature and the arts; recognising emerging professionalism; research skills and independent adult learning.
Course: ED52  Prerequisite: CUB353  Credit Points: 12  Contact Hours: 2.5 per week

- CUB355 EARLY CHILDHOOD PRACTICES 6
Synthesis of knowledge gained to date in terms of developing a personal teaching style and philosophy; ethical responsibility; the roles of the teacher as reflective practitioner, action researcher, advocate, administrator and leader; preparing for a teaching career and examining career pathways in early childhood.
Course: ED52  Prerequisite: CUB353  Credit Points: 12  Contact Hours: 2.5 per week

- CUB356 PROFESSIONAL PRACTICE 1
The school experience program of 20 days provides students with opportunities to continue their observations of educational settings and to apply their professional and discipline studies to the planning, resourcing, teaching and evaluation of a series of related lessons. While observations focus on the development and implementation of school-wide curriculum, in the teaching of lessons emphasis is given to formulation of objectives, communication skills, motivation and management of learners, and self-evaluation. Students develop their skills in personal and professional relationships within the school community.
Course: ED50  Prerequisite: CUB365  Credit Points: 12

- CUB357 PROFESSIONAL PRACTICE 2
This program consists of a 25 day block session with pre-placement on-campus tutorials. It concentrates on the development of those skills needed in teaching effectively and cooperatively. Teachers are expected to design, test and refine personal decision-making models, approaches, strategies and programs.
Course: ED50  Prerequisite: CUB356  Credit Points: 12

- CUB358 PROFESSIONAL PRACTICE 3
This program of 20 days (ED54) – 25 days (ED50) aims at extending confidence and competence in teacher roles to a level commensurate with that of a beginning teacher. Preservice teachers assume full responsibility for implementing units of work that are planned collaboratively with cooperating teachers. They challenge students to cater for the learning styles of their pupils by incorporating a variety of teaching strategies and classroom organisational skills. Students are expected, through analysis and reflection, to promote praxis between their university studies, their teaching and other school experiences.
Course: ED50  Prerequisite: Curriculum Studies X/Y, CUB356  Credit Points: 12

- CUB359 PROFESSIONAL PRACTICE 4: THE BEGINNING TEACHER
This unit is concerned with the students' transition from 'tertiary student' to 'beginning teacher', and the career development processes which it entails. Students study research on beginning teaching across a variety of contexts. Attention is given to teacher recruitment processes.
Course: ED50  Prerequisite: Curriculum studies 2X and 2Y  Credit Points: 12

- CUB360 TEACHERS AS COMMUNICATORS & PROFESSIONAL PRACTICE 1
This unit is concerned with communication at various levels and in a range of contexts. Its focus is directed towards individuals and groups of learners in the primary school. The unit is operated in a 1 hour/week class on campus and 15 single days (1 introduction and 1 day/week) in schools.
Course: ED51  Prerequisite: CUB365  Credit Points: 12  Contact Hours: 1 hour per week and 1 day per week in schools plus 1 day of initial

- CUB361 TEACHERS AS MANAGERS & PROFESSIONAL PRACTICE 2
The management of planning; implementation and evaluation in the classroom; the relationship of management and classroom climate and control.
Course: ED51  Prerequisite: CUB360  Credit Points: 12

- CUB362 TEACHERS AS CURRICULUM DECISION MAKERS & PROFESSIONAL PRACTICE 3
Examination of aspects of curriculum decision making to acquire the knowledge, skills and processes necessary for short-term and long-range planning. Curriculum development, curriculum implementation and curriculum evaluations are investigated to refine daily, weekly and term programs. State and federal initiatives in curriculum are assessed so that classroom teachers can confidently interpret curricula for the needs and capabilities of diverse groups of learners. The block practice component of the unit provides opportunities to design, test and refine personal decision-making models, approaches, strategies and programs.
Course: ED51  Prerequisite: CUB361  Credit Points: 12

- CUB363 TEACHERS AS RESPONSIVE PRACTITIONERS & PROFESSIONAL PRACTICE 4
This unit is concerned with responding effectively to the many and varied teaching/learning contexts within today's classrooms and schools. Its focus is directed from traditional/open classroom to the wider communities encompassing state/private, rural/distance and Aboriginal/migrant education.
Course: ED51  Prerequisite: CUB362  Credit Points: 12

- CUB364 TEACHERS AS REFLECTIVE PRACTITIONERS & PROFESSIONAL PRACTICE 5
Prior to graduation, students need to synthesise the range of skills, attitudes and knowledge sources that they have
experienced through the course, to ensure an effective transition into professional practice. This unit attempts to pursue this goal through further developing teachers as reflective practitioners, taking responsibility for the shaping of educational practice from their own perspective.

Course: ED51
Credit Points: 12
Prerequisite: CUB363
Contact Hours: 1 hour per week and 3 week block in schools following September vacation.

CUB365 INTRODUCTION TO PROFESSIONAL PRACTICE IN EDUCATION

The nature of teaching and the role of teachers are studied using curriculum decision-making and critically reflective frameworks. Teaching is viewed as a complex personal and social process which is highly interactive, while the role of the teacher is elaborated with reference to the concepts of the teacher as observer, communicator and facilitator of learning.

Courses: ED37, ED50, ED51, ED52, ED54
Credit Points: 12
Contact Hours: 3 per week

CUB366 LEARNING/TEACHING ENVIRONMENTS

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

Courses: ED37, ED50, ED51, ED52, ED54
Credit Points: 12
Contact Hours: 3 per week

CUB367 CLASSROOM AND BEHAVIOUR MANAGEMENT

Reviews and extends knowledge about managing learners to meet their needs in purposeful and responsive learning environments. A reflective approach to the evaluation of topics is encouraged, including managerial, environmental and educational conceptions of developing positive relations, teaching for motivation, and contemporary models, structures and frameworks for decision-making, relating to cooperative learning environments.

Courses: ED37, ED50, ED51, ED52, ED54
Credit Points: 12
Contact Hours: 3 per week

CUB368 PRACTICE TEACHING 1 (0-5 YEARS)

Twenty continuous days in a group care setting for infants and toddlers; observing recording and analysing the behaviour and learning of individual children and selected aspects of the teaching/learning environment; planning, implementing and evaluating learning opportunities for individuals and where appropriate, small groups, which foster communication, exploration and problem-solving and which take into account social and cultural contexts; adopting and promoting sound health and safety practices.

Course: ED53
Credit Points: 12

CUB369 PRACTICE TEACHING 2 (0-5 YEARS)

Twenty continuous days in a group care setting for children 3-5 years observing, recording and analysing the behaviour and learning of individuals and groups of children; recording and evaluating selected aspects of the teaching/learning environment; planning, implementing and evaluating learning opportunities for individuals and groups which foster communication, exploration and problem-solving, creativity and self-expression and which take into account social and cultural backgrounds, and health and safety practices appropriate for 3-5 year old children in group care; assuming limited leadership responsibilities for the total program.

Course: ED53
Credit Points: 12

CUB370 PRACTICE TEACHING 3 (ALTERNATIVE SETTINGS)

Twenty continuous days in a selected service (early primary classroom, centre-based long day care, family day care, out-of-school hours care, occasional care, vocational care, work-related child care), observing, recording and analysing aspects of children’s behaviour and learning and the teaching/caring/learning environment; planning, implementing and evaluating a comprehensive curriculum which takes into account a selected social, political and/or curriculum issue previously researched and relevant to the selected service; communicating with children, parents, colleagues and the wider community; utilising organisational and administrative skills in the assumption of responsibility for the total program for an extended period; recording and analysing operational details of the service, the interaction and interrelatedness of components of the service, its management and structure.

Course: ED53
Credit Points: 12

CUB371 SECONDARY PROFESSIONAL PRACTICE 1: CLASSROOM MANAGEMENT

This unit examines the role of the teacher with reference to the concepts of the teacher as communicator, planner, manager and facilitator of learning. It provides an opportunity for associated approaches, strategies and skills to be introduced and applied within the ambit of classroom management in practical settings.

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

CUB372 SECONDARY PROFESSIONAL PRACTICE 2: CURRICULUM DECISION MAKING

State and federal initiatives in curriculum are examined to interpret curricula for the needs and capabilities of learners. The practice component provides opportunities to design, test and refine personal decision-making models, approaches, strategies and programs.

Course: ED50
Credit Points: 12
Contact Hours: 2 per week

CUB373 SECONDARY PROFESSIONAL PRACTICE 3: THE INCLUSIVE CURRICULUM

The unit addresses the social, political and material relations in differing classroom curriculum practices, with a view to examining both the constraining and enabling factors that impact on and generate possibilities within the conceptualising and operationalising of the inclusive curriculum. Critical analysis of classroom practices and possibilities is effected in the professional practice component.

Course: ED50
Credit Points: 12
Contact Hours: 2 per week

CUB374 SECONDARY PROFESSIONAL PRACTICE 4: THE BEGINNING TEACHER

Students synthesise the range of skills, attitudes and knowledge sources that they have experienced to ensure an effective transition into professional practice as beginning teachers, taking responsibility for the shaping of educational practice from their own perspective and that of the learners. Emphasis will be on planning and implementation of the total program.

Course: ED50
Credit Points: 12

CUB375 PRIMARY PROFESSIONAL PRACTICE 1: CLASSROOM MANAGEMENT

This unit provides an introduction to professional practice in education and gives a foundation for further development in the areas of specialisation and/or specific subject curriculum areas. The role of the teacher is examined with reference to the teacher as communicator,
planner, manager and facilitator of learning. It provides an opportunity for approaches, strategies and skills associated with the teacher’s role to be introduced and applied with classroom management.

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

■ CUB376 PRIMARY PROFESSIONAL PRACTICE 2: CURRICULUM DECISION MAKING
Examination of aspects of curriculum decision making to acquire the knowledge, skills and processes necessary for short-term and long-range planning. Curriculum development, curriculum implementation and curriculum evaluation are investigated to refine daily, weekly and term programs. Particular attention is given to cooperative teaching of an integrated unit of work.

Course: ED51  
Prerequisite: CUB376
Credit Points: 12  
Contact Hours: 2 per week

■ CUB377 PRIMARY PROFESSIONAL PRACTICE 3: THE INCLUSIVE CURRICULUM
This unit is designed to address the social, political and material relations that exist in differing classroom curricular practices, examining both the constraining and enabling factors that impact on and generate possibilities within the conceptualising and operationalising of the inclusive curriculum. This will be done with the support of practising teachers, and critical self-analysis of classroom practices and possibilities.

Course: ED51  
Prerequisite: CUB376
Credit Points: 12  
Contact Hours: 12 per week

■ CUB378 PRIMARY PROFESSIONAL PRACTICE 4: REFLECTIVE PRACTICE
Prior to graduation, students need to synthesise the range of skills, attitudes and knowledge sources that they have experienced through the course, to ensure an effective transition into professional practice. This unit attempts to pursue this goal through further developing teachers as reflective practitioners, taking responsibility for the shaping of educational practice from their own perspective.

Course: ED51  
Prerequisite: CUB377
Credit Points: 12  
Contact Hours: 1 per week

■ CUB379 EARLY CHILDHOOD PROFESSIONAL PRACTICE 1
Understanding socio-historical and contemporary contexts for young children in a range of settings for early childhood education and care; observing children and the planning cycle; the use of play, exploration, communication and problem solving by children from birth to eight years; ten days of supervised practice in kindergarten or preschool.

Course: ED52
Credit Points: 12  
Contact Hours: 2.5 per week

■ CUB380 EARLY CHILDHOOD PROFESSIONAL PRACTICE 2
Development and teaching strategies, with particular focus upon children aged three to eight years; planning from observations; discourse practices and classroom management; working in groups; policies, syllabi and resources in curriculum generation and provision; handwriting; ten days of supervised practice in preschool or kindergarten, and fifteen days in lower primary classrooms.

Course: ED52
Credit Points: 12  
Contact Hours: 2.5 per week

■ CUB381 EARLY CHILDHOOD PROFESSIONAL PRACTICE 3
Focus upon programs in child care and family care services; management of problems arising between children in a range of EC settings; classroom management practices; record-keeping, reporting to and relationships with parents and professional colleagues; fifteen days of supervised practice in child care centres, and ten days of supervised practice in an EC setting of the student’s choice.

Course: ED52
Credit Points: 12  
Contact Hours: 2.5 per week

■ CUB382 EARLY CHILDHOOD PROFESSIONAL PRACTICE 4
Refining strategies for teaching and working collaboratively with children, parents and colleagues in EC context; student reflection on development of own practices; roles of EC educators with regard to ethics, advocacy for young children, policy development and administration; curriculum vitae and resume; twenty days of supervised practice in an EC setting of the student’s choice.

Course: ED52
Credit Points: 12  
Contact Hours: 2.5 per week

■ CUB410 TEACHERS & THE CURRICULUM
Development of concepts and strategies essential to the processes of school-based curriculum development and the design, implementation and evaluation of relevant school programs; the significance of curriculum in the broader sense to a spectrum of individual professional teaching perspectives.

Courses: ED26, ED63
Credit Points: 12  
Contact Hours: 3 per week

■ CUB414 ADULT EDUCATION
The design and implementation of educational programs for adults; theories relating to adults as educational participants; the educational process and the environment in which it takes place; emphasis on the provision of effective adult education.

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

■ CUB431 CLASSROOM MANAGEMENT: MODELS & PRACTICE
Practical and research-based approaches to classroom management and discipline for teachers. Includes techniques that motivate pupils in daily teaching, rules of behaviour, teaching for responsibility, working with parents and communication and settings for on-task behaviour and meeting student needs.

Courses: ED26, ED64
Credit Points: 12  
Contact Hours: 3 per week

■ CUB432 TEACHERS & ISOLATED LEARNERS
The isolated community; the isolated learner; consideration of various types of teaching situations in rural schools, especially small schools and distance education; teaching strategies; support services.

Courses: ED26, ED50, ED51, ED54, ED52
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, ED50, ED51, ED52, ED54, 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.
This unit is designed to address the multidimensional, critical approach to the curriculum dilemmas that diverse and complex nature of teachers' professional learning. This unit develops understandings in a socially just framework and to facilitate effective teaching which is consonant with such principles and, at the same time, encourage lifelong teacher learning. Course: ED50
Credit Points: 12
Contact Hours: 3 per week

CUB446 ADVANCED SKILLS OF EFFECTIVE LEARNING & TEACHING
The Queensland Education Department's corporate plan focuses on teachers having skills and attitudes to teach in a socially just framework and to facilitate effective learning and teaching. This unit develops understandings of the Principles for Effective Learning and Teaching and develops strategies which facilitate socially just teaching which is consonant with such principles and, at the same time, encourage lifelong teacher learning. Course: ED50
Credit Points: 12
Contact Hours: 3 per week

CUB447 GETTING IT ALL TOGETHER: TEACHERS' PROFESSIONAL WORK IN THE DIFFERING CONTEXTS OF THE PRIMARY CLASSROOM
This unit is designed to address the multidimensional, diverse and complex nature of teachers' professional work in the primary classroom with a view to developing in graduating teachers an holistic, comprehensive and critical approach to the curriculum dilemmas that permeate their work. Course: ED51
Credit Points: 12
Contact Hours: 3 per week

CUN601 CURRICULUM INVESTIGATIONS
This unit is set within the context of trends, policies and practices which impact upon the decisions made by educators as curriculum practitioners. Curriculum inquiry and research are addressed with an appreciation of how curriculum trends, policies and practices have been framed and investigated in the past; how contemporary researchers and writers conceptualise curriculum as a field of inquiry and how curriculum practitioners are central in theorising about and transforming their own professional practice as curriculum leaders. Courses: ED13, ED11
Credit Points: 12

CUN602 PROFESSIONAL GROWTH & DEVELOPMENT
This unit is designed for those practitioners who are interested in initiating and responding to curriculum change as both individuals and in collaboration with others. It assumes that curriculum leaders at different levels are required to be both proactive and reactive towards such change and this unit seeks to develop understandings which enable them to do this. This unit cultivated uniqueness and virtuosity, is guided by individual judgments in their context and leads to individual understandings and awareness of professional development issues. Courses: ED13, ED11
Credit Points: 12

CUN603 LEADING CHANGE IN CONTEMPORARY PROFESSIONAL PRACTICE
This unit considers a range of contemporary problems and issues in cultures and climates of incessant educational change which are impacting on the professional practice of educators. These circumstances underline the need for curriculum leadership in professional practice. Problem areas include: managing behaviour in a supportive school environment; promoting inclusion practices; interpreting and implementing educational policy, e.g. the Whitelaw report; mentoring the beginning teacher; managing stress; implementing effective learning and teaching principles; translating teacher competencies into practice; creating and transforming organisational cultures. The unit provides the opportunity for students to focus on particular professional problems and issues of interest to them and, within the context of relevant literature and the realities of their particular professional situation, develop a change plan for addressing these problems and issues which is transformative and action-oriented. Courses: ED13, ED11
Credit Points: 12

CUN605 ADULT AND WORKPLACE EDUCATION: PRINCIPLES AND PRACTICES
The ethical basis, the contextual basis and the expert knowledge of adult and workplace education are explored through the themes of conceptualisation, teaching adults, change, flexible delivery, assessment and legal risk management. This will provide an extensive basis for further work, including research, in the area. Courses: ED13, ED11
Credit Points: 12

CUN609 ACHIEVING QUALITY IN EDUCATIONAL CONTEXTS
The processes of education and training are associated with implementing and ensuring quality procedures and outcomes. A major contributing factor in seeking quality in education is related to the formulation and application of appropriate assessment and evaluation techniques. The unit is designed for educational and evalua-
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

■ CUP405 TEACHING STUDIES
Strategies for expository teaching and inquiry-based learning; generic teaching skills; interactive classroom; basic language and text processing strategies; organisation of the learning environment; lesson and activity planning routines and models.

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

■ CUP406 TEACHING STUDIES
Strategies for expository teaching and inquiry 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 (Part-time)
Credit Points: 12
Contact Hours: 3 per week

■ CUP420 PROFESSIONAL & CURRICULUM STUDIES
The theories and practices which make up the educational repertoire of a classroom teacher; development of a coherent conceptual understanding of teaching and managing learning, particularly as it applies to arts education and physical education.

Course: ED36
Credit Points: 12
Contact Hours: 3 per week

■ CUP421 PROFESSIONAL & CURRICULUM STUDIES
Investigation of the process of curriculum development, particularly in social environment, human relationships education, health studies and science in primary schools.

Course: ED36
Credit Points: 12
Contact Hours: 3 per week

■ 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

■ EAB301 EARLY CHILDHOOD ARTS
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 are 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: ED43, ED52
Credit Points: 12
Contact Hours: 3 per week

■ EAB303 EARLY CHILDHOOD FOUNDATIONS
Review and analysis of current knowledge of the processes and features of language and cognitive development of children from birth to eight years of age; language acquisition and communication; interrelationships between language and thought; the knowledge base and cognitive processes; analysis of observational data on children’s behaviour in the areas of language and cognition and using such analysis to plan for children's needs, interests and abilities; links with other aspects of development.

Course: ED43, ED52
Credit Points: 12
Contact Hours: 3 per week

■ EAB304 EARLY CHILDHOOD FOUNDATIONS
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: ED43, ED52
Credit Points: 12
Contact Hours: 3 per week

■ EAB305 EARLY CHILDHOOD LANGUAGE EDUCATION
Theories of development and learning of language and literacy from early years through emergent literacy to fluency with the use of a variety of genres of written language; early literacy learning processes, and the teaching practices, strategies and resources to support these in preschools and primary schools; working with parents to enhance literacy learning in home, child care, kindergarten and other settings; planning based on observations in order to assist children in educational contexts.
■ EAB306 EARLY CHILDHOOD LANGUAGE EDUCATION

Review of previous experiences in literacy education from practice and the earlier unit; observation and assessment of the literacy learning abilities of a child as a basis for the development of a profile for planning; reporting parents; development of frameworks for 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: ED43, 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 a problem-solving framework; application of technology.

Course: ED43, ED52
Credit Points: 12
Contact Hours: 3 per week

■ EAB308 EARLY CHILDHOOD SCIENCES, MATHEMATICS & TECHNOLOGY

Overview of early childhood science, social studies and maths topics, concepts and processes; investigation of appropriate monitoring strategies; use of a variety of technologies; ways in which early childhood environments can be organised to support integrated, active, inquiry learning, with relevant resources from the immediate classroom, the outdoors, families and the local neighbourhood.

Course: ED43, ED52, ED53
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 teachers' decision making and the knowledge bases teachers bring to their curriculum implementation work.

Course: ED52, ED43
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; in-depth 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: ED43, ED52
Credit Points: 12
Contact Hours: 3 per week

■ EAB311 ALTERNATIVE PROGRAMS IN EARLY CHILDHOOD

The range of community programs which support the needs of children and families outside of mainstream early childhood settings (e.g., visits to community Aboriginal and Torres Strait Islander programs). A resource file of programs will be established by students to aid in future teaching, to help refer families to appropriate services, to build up a deepened awareness of models of parent-professional communication and to suggest alternative career paths in early childhood.

Course: ED52
Credit Points: 12
Contact Hours: 3 per week

■ EAB312 CASE STUDIES IN EARLY CHILDHOOD & FAMILY LITERACY

Introduction to case study methods, adult literacy and inter-generational and family literacy, including clients from English and non-English speaking backgrounds; planning and implementing an inter-generational literacy program with a client and young children; reflecting upon the program; contributing to ongoing research in family literacy.

Course: ED52
Credit Points: 12
Contact Hours: 3 per week

■ EAB313 CHILDREN'S LITERATURE FOR EARLY CHILDHOOD SETTINGS

A study of the significance of children's literature as it furnishes literacy and language programs: origins and patterns of stories both traditional and contemporary as they reflect society; critical evaluation of books published nationally and internationally; acquisition of skills of selection for use in early childhood settings; planning appropriate long term quality literature programs that include a wide range of genre and current issues.

Course: ED52
Credit Points: 12
Contact Hours: 3 per week

■ EAB314 CHILDREN, TEACHERS & THE ENVIRONMENT

The exploration of interactions between individuals and their environments; the development of 'whole school/whole centre' policies and practices in environmental education in early childhood settings; consideration of ecologically sustainable development and social justice through education about, in and for the environment; a strong focus on teachers of young children exploring their own attitudes, values and actions regarding these goals. The unique perspectives of 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

Students examine dilemmas arising when teachers plan to negotiate the curriculum with children and parents in child care, preschool/Kindergarten and primary school settings. Critical analysis of strategies teachers use to create 'spaces' where children are able to construct knowledge in personally relevant ways.

Course: ED52
Credit Points: 12
Contact Hours: 3 per week

■ EAB316 EARLY CHILDHOOD ART EDUCATION

Historical and contemporary trends in art education; philosophy and practice in early childhood visual arts education; in-depth exploration of young children's artistic development and learning; assessment and evaluation of visual arts in early childhood; curating children's art exhibitions; public information about children's artistry; advocacy for improving options for young children in the visual arts.
Course: ED52  Credit Points: 12  Contact Hours: 3 per week

■ EAB317 EARY CHILDHOOD DRAMA IN EDUCATION
The development of skills and understandings of drama in education; in-depth exploration of techniques and strategies to enhance young children's dramatic ways of knowing and learning; assessment and planning for drama across the early childhood curriculum.
Course: ED52  Credit Points: 12  Contact Hours: 3 per week

■ EAB318 EARY CHILDHOOD EDUCATION & FAMILY ISSUES IN AUSTRALIA
Contemporary issues facing families such as changing employment patterns, changing family forms, social 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 EARY CHILDHOOD SOCIO-CULTURAL CONTEXTS
Opportunity to investigate a broad range of issues currently affecting early childhood educators and their clients, with an 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 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

■ EAB321 EARY CHILDHOOD TRANSACTIONS 2
Insights into Australian families and interpersonal processes extended from EAB320; diversity and commonality in family childrearing values and practices; the parental role in young children's development; dimensions of parenting behaviour; family-teacher roles; interpersonal skills in practical contexts with families: effective collaborative procedures and skills of listening, giving and receiving feedback, assertion, negotiation and group leadership.
Course: ED43, ED52  Credit Points: 12  Contact Hours: 3 per week

■ EAB322 ETHICAL RESPONSIBILITIES IN EARLY CHILDHOOD
In-depth examination of legal and ethical responsibilities of early childhood educators; historical overview of changing trends in legislation relating to children; current issues in children's rights, including welfare, human rights, child care; professional ethics and the responsibility of the early childhood educator to children, parents, the community, society, colleagues and the profession; advocacy for improved opportunities for young children; case studies of Australian issues in advocacy, ethics and the law.
Course: ED52  Credit Points: 12  Contact Hours: 3 per week

■ EAB323 EVERYDAY FOOD & SCIENCE FOR YOUNG CHILDREN
An overview of science topics, concepts and processes as experienced in everyday life, in the home and various early childhood educational settings; exploration of a food cycle approach to learning, with consideration of space, time, resources and teaching strategies; current early childhood policies and practices which affect the needs of children from birth to age eight years; staff health in relation to early childhood program delivery.
Course: ED52  Credit Points: 12  Contact Hours: 3 per week

■ EAB324 INTEGRATING YOUNG CHILDREN WITH DISABILITIES INTO EARLY CHILDHOOD PROGRAMS
The integrated approach to teaching children with disabilities through an effective and cooperative team approach of teachers, families and support personnel; philosophical and policy issues for the least restrictive early education for young children with disabilities; the range and nature of disabilities early childhood teachers may encounter in their practice; development, implementation and evaluation of individualised programs; teaching strategies for integration into regular programs; needs and concerns of families as the range of support services available to families and teachers.
Course: ED43, ED52, ED53  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 and conduct issues; working outside early childhood services.
Course: ED43, ED52, ED53  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
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 3-8 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; introduction to descriptive and inferential statistics; report writing and organisation.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week
■ EAB329 ROUTINES FOR INCLUSIVE EARLY CHILDHOOD CURRICULUM
The routines for daily living in kindergartens, preschools, child care centres and primary schools; the creation of routines which will foster inclusivity of difference based on race, gender, social class and intellectual capabilities; particular attention is given to contexts which are inclusive of Aboriginal and Torres Strait Islander values and beliefs. Investigations of practices currently in use in early childhood settings will form the basis for critical analysis of possibilities for improving practice.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week
■ EAB330 STORYTELLING IN EARLY CHILDHOOD
The identification and exploration of the craft of the storyteller. In particular it will focus on a range of storytelling techniques, identification of suitable stories that can be told; cultural influences on storytelling and storytelling across the curriculum.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week
■ EAB331 TECHNOLOGY & THE YOUNG CHILD
The use of computers, calculators and other examples of technology in the learning of young children; links between technology and problem-solving, applications of number concepts and the use of computers in language development and the publication of documents.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week
■ EAB332 TECHNOLOGY IN EARLY CHILDHOOD CONTEXTS
Students undertake an investigation which incorporates the use of technology with young children. This investigation would be designed, carried out and reported on as in a small scale research project or an independent study.
Course: ED52
Credit Points: 12 Contact Hours: 3 per week
■ EAB333 EARLY CHILDHOOD EDUCATION: COMMUNITY 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.
Course: ED53
Credit Points: 12
■ EAB334 EARLY CHILDHOOD FOUNDATIONS A
The content of this unit provides the theoretical and applied knowledge basis for the selection and organisation of appropriate learning situations for young children in a range of early childhood contexts and settings.
Courses: ED53
Credit Points: 12 Contact Hours: 3 per week
■ EAB335 EARLY CHILDHOOD LANGUAGE AND ARTS EDUCATION 1
This unit introduces students to the theory, issues and practices involved in planning to foster young linguistic and artistic development in a range of early childhood educational contexts.
Courses: ED53
Credit Points: 12 Contact Hours: 3 per week
■ EAB336 EARLY CHILDHOOD FOUNDATIONS B
The content of this unit provides the theoretical and applied knowledge basis for the selection and organisation of appropriate learning situations in a range of educational contexts and settings, and for working with parents and other adults in a range of situations.
Courses: ED53
Credit Points: 12 Contact Hours: 3 per week
■ EAB337 INTEGRATED EARLY CHILDHOOD CURRICULUM
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: ED53
Credit Points: 12 Contact Hours: 3 per week
■ EAB338 EARLY CHILDHOOD LANGUAGE AND ARTS EDUCATION 2
This unit extends students' understanding of the theory, issues and practices related to curriculum decision making to foster young children's linguistic and artistic development across a range of early childhood educational contexts.
Course: ED53
Credit Points: 12 Contact Hours: 3 per week
■ EAB340 PROGRAMS FOR INFANTS AND TODDLERS
Ideas and beliefs which underpin practices and theories in relation to children under three years of age; exploration of societal attitudes in relation to young children, historically and currently; foundations and functioning of programs for infants and toddlers; examination of Australian and overseas models; government regulations for under three's programs; changing attitudes and trends in relation to parental involvement in education.
Course: ED53
Credit Points: 12 Contact Hours: 3 per week
■ EAB341 EARLY CHILDHOOD FOUNDATIONS 1
Biological processes foundational to physical, perceptual and motor development of children from birth to eight years of age; prenatal factors; observational methods and techniques for analysing physical, perceptual and motor development of young children; knowledge of atypical development; provision of care and education for children with special needs; related social justice issues.
Course: ED52
Credit Points: 12 Contact Hours: 2.5 per week
■ EAB342 EARLY CHILDHOOD FOUNDATIONS 2
Processes and features of language and cognitive development of children from birth to eight years; language acquisition and communication; interrelationships between language and thought; the knowledge base and cognitive processes; analysis of observational data to plan for children's needs, interests and abilities; assisting children with special needs or developmental delay, especially in terms of intellectual abilities.
Course: ED52
Credit Points: 12 Contact Hours: 2.5 per week
■ EAB343 EARLY CHILDHOOD FOUNDATIONS 3
Theoretical and empirical approaches to the study of
creativity and self-expression from birth to eight years; children's recognition and production of emotions; sex differences and contextual influences; development of personal identity; socialisation relationships among the family members, the peer context and the classroom; social and emotional difficulties of children, including aggression and learned helplessness; appropriate interventions for management.

Course: ED52
Credit Points: 12
Contact Hours: 2.5 per week

■ EAB344 EARLY CHILDHOOD FOUNDATIONS
Synthesis of individual students' knowledge from the previous foundation units; development of skills in preparation and conduct of debates and case study reporting; children with special needs; social, personal, and professional issues in the provision of early childhood education and services.

Course: ED52, ED53
Credit Points: 12
Contact Hours: 2.5 per week

■ EAB345 EARLY CHILDHOOD CURRICULUM: LANGUAGE EDUCATION
Pertinent theories and research in language and literacy education for children in EC settings; development of specific teaching and interactive practices for working with children's development of literacy, and for teaching reading and writing; planning appropriate learning environments using a wide range of literary and other resources; introduction to English syllabus.

Course: ED52
Credit Points: 12
Contact Hours: 4 per week

■ EAB346 EARLY CHILDHOOD CURRICULUM: SCIENCE, SOCIETY AND THE ENVIRONMENT
Teacher's knowledge and understanding of science and its influences and applications; broad, multidisciplinary approaches to scientific, social and environmental issues in order to create just and sustainable futures; development of scientific knowledge and related social perspectives in programs for young children; practical activities arising from observations of children's interest and needs.

Course: ED52
Credit Points: 12
Contact Hours: 4 per week

■ EAB347 EARLY CHILDHOOD CURRICULUM: EARLY MATHEMATICAL EXPLORATIONS
Theories and understanding of children's conceptual development; application of active inquiry processes to further concept development in mathematics; foundational concepts in mathematics and the development of appropriate learning and teaching opportunities; use of language in children's concept of number; role and use of technology in processes for learning and understanding.

Course: ED52
Credit Points: 12
Contact Hours: 4 per week

■ EAB348 EARLY CHILDHOOD CURRICULUM: ARTS
Introductory principles, practices, philosophies and theories in the visual and performing arts as they relate to young children in various EC contexts; the arts as a way of knowing and expressing; creativity versus artistry; overview of artistic development from birth to adolescence; the arts, culture, education and the young child; elements and concepts in the visual arts, music, drama, movement and dance with specific emphasis on the visual arts; the development of the visual arts for children in EC settings; assisting artistry with children under five years of age and with school-aged children.

Course: ED52
Credit Points: 12
Contact Hours: 4 per week

■ EAB349 ADVANCED EARLY CHILDHOOD CURRICULUM: ARTS
Application of principles, practices, philosophies and theories in the areas of music, drama, movement and dance, with specific emphasis on how these arts provide unique opportunities for knowing and understanding; assisting children's development through music, dance and drama in preschool and primary school EC settings; integration of the arts in relation to unique and shared elements and concepts across various domains; advocacy in the arts.

Course: ED52
Credit Points: 12
Contact Hours: 4 per week

■ EAB350 ADVANCED EARLY CHILDHOOD CURRICULUM: LITERACY AND NUMERACY IN THE EARLY YEARS
Observation, assessment and diagnosis of the literacy and numeracy abilities of young children in EC settings; planning, implementing and evaluating programs to foster optimal development in literacy and numeracy; addressing literacy and numeracy needs of all children equitably and justly; critical examination of teaching approaches and resources in literacy and numeracy education.

Course: ED52
Credit Points: 12
Contact Hours: 4 per week

■ EAB351 FAMILY STUDIES AND EARLY CHILDHOOD EDUCATION
Current social contexts and issues affecting families with young children, including employment patterns, unemployment, poverty, inequality and social justice, ideology of family, cultural diversity, particularly from the perspectives of Aborigines and Torres Strait Islanders, and the influence of technology; reciprocal social and family influences.

Course: ED52
Credit Points: 12
Contact Hours: 12 per week

■ EAB410 EARLY EDUCATION: DECIDING THE CURRICULUM
Examination of the curriculum decision-making processes promoted and in use among teachers working in early childhood settings such as kindergartens, child care and schools. Students have an opportunity to reflect on, and seek to improve, personal ability to decide the curriculum for young learners.

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

■ EAB411 EARLY EDUCATION: LITERACY
A study of current understandings about the nature of literacy, literacy development in early childhood and the ways in which this development can be fostered both within the home and at a range of educational and care settings. The broad topical areas addressed comprise language foundations, processes and patterns of development, the classroom context and program development. Students are expected to build on their preservice studies in the area of language and literacy development and learning.

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

■ EAB412 INTEGRATIVE EARLY CHILDHOOD CURRICULUM
Examination of key ideas informing holistic curriculum approaches; theories and practices associated with play in the curriculum in all EC settings, and particularly the lower primary school; implications of implementing an inclusive curriculum; issues of equity and social justice reviewed in relation to the transacting the curriculum in
- 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:** 4 per week

- **EAB413 MANAGEMENT OF EARLY CHILDHOOD SERVICES**
  - General management theory and practice; organisational and leadership styles; management of various EC services; setting policies and planning for services; implementing day-to-day tasks and operations; managing and working with people; collective and collaborative approaches to management; teamwork and decision-making; ethical issues and conduct; advocacy for EC services for young children from all cultural and social contexts.

**Course:** ED52  
**Credit Points:** 12

- **EAB414 RESEARCH IN EARLY CHILDHOOD DEVELOPMENT AND EDUCATION**
  - Research design and methodology; qualitative and quantitative research; ethical issues in the conduct of the research process with young children and the adults involved with them; awareness and understanding of the research process from development of proposal, through conduct of some aspects of data collection and analysis to writing parts of the thesis. Introduction to and involvement in processes of self-evaluation. Students will be involved with a practising researcher who will act as mentor.

**Course:** ED52  
**Credit Points:** 12  
**Contact Hours:** 4 per week

- **EAB415 RESOURCE/SUPPORT PROGRAMS IN EARLY CHILDHOOD**
  - Community programs which support children and families outside the mainstream EC settings; visits to programs such as those for Aboriginals and Torres Strait Islanders, as well as for children and families of other cultures; awareness of effects of cultural diversity, geographical isolation, etc.; establishing resource files for teaching and referral; models of parent-professional communication; evaluation of community programs; careers in EC services and education.

**Course:** ED52  
**Credit Points:** 12  
**Contact Hours:** 4 per week

- **EAB416 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; methods of reporting and record-keeping; studio art experiences; 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:** 4 per week

- **EAB417 CREATING CURRICULUM WITH YOUNG CHILDREN**
  - Examining the dilemmas arising when teachers negotiate the curriculum with children and parents in shared curriculum creation in child care, preschool, kindergarten and primary school settings; critical analysis of strategies early childhood educators use to create spaces where children construct knowledge in personally relevant ways; consideration of factors which promote children's involvement in creating the curriculum.

**Course:** ED52  
**Credit Points:** 12  
**Contact Hours:** 4 per week

- **EAB418 STUDIES IN NARRATIVE FOR YOUNG CHILDREN**
  - Critical analysis of central themes and issues relevant to the range and uses of narrative with young children; selection and evaluation of stories and narratives (spoken and in print) for use in a multicultural society; desirable qualities in narrative resources and materials; storytelling and story-telling techniques; narrative as a means of reflecting on human issues for the individual and for society; use of narrative in EC programs generally and for linking curriculum areas.

**Course:** ED52  
**Credit Points:** 12  
**Contact Hours:** 4 per week

- **EAB419 MUSIC EDUCATION FOR DIVERSE LEARNERS**
  - This unit provides advanced exposure to music education and explores ways in which music programs for young children can be established on experiential, self-chosen and guided bases. Students will acquire a understanding of musical concepts and elements to enable them to interact with, and make decisions about, sound and to apply specific teaching strategies and techniques to guide children's conceptual understanding, knowledge, skills and socio-cultural awareness of music.

**Course:** ED52  
**Credit Points:** 12  
**Contact Hours:** 4 per week

- **EAB420 CHILDREN, TEACHERS AND THE ENVIRONMENT**
  - Teachers' positions in relation to community concerns on socio-environmental issues; socially just and ecologically sustainable programs; environmental education; exploring a range of environmental issues and dilemmas.

**Course:** ED52  
**Credit Points:** 12  
**Contact Hours:** 4 per week

- **EAB421 EVERYDAY FOOD LEARNING**
  - Exploring a food cycle approach to learning; consideration of space, time, resources and teaching strategies; current EC policies and practices affecting the food and health of children from birth to eight years of age; staff health in relation to early childhood program delivery.

**Course:** ED52  
**Credit Points:** 12  
**Contact Hours:** 4 per week

- **EAB422 TECHNOLOGY AND THE YOUNG CHILD**
  - Selection, use and critical evaluation of computers and associated software, and related technologies in EC programs, linking technology and problem-solving; applications and use of computers and associated software for language, number and problem-solving; creating teaching materials.

**Course:** ED52  
**Credit Points:** 12  
**Contact Hours:** 4 per week

- **EAB440 WORKING WITH PARENTS & THE COMMUNITY**
  - Parental roles in childhood; review of research on child rearing; the use of interpersonal skills in relating to parents; planning for parent involvement; parent involvement approaches; resources for parents; meeting the needs of parents and programs; future trends.

**Courses:** ED23, ED26  
**Credit Points:** 12  
**Contact Hours:** 3 per week

- **EAB441 EARLY EDUCATION DEVELOPMENT & LEARNING**
  - Ecological orientation of child development; forces shaping the development of children from birth to eight years of age; the psychosocial and cultural perspectives of development and learning in the early childhood years; ecological analysis of early childhood settings impacting on development.
EAB501 ADVANCED CHILD CARE DEVELOPMENT & LEARNING
Theoretical perspectives on development and learning of children 0-12 years; investigation of aspects of development, developmental sequences and patterns; factors influencing development and learning; observation and research methods in development and learning.
Course: ED42 Credit Points: 16

EAB502 ADVANCED CURRICULUM THEORY & DESIGN FOR CHILD CARE
Frameworks for curriculum decision making; establishing curriculum policies and evaluation strategies; characteristics of learning environments which foster communicative competence, creativity and problems solving; levels of decision-making, federal and state governments; employing authorities, particular child care and education services.
Course: ED42 Credit Points: 16

EAB503 TEACHING STRATEGIES FOR CHILD CARE
The planning-implementing-evaluating cycle; managing learning environments; the teaching/caring role; facilitating children's development and learning through the human environment; dimensions of curriculum decision-making; adult-adult and adult-child interactions; teaching as a professional.
Course: ED42 Credit Points: 16

EAB504 PROGRAMS & TEACHING STRATEGIES FOR CHILDREN UNDER 3 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 SOCIO-CULTURAL CONTEXT
Administration of early childhood services; leadership styles; managing people; professional issues; selection of personnel; outcomes for children and families; management theory and practice; program administration; financial matters; features of comprehensive programs, planning and communication.
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 TEACHERS' KNOWLEDGE IN ACTION
Critical reflection on knowledge in action as teachers work in early childhood programs; history of the development of key ideas influencing early childhood curriculum and teaching; methods for studying teaching at work in different early childhood programs; analysis of research which examines issues related to teaching in early childhood programs.
Courses: ED13, ED11 Credit Points: 12

EAN602 EARLY CHILDHOOD SERVICES AND POLICIES
Examination is made of the processes of policy development and sources of influence on policies in the area of early childhood services. Critical analyses are undertaken of selected early childhood policies.
Courses: ED13, ED11 Credit Points: 12

EAN603 DEVELOPMENT IN EARLY CHILDHOOD CONTEXTS
Development of skills for critical evaluation of current developmental issues in early childhood within an ecological framework; knowledge of a broad range of developmental and methodological issues of research in early childhood including infant development, family, educational and care contexts; the processes and patterns of symbolic development in young children; critical discussion of developmental research and the implications of this knowledge for early childhood education.
Courses: ED13, ED11 Credit Points: 12

EAN604 YOUNG CHILDREN, FAMILIES AND COMMUNITY
Aspects of family diversity; the interactions between young children, families and the wider social and cultural community; key issues facing families within community contexts; the analysis of transactions involving professionals, young children, families and community.
Courses: ED13, ED11 Credit Points: 12

EAN605 EDUCATION MANAGEMENT PROCESSES AND STRATEGIES
The management processes in educational and other professional settings; the identification of various leadership skills and effective communication styles. The understanding and facilitation of change are explored. Consulting, advocacy and empowerment strategies are identified in terms of the students' particular work sites.
Courses: ED13, ED11 Credit Points: 12

EAN606 MANAGING EDUCATION PERSONNEL
Human resource management; staff selection, staff supervision and appraisal; staff development and the importance of developing evaluation and facilitation skills. Strategies for including professional development in a range of educational and professional settings are explored.
Courses: ED13, ED11 Credit Points: 12
■ EAN607 CONSULTATION AND TEAMWORK
Analysis of typical professional consultancy and teamwork contexts within education and early childhood services, including contributions from other disciplines (e.g., medicine, psychology, therapies, social welfare, law) and agencies (e.g., health, community services, police); theoretical and practical understanding of intra- and interpersonal qualities which affect consultancy and teamwork; theory and application of group development processes related to effective task accomplishment. Factors impinging on the quality of interdisciplinary and interagency teamwork; strategies for reviewing and improving consultation and teamwork.
Courses: ED13, ED11 Credit Points: 12

■ EAP411 CREATIVITY & LANGUAGE 1
Developmental processes in the expressive and language arts; principles of learning; the development of personal identity in young children; creative and expressive processes for language and literacy in early childhood programs.
Course: ED35
Credit Points: 12 Contact Hours: 4 per week

■ EAP412 THINKING & PROBLEM SOLVING 1
The processes of interest in active learning, inquiry and problem solving; environments and strategies which promote the development of active learning and inquiry by young children; monitoring progress.
Course: ED35
Credit Points: 12 Contact Hours: 4 per week

■ EAP413 PROGRAM PLANNING & TEACHING STRATEGIES 1
Development of those areas of knowledge and skills essential to the practical decision-making of early childhood teachers. An off-campus component of this unit includes two practicums, each of twelve days, in two early childhood settings (child care, preschool, kindergarten or early primary).
Course: ED35
Credit Points: 12 Contact Hours: 3 per week

■ EAP416 CREATIVITY & LANGUAGE 2
Discipline-based processes; the interrelated and unique contribution of each of the arts; the teacher's role as a curriculum decision-maker in the development of language and literacy programs.
Course: ED35
Credit Points: 12 Contact Hours: 4 per week

■ EAP417 THINKING & PROBLEM SOLVING 2
The child as explorer, problem solver and meaning maker; organising for active learning, inquiry and problem solving; linking home and early childhood educational environments.
Course: ED35
Credit Points: 12 Contact Hours: 4 per week

■ EAP418 PROGRAM PLANNING & TEACHING STRATEGIES 2
The development and integration of student teachers' knowledge, skills and attitudes from the curriculum development and socio-cultural units to assist them in performing and justifying their diverse roles in teaching practice. An off-campus component of this unit includes two practicums each of sixteen days in two early childhood settings (child care, preschool, kindergarten or early primary).
Course: ED35
Credit Points: 12 Contact Hours: 3 per week

■ EAP418 EARLY CHILDHOOD LEADERSHIP & ADVOCACY
The foundations of early childhood services in Australia; the principles of leadership, empowerment plus change are considered along with advocacy for the early childhood field.
Courses: ED23, ED61 Credit Points: 12

■ EAP512 POLICIES & PRACTICES IN EDUCATIONAL MANAGEMENT
Explores the nature of educational policies in Australia; analyses policies to consider social and political influences; addresses educational practices in relation to current policies at various government and organisational levels.
Courses: ED23, ED61 Credit Points: 12

■ EAP513 EDUCATIONAL SERVICES MANAGEMENT
Focuses on leadership roles by identifying various leadership skills and effective communication styles; development of an understanding and facilitation of change; consulting, advocacy and empowerment strategies are identified.
Courses: ED23, ED61 Credit Points: 12

■ EAP515 HUMAN RESOURCE MANAGEMENT IN EDUCATION
Staff supervision and appraisal; staff development planning, implementation and evaluation; facilitative skills.
Courses: ED23, ED61 Credit Points: 12

■ EAP518 MANAGING THE CURRICULUM
This unit helps students understand the elements of curriculum management. The problematic nature of managing curriculum is explored by considering ideological approaches.
Course: ED23, ED26 Credit Points: 12

■ EAP525 EARLY CHILDHOOD PROGRAM PLANNING
Planning and evaluating early childhood programs for children 3-8 years; organisation and administration of programs for young children; examination of approaches to teaching; early intervention programs; interdisciplinary 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

■ EAP528 CHANGE IN CHILDREN BIRTH TO AGE EIGHT
Techniques for observing and analysing child behaviour; major theories of development and learning; cognitive, social/emotional, language, physical development and learning in children 2-9 years.
Course: ED20 Credit Points: 12

■ EAP529 EARLY CHILDHOOD EDUCATION 1 & 2
The development of problem solving, explanation, investigation, self-expression, originality, divergent thinking and risk-taking in young children in relation to communication, movement, the expressive arts, mathematics, science, social studies and health curriculum; approaches and suitable materials for these curriculum ar-
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 STUDIES: AN INTEGRATED PERSPECTIVE  
This unit continues to develop students’ knowledge about Murri and Torres Strait Islander people, historically, socially and culturally in relation to these changes and gives them the opportunity to explore and investigate areas of interest.

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

- EDB338 MURRI & TORRES STRAIT ISLANDER STUDIES: AN INTEGRATED SEMINARS  
Self-initiated and self-directed academic study in an area of educational management interest which allows study either to a depth not possible in electives, or in an area not covered by the course; for requirements see the Independent Study Guide.

Courses: ED23, ED26, ED50, ED51, ED52, ED54, ED37  
Credit Points: 12

- EDB442 INTEGRATED PROFESSIONAL SEMINARS  
The unit is designed to operate in conjunction with the training provided to educational advisors by the Queensland Department of Education. Students compile a portfolio based on a survey of professional development literature and an in-service activity which they design and implement with classroom teachers. A report is compiled in which students describe their work and reflect on its effectiveness.

Course: ED26  
Credit Points: 12

- EDBN01 ADVANCED SEMINARS  
This unit provides for the special needs and interests of students. Small groups of students interact at an advanced level with specialists or visiting scholars in seminars, conferences and research projects.

Courses: ED13, ED11  
Credit Points: 12

- EDBN03 INDEPENDENT STUDY  
This unit allows individual students to follow their own particular needs/interests and/or take advantage of specialised lecturer expertise through working autonomously on relevant topics of interest under the supervision of individual lecturers.

Courses: ED13, ED11  
Credit Points: 12

- EDBN06 PROJECT/DISSERTATION (STAGES 1 AND 2)  
A minor research project that provides students with an opportunity to extend, synthesise and analyse knowledge from core and elective units through, for example, a criti-
cal literature review, the development of appropriate educational resources, or a project of change in their workplace.

Courses: ED13, ED14  
Prerequisite: EDN611  
Credit Points: 24

E. 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: ED61  
Credit Points: 12  
Contact Hours: 3 per week

II EDP602 ADULT LEARNING & TEACHING IN HIGHER EDUCATION
The theory and practice of teaching adults; the appropriateness of particular approaches to the needs, interests and learning styles of adult audiences; involves the application of theoretical perspectives to the practice of teaching adults in varied higher education and contexts.

Course: ED61  
Credit Points: 12  
Contact Hours: 3 per week

II 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: ED61  
Credit Points: 12  
Contact Hours: 3 per week

II EDP604 PROGRAM DESIGN & EVALUATION IN HIGHER EDUCATION
Identifies and describes the major theoretical underpinning of educational planning and evaluation; traces the historical shifts within the practice of course design and evaluation; demonstrates skills in evaluation and subsequent planning for course integration; and demonstrates skills in critical analysis of evaluation designs and procedures.

Course: ED61  
Credit Points: 12  
Contact Hours: 3 per week

II EDR702/1-9 THESIS
Provides students with an opportunity to extend and synthesise knowledge from the coursework section; allows the coursework to be applied in a manner that reflects how it might be used in future work situations; provides a means of extending the skills and understandings gained from formal units to investigate in depth some aspects of the student’s professional practice. Focuses on the extension of acquired knowledge to increase the understanding and competence of skilled professional educators; facilitates the application of innovative research but grows out of the professional coursework. All candidates will proceed through the three required thesis steps. Namely, Step (a) Thesis Preparation; Step (b) Thesis Confirmation of Candidature; and Step (c) Thesis Implementation.

Course: ED11  
Credit Points: 24 each

II EDR703 INTERDISCIPLINARY EDUCATION STUDIES (ADVANCED SEMINARS)
A reading and seminar program that 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 of learning for educators who seek the personal and professional benefits that the broadening and deepening of their professional knowledge affords.

Course: ED11  
Credit Points: 24

II EDR704/1-9 THESIS
Provides students with an opportunity to extend and synthesise knowledge from the coursework section; allows
the coursework to be applied in a manner that reflects how it might be used in future work situations; provides a means of extending the skills and understandings gained from formal units to investigate in depth some aspects of the student’s professional practice. Focuses on the extension of acquired knowledge to increase the understanding and competence of skilled professional educators; facilitates the application of innovative research but grows out of the professional coursework. All candidates will proceed through the three required thesis steps. Namely, Step (a) Thesis Preparation; Step (b) Thesis Confirmation of Candidate; and Step (c) Thesis Implementation.

Course: ED11
Credit Points: 12 each

• 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, EE45, IF42, IF44, IF53, IF56, ME35, ME36, ME43, ME46, ME47, IF25
Credit Points: 8
Contact Hours: 3 per week

• EEB209 ELECTRICAL ENGINEERING 2M

This unit aims to provide a basic understanding of electric circuits, power calculation in single-phase and three-phase systems, laws of electrostatics, electromagnetic fields, single-phase transformer, AC and DC machines, basic electronics with some engineering applications.

Courses: IF53, IF56, ME35, ME45, ME46, ME47
Credit Points: 8
Contact Hours: 3 per week

• EEB210 NETWORK ANALYSIS

This unit develops the use of complex number theory for the solution of electric circuit problems, and introduces the concepts of frequency domain analysis. Topics covered include network theorems, mesh and nodal analysis, complex and three-phase power, the transient response of RL, RC and RLC circuits with step forcing functions, computer aided analysis of circuits using standard software packages (e.g. PSPICE) and Laplace transform theory and application to the transient response of linear circuits. Initial conditions, circuit transformation into the frequency domain.

Courses: EE43, EE44, EE45, IF44, IF25
Prerequisites: EEB101
Credit Points: 8
Contact Hours: 4 per week

• EEB270 DIGITAL DESIGN PRINCIPLES

Binary variables, number systems; signed numbers and codes; Boolean algebra; logic functions, minimisation; implementation of combinational logic by gates, PROMs and GALs; binary arithmetic, adders and subtractors, overflow conditions; synchronous and asynchronous sequential logic; flip-flops, counters and shift registers; state diagrams and transition tables, implementation of sequential machines using feedback, flip-flop, PROMs, GALs; TTL, MOS and CMOS logic families.

Courses: EE43, EE44, EE45, IF23, IF44, IF53, IF56, IF25
Credit Points: 8
Contact Hours: 3 per week

• EEB302 ELECTRICAL ENGINEERING 1

Magnetic circuits, magnetic materials, transformers and electromagnetic devices, Power distribution, three-phase, balanced and unbalanced loads.

Courses: EE44, IF23, EE45, IF44, IF25
Prerequisite: EEB210
Credit Points: 8
Contact Hours: 3 per week

• EEB310 NETWORK SYNTHESIS

This unit aims to give students a good understanding of the synthesis of networks and filters. Topics discussed include frequency response and Bode plots, stability and realisability of networks, standard filter approximations, the synthesis of passive networks and filters and the synthesis of active filters using positive and negative feedback and three amplifier biquadratic circuits.

Courses: EE43, EE44, EE45, IF44, IF25
Prerequisites: EEB210, MA8188
Credit Points: 8
Contact Hours: 4 per week

• EEB362 INTRODUCTION TO TELECOMMUNICATIONS

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, EE45, IF44, IF25
Prerequisites: MA8188, EEB210 or EEB271
Credit Points: 8
Contact Hours: 3 per week

• EEB375 ELECTRONICS 1

Provides basic understanding of the characteristics and operation of discrete semiconductor components; introduces electronic circuit design with emphasis on the low and high frequency response of those circ units; develops the theory and design of feedback structures in electronic circuits and amplifiers.

Courses: EE43, EE44, EE45, IF44, IF25, ME46
Credit Points: 8
Contact Hours: 4 per week

• EEB380 ENGINEERING MANAGEMENT SKILLS

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

Courses: EE43, EE44, EE45, IF44, IF25
Credit Points: 8
Contact Hours: 3 per week

• EEB390 ENGINEERING COMPUTING 1

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

Courses: EE43, EE44, CSBI92
Credit Points: 8
Contact Hours: 3 per week

• EEB400 ELECTRICAL ENGINEERING 2

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

Courses: EE44, EE45, IF23, IF44, IF25
Prerequisite: EEB302
Credit Points: 8
Contact Hours: 3 per week

• EEB420 CONTROL SYSTEMS 1

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

Courses: EE43, EE44, EE45, IF44, IF25
Prerequisite: EEB101
Credit Points: 8
Contact Hours: 3 per week
• **EEB475 MICROPROCESSOR SYSTEMS**
  To give students a good grounding in the basic principles and practical use of embedded microprocessor/microcontroller systems, with particular regard to the hardware and software. Parallel data transfer, memory decoding, and Centronics interface; Synchronous and asynchronous serial data communications RS232, RS422, etc.; DACs and ADC; Instruction sets, machine and assembly language programming; Input/output devices, and timers; Real time clocks and interrupt driven systems; Application of C to the programming of embedded systems.
  **Courses:** EE43, EE44, IF44, IF25
  **Prerequisites:** EEB270, EEB390 or ITB411
  **Credit Points:** 8
  **Contact Hours:** 3 per week

• **EEB476 ELECTRONICS 2**
  Operational amplifiers; theory and practical applications; comparators; signal conditioning; log, anti-log amplifiers; precision rectifiers; peak detectors and Schmitt trigger; Instrumentation amplifiers; operational amplifier practical design considerations: noise and EMI; circuit layouts for high frequency applications; interfacing techniques. Power semiconductor devices: power diode, Zener diode, SCR, GTO, Triac, BJT, MOSFET and IGBT and their control; Power amplifiers: classes A, B, AB; alternating current control circuits using SCRs and Triacs; rectifiers and unregulated power supply theory and design; Series voltage regulator power supplies: overload protection and foldback; integrated circuit regulators design; switched mode regulator: buck and boost regulators, theory and design.
  **Courses:** EE44, EE45, EE43, IF44, IF25
  **Prerequisites:** EEB375
  **Credit Points:** 8
  **Contact Hours:** 4 per week

• **EEB530 ENGINEERING ELECTROMAGNETICS**
  The aim of this subject is to develop the student's understanding of the basic theory leading to the development and solution of Maxwell's Equations. An objective is to develop his intuitive as well as his theoretical understanding and leave the development of more advanced concepts of the theory until later in the course.
  **Course:** EE44, EE45, IF44, IF25
  **Prerequisites:** EEB400, MAB486, PHB234
  **Credit Points:** 8
  **Contact Hours:** 3 per week

• **EEB532 POWER SYSTEMS 1**
  **Courses:** EE44, EE45, IF44, IF25
  **Prerequisites:** EEB400
  **Credit Points:** 8
  **Contact Hours:** 3 per week

• **EEB564 INFORMATION THEORY MODULATION & NOISE**
  Information in discrete and continuous channels, coding efficiency, statistical description of noise, effects of transformations on signal parameters, error rates, effect of noise and system transfer.
  **Courses:** EE43, EE44, IF44, IF23
  **Prerequisites:** EEB362, EEB566
  **Credit Points:** 8
  **Contact Hours:** 3 per week

• **EEB565 SIGNALS & LINEAR SYSTEMS**
  A detailed study of Fourier theory applied to signals; an overview of systems and their representation; response of systems to signals.
  **Courses:** EE43, EE44, IF23, EE45, IF44, IF25
  **Prerequisites:** EEB362, MAB486, EEB310
  **Credit Points:** 8
  **Contact Hours:** 3 per week

• **EEB582 AEROSPACE DESIGN 1**
  Study of the environmental factors affecting the design of aerospace equipment particularly in relation to US and Australian standards and specifications (e.g. US Mil Specs, FAR 23, 25 and Technical Service Orders, Australian certification requirements both civil and military). Examination in detail of the operating regime for avionics equipment such as the properties of the atmosphere (temperature, pressure, humidity), design load factors for aeronautical equipment, reliability and duplication requirements.
  **Course:** EE43
  **Credit Points:** 8
  **Contact Hours:** 3 per week

• **EEB587 DESIGN 1**
  General principles of electronic circuit and electrical equipment design and the realisation of typical electronic circuits and equipment.
  **Courses:** EE44, IF23, EE45, IF44, IF25
  **Prerequisites:** EEB476
  **Credit Points:** 8
  **Contact Hours:** 3 per week

• **EEB593 SOFTWARE SYSTEMS ENGINEERING**
  Students will learn concepts, issues, theory, techniques and practice of software engineering methodologies. They will examine and develop applications software for high level and low level (embedded) systems. They will gain experience in use of computer assisted software engineering facilities and will undertake a major project as part of a team project for an extensive engineering project. Software design principles; OOP as a paradigm for SW design; program development tools; human-computer interaction.
  **Courses:** EE43, EE44, IF45
  **Prerequisites:** EEB390
  **Credit Points:** 8
  **Contact Hours:** 3 per week

• **EEB624 CONTROL SYSTEMS 2**
  Analysis and design of systems using state-space methods. An introduction to optimal control, Z-transform application to digital control system analysis and design using classical and modern approaches. System identification and nonlinear system analysis and design.
  **Courses:** EE43, EE44, IF45
  **Prerequisites:** EEB420
  **Credit Points:** 8
  **Contact Hours:** 3 per week

• **EEB632 POWER SYSTEMS 2**
  Fault analysis (unbalanced faults) on power systems using symmetrical component techniques. Power flows in electrical networks using Gauss-Seidel and Newton-Raphson techniques. Studies of the causes and effects of travelling waves on transmission systems. Computer analysis techniques used in all areas to reinforce understanding of each topic.
  **Course:** EE43, EE44, IF44, IF25
  **Prerequisites:** EEB532
  **Credit Points:** 8
  **Contact Hours:** 3 per week

• **EEB665 TRANSMISSION & PROPAGATION**
  Transmission line theory, terminated line, Smith Circle Chart usage and lattice diagram; propagation modes in wave guides and optical fibres; free-space propagation, ionospheric and ground wave propagation; basic antenna parameters.
  **Courses:** EE43, EE44, IF23, EE45, IF44, IF25
  **Prerequisites:** EEB530
  **Credit Points:** 8
  **Contact Hours:** 3 per week

• **EEB667 DIGITAL COMMUNICATIONS**
  The theory and applications of digital communications technology; baseband digital signals are introduced;
pulse shaping, signal regeneration, measurement techniques and the digital coding of analogue signals are treated; such applications as digital radio systems, digital telephone and computer networks, error control in digital networks and ISDN.

Courses: EE43, EE44, IF23, EE45, IF44, IF25
Prerequisites: EEB564
Credit Points: 8 Contact Hours: 3 per week

**EEB668 DIGITAL SIGNAL PROCESSING**
Introduction to digital signal processing; discrete Fourier transform; discrete convolution; digital filtration and spectral estimation.

Courses: EE43, EE44, IF23, EE45, IF44, IF25
Prerequisites: EEB565, MAB893
Credit Points: 8 Contact Hours: 3 per week

**EEB682 ENGINEERING BUSINESS SKILLS**
To provide students with sufficient grounding in business practice, for them to appreciate the fundamental links between engineering practice and business. There should be adequate skills for young professional engineers to start or be an active partner in a small business.

Courses: EE43, EE44, EE45, IF44, IF25
Credit Points: 8 Contact Hours: 3 per week

**EEB683 AEROSPACE DESIGN 2**
Designing for reliability as required by the aviation and aerospace industry will augment practical design assignments; assignments require that design problems be solved analytically and the results confirmed by equipment construction and practical measurement; computer-aided design, computer simulation and programming may be required.

Course: EE43
Prerequisites: EEB362, EEB400, EEB582, EEB624
Credit Points: 8 Contact Hours: 3 per week

**EEB691 AERONAUTICAL COMPUTING**
Suitable languages such as ADA are used to implement embedded avionics computer systems and practical experience is gained in the application of object-oriented software design, concurrency and distributed systems used in the aerospace industry.

Course: EE43
Prerequisite: EEB390, EEB475
Credit Points: 8 Contact Hours: 3 per week

**EEB692 SPACE TECHNOLOGY**
Review of world launch capability; spherical trigonometry; orbits and trajectories, e.g. launch orbits, geostationary orbits, G.P.S. satellite orbit requirements; gravitational fields, Lagrange points, orbital dynamics and parameters; special purpose orbits; orbit determination from tracking data; payload techniques; upper atmospheric meteorology and introduction to astronomy.

Course: EE43
Credit Points: 8 Contact Hours: 3 per week

**EEB693 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 specified time; applications related to embedded systems and some business applications; design of new systems and study of existing systems.

Courses: EE43, EE44, IF23, EE45
Prerequisite: EEB593
Credit Points: 8 Contact Hours: 3 per week

**EEB722 FLIGHT CONTROL SYSTEMS**
Principles and description of flight control systems; performance of aircraft in flight; analysis and simulation of flight control systems; cross-coupling parameters; methods of coupling terrain following radar and other navigational aids; mechanical systems; analogue augmented systems; digital augmented systems; digital computer control relating to multiplex buses (Mil spec); artificial stability; automatic pilots during flight and landing; fibre optic control; fly-by-wire systems; use of redundancy.

Course: EE43
Prerequisites: MEB553
Credit Points: 8 Contact Hours: 3 per week

**EEB730 RADAR & RADIO NAVIGATION**
Radar equation; theory of reception; matched filtering; principles of detection; types of radars; primary and secondary radar; surveillance; tracking; navigation; terrain-following radar; radar techniques including doppler extraction, moving target indicator; pulse compression, ranging parameter optimisation, application of matched filtering and Wiener and Kalman filtering; detailed and systematic study of navigational systems; microwave landing systems.

Course: EE43
Prerequisites: EEB665, EEB765, EEB668
Credit Points: 8 Contact Hours: 3 per week

**EEB741 POWER SYSTEMS ANALYSIS**
Economic operation of power systems, system stability, power system control; HVDC power transmission; advanced harmonic analysis; surge phenomena in machine and transmission lines.

Course: EE44, EE45, IF44, IF25
Prerequisite: EEB632
Credit Points: 8 Contact Hours: 3 per week

**EEB752 POWER ELECTRONICS**
Review of modern switching components, characteristics and device control methods; principles of operation of controlled rectifiers and chopper techniques for DC motor control; quasi-square and PWM 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, EE45, IF44, IF25
Prerequisite: EEB476
Credit Points: 8 Contact Hours: 3 per week

**EEB762 COMMUNICATIONS TECHNOLOGY**
Introduction to three important communication technology areas. Study of the techniques for system design and performance analysis of mobile and satellite communication systems; study of the fundamentals of fibre communication systems.

Course: EE44, EE43, EE45, IF44, IF25
Prerequisites: EEB564, EEB667
Credit Points: 8 Contact Hours: 3 per week

**EEB763 MODERN SIGNAL PROCESSING**

Courses: EE43, EE44, EE45, IF25, IF44
Prerequisites: EEB563, MAB893
Credit Points: 8 Contact Hours: 3 per week

**EEB765 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, EE45, IF44, IF25
Prerequisite: EEB665
Credit Points: 8 Contact Hours: 3 per week

■ EEB780 AEROSPACE DESIGN 3
Practical design assignments consisting of detailed design and realisation of typical subsystems used in all areas of the avionics industry; assignments require that design problems be solved analytically and the results confirmed by equipment construction and practical measurement; computer-aided design, computer simulation and programming may be required.

Course: EE43
Prerequisites: EEB475, EEB668, EEB683
Corequisites: EEB947, MEB790
Credit Points: 8 Contact Hours: 3 per week

■ EEB787 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: 24 Contact Hours: Average 5 per week

■ EEB788 DESIGN 2
Design principles and practice of more complex electronic circuits; electrical equipment and systems.

Courses: EE44, IF23, EE45, IF44, IF25
Prerequisites: EEB302, EEB587, EEB420
Credit Points: 8 Contact Hours: 3 per week

■ EEB791 ADVANCED ENGINEERING COMPUTING 1
An examination of underlying theory and algorithms pertaining to selected advanced computational techniques for selected areas of engineering problems. Practical experience in the use of existing software and in constructing their own implementations of some techniques, for engineering problems, is obtained. Artificial intelligence techniques; optimisation techniques; simulation techniques.

Course: EE44, EE45, IF44, IF25
Prerequisite: EEB593 or ITB424
Credit Points: 8 Contact Hours: 3 per week

■ EEB820 ENGINEERING MANAGEMENT
Economic analysis of electrical engineering projects; present worth and annual cost calculations. Assessment of tenders: project management, critical paths and linear programming methods; contract administration. Engineering case studies.

Courses: EE43, EE44, IF23, EE45, IF44, IF25
Credit Points: 8 Contact Hours: 3 per week

■ EEB822 ADVANCED CONTROL SYSTEMS

Course: EE44, EE43, EE45, IF44, IF25
Prerequisites: EEB624
Credit Points: 8 Contact Hours: 3 per week

■ EEB842 POWER SYSTEMS ENGINEERING
Substation engineering, protection of plant, substation earthing, system overvoltages, insulation coordination, HV switchgear.

Course: EE44, EE45, IF44, IF25
Prerequisite: EEB532
Credit Points: 8 Contact Hours: 3 per week

■ EEB869 SIGNAL FILTERING & ESTIMATION
Modern spectral estimation, parametric and non-parametric; time frequency analysis and instantaneous frequency estimation; definition and implementation of higher order spectra; application to signal detection and classification.

Courses: EE44, IF23, EE43, EE45, IF44, IF25
Prerequisite: EEB668
Credit Points: 8 Contact Hours: 3 per week

■ EEB871 APPLIED ELECTRONICS
Analysis of the characteristics and applications of a variety of integrated devices; particular attention is given to new products; errors and quality of design.

Courses: EE43, EE44, IF23, EE45, IF44, IF25
Prerequisite: EEB476
Credit Points: 8 Contact Hours: 3 per week

■ EEB881 PRODUCTION TECHNOLOGY & QUALITY
The methodology of electronic system design, the range of production processes in electronic manufacture, and the quality control procedures at both prototype and full production stages.

Courses: EE43, EE44, IF23, EE45, IF44, IF25
Prerequisite: EEB587, EEB788
Credit Points: 8 Contact Hours: 3 per week

■ EEB885 DESIGN 3
Detailed design and realisation of typical electronic and power based subsystems used in all areas of electronic systems and power systems engineering.

Courses: EE44, IF23, EE45, IF44, IF25
Prerequisite: EEB788
Credit Points: 8 Contact Hours: 3 per week

■ EEB889 PROJECT
An individual engineering project on a specified topic is completed; the work will require design, computing, construction, experimental work and practical testing with the submission of appropriate reports; the topic is selected from any area which involves electronics, computing, control, communication and educational power and may include programming, circuit and system design.

Courses: EE44, IF23, EE45, IF44
Corequisites: This unit must be done in the final year of the course.
Credit Points: 324
Contact Hours: Average 5 per week

■ EEB891 SIGNAL COMPUTING & REAL-TIME DSP
Signal theory; speech processing; image processing and real time DSP; the fundamentals of signal processing concepts; applications of signal processing techniques.

Courses: EE43, EE44, IF23, EE45, IF44, IF25
Prerequisites: EEB668
Credit Points: 8 Contact Hours: 3 per week

■ EEB892 ADVANCED ENGINEERING COMPUTING 2
Selected basic graphic techniques and writing of simple engineering graphics software; application of graphics software libraries and interactive graphics facilities; appreciation of graphical user environments, interface, windows and graphical tools; an understanding of and ability to use 2D/3D/4D data visualisation techniques, and spatial data manipulation.

Courses: EE44, EE43, EE45, IF44, IF25
Prerequisites: EEB393 or ITB424
Credit Points: 8 Contact Hours: 3 per week
EEB910 PHOTOVOLTAIC ENGINEERING
The various aspects of photovoltaic systems including flat panel and concentrating solar cells, series-parallel connection for optimal array design, array measurements, power conditioning, load management, energy storage, system costs, and balance of subsystems.
Course: EEB43, IF24, EE45, IF44, IF45
Prerequisite: EEB383
Credit Points: 8 Contact Hours: 3 per week

EEB923 INDUSTRIAL CONTROL SYSTEMS
Courses: EEB43, IF23, IF25, IF44
Prerequisite: EEB420, EEB624
Credit Points: 8 Contact Hours: 3 per week

EEB932 AUTOMATIC FLIGHT CONTROL
The application of design principles to the Flight Control Systems of modern civil and military aircraft. Derivation of transfer functions for aircraft and missiles including effects of vibration and other perturbations on servo systems along with servo actuators and sensors. Use of conventional and modern control theory to analyse and design and lateral-directional stability augmentation systems and control augmentation systems. Study of autopilot design for various tasks including turn coordination and automatic landing, stabilisation of aircraft and adaptive control systems.
Course: EEB43
Prerequisite: EEB722
Credit Points: 8 Contact Hours: 3 per week

EEB933 COMBAT SYSTEMS
Sound generation propagation and analysis in the maritime environment; principles and application of lasers to sighting and guidance systems; principles of detection of submarines using magnetometers; infra-red propagation and its use in detection and weapons guidance; including ECM/ECCM; sonar processing; laser processing and guidance; radar guidance/sighting; gun sights; weapons control systems; IFF/ transponders; command and control; magnetic anomaly detection; tactical navigation systems; infra-red.
Course: EEB43
Prerequisite: EEB930
Credit Points: 8 Contact Hours: 3 per week

EEB934 ADVANCED COMMUNICATIONS & NAVIGATION SYSTEMS
Expansion of previous theory; develop an increased understanding of systems previously described; complex algebra required for error-correcting codes and auto-correlation and cross-correlation of pseudo-noise sequences; investigation and simulation of error-correcting communication systems; detailed investigation into modern communication systems; theory of acquisition and tracking using delay-lock and similar techniques; use of fast-fourier and parallel processing the Global Positioning System (GPS); position fixing using GPS.
Course: EEB43
Prerequisite: EEB362, EEB665, EEB765, EEB668
Credit Points: 8 Contact Hours: 3 per week

EEB935 ADVANCED SATELLITE SYSTEMS
Design of communication systems for spacecraft; spacecraft and ground stations performance; special modula-

tion 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: EEB43
Prerequisites: MEB692
Credit Points: 8 Contact Hours: 3 per week

EEB957 HIGH VOLTAGE EQUIPMENT
Review of modern insulating materials; high voltage test methods and apparatus; characteristics of electrical insulation theories of breakdown in dielectrics; non-destructive testing methods, dielectric loss angle, partial discharge; voltage surge distribution in power equipment; overhead line insulation and lighting.
Course: EEB44, IF23, EE45, IF44, IF25
Corequisite: EEB632
Credit Points: 8 Contact Hours: 3 per week

EEB958 ELECTRICAL ENERGY UTILISATION
Power reticulation in building, energy management, fire protection systems, illumination technology, air conditioning plant, building supervising and control systems. Iffs.
Course: EEB44, IF23, EE45, IF44, IF25
Prerequisite: EEB400
Credit Points: 8 Contact Hours: 3 per week

EEB959 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: EEB44, IF23, EE45, IF44, IF25
Prerequisite: EEB752
Credit Points: 8 Contact Hours: 3 per week

EEB963 STATISTICAL COMMUNICATIONS
PCM quantisation noise in uniform and non-uniform quantisation; effects of channel noise on S/N; delta and sigma modulations; threshold extensions, spread spectrum, matched filtering and correlation.
Course: EEB43, EE44, IF23, EE45, IF44, IF25
Prerequisite: EEB564, EEB658
Credit Points: 8 Contact Hours: 3 per week

EEB965 MICROWAVE SYSTEMS ENGINEERING
Microwave thermionic and semiconductor devices, amplifier design using scattering parameters; passive microwave devices: non-linear networks and ferrites; array theory and design, microwave antennae.
Courses: EEB43, EE44, IF23, EE45, IF44, IF25
Prerequisite: EEB665
Credit Points: 8 Contact Hours: 3 per week

EEB974 VLSI CIRCUITS AND SYSTEMS
Design of digital integrated circuits at mask level, symbolic level, transistor level and module level; IC planar fabrication process; Implementation technologies including FPGAs, Gate Arrays, Standard Cells and full-custom ICs; CAD tools for specification, layout verification and testing; memory circuits and systems.
Courses: EEB44, EE43, IF23, IF44, EE43, IF25
Prerequisite: EEB474 or EEB475
Credit Points: 8 Contact Hours: 3 per week
■ EEB990 ADVANCED INFORMATION TECHNOLOGY TOPICS
Supercomputer principles, architectures, characteristics, performance measures. Hardware components for supercomputers; parallel programming environments, automatic code parallelization techniques; parallel algorithm design and development approaches; parallel computer system process scheduling strategies and load balancing; numerical applications; computer graphics applications; case study.
Courses: EE43, EE44, EE45, IF25, IF44
Prerequisites: EEB593 or ITB424
Credit Points: 8  Contact Hours: 3 per week

■ EEB999 ADVANCED ELECTRICAL ENGINEERING TOPICS
Students are introduced to the current technology that is the expertise of visiting specialists or staff within the School.
Course: EE43, EE44, EE45, IF44, IF25
Prerequisites: As required
Credit Points: 8  Contact Hours: 3 per week

■ EEP101 ALGORITHMS FOR CONTROL & ENGINEERING
Solution of equations using numerical analysis methods and computer algorithms; differential and difference equations, numerical approximations and computational flow diagrams. Computer control of closed-loop systems, continuous and discrete systems, system hardware, sampled data systems design techniques, system simulation; state-space theory, and system performance optimisation; state equation, transformations, state equation solution, closed-loop system pole-placement design, performance criteria, dynamic optimisation methods; spectral analysis and digital filtering; discrete time adaptive filters; an introduction to neural networks and to fuzzy logic.
Course: CE74, EE65, EE76
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: CE74, EE65, EE76
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, EE76
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 QNX and UNIX-like operating systems. Structure: management; input/output management; file management; resource allocation and scheduling; protection; job control and multitasking. Development of programming skills: structured programming techniques, modular programming techniques; documentation of programs; interrupt handling techniques. Using assembler and high-level languages.
Courses: CE74, EE65, EE76
Credit Points: 12  Contact Hours: 3 per week

■ EEP120 NETWORKS & DISTRIBUTED COMPUTING
The Open System Interconnection model and the more common standards which support the model; layers 3-7 covered in depth, layers 1 and 2 covered by reference; computers, software packages; network topologies, software techniques, data transfer protocols; examples of local and wide area networks; hardware implementation of OSI layers and protocols; Modern High Performance Networking protocols such as FDDI and ATM, treated as extensions of the OSI model.
Courses: CE74, EE65, EE76
Credit Points: 12  Contact Hours: 3 per week

■ EEP121 PARALLEL & SUPER COMPUTING
Systems engineering design and economics of High Performance Computers; vector processing and parallel computing technology; students will have access to vector and parallel computers and may be required to undertake a small research project.
Courses: EE65, EE76
Credit Points: 12  Contact Hours: 3 per week

■ EEP122 GRAPHICS & COMPUTER VISION
An introduction to the human visual system computer graphics and the modelling of digital images. It also provides an introduction to a range of digital image process systems, pattern recognition and image synthesis.
Courses: EE65, EE76
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, EE76
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 and encryption; public networks, and other specialised topics.
Courses: CE74, EE65, EE76
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. Techniques and applications of interest to students may be included in small research projects with guidance.
Courses: EE65, EE76
Credit Points: 12  Contact Hours: 3 per week

■ EEP126 COMMUNICATIONS DIGITAL SIGNAL PROCESSING
Source and channel coding; waveform encoding; adaptive filtering in communication; applications of speech technology in communication; applications of DSP technology; real time DSP devices and their applications in communications.
Courses: CE74, EE76
Credit Points: 12  Contact Hours: 3 per week

■ EEP127 ADVANCED TOPIC B
An advanced topic in the field of computers and communication engineering. This topic will change from year to year and is announced at the beginning of the semester.
Courses: CE74, EE76
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-

Courses: CE74, EE76
Credit Points: 12 Contact Hours: 3 per week

■ EEP129 IMAGE PROCESSING & COMPUTER VISION
Image representation and modelling; image enhancement; image restoration; image representation by stochastic models, boundary detection techniques and algorithms; image segmentation; shape description techniques; neighbourhood operators; mathematical morphology. Other specialised topics may be included as small research projects.

Courses: CE74, EE65, EE76
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.

Courses: CE74, EE76
Credit Points: 12 Contact Hours: 3 per week

■ EEP137 ADVANCED TOPIC A
An advanced topic in the field of computers and communication engineering. This topic will change from year to year and is announced at the beginning of the semester.

Courses: CE74, EE76
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; stratified grounds; electric shock, calculation of step and touch potentials; introduction to substations earthing: ground potential rise; connection of services, grid and mesh potentials; measurement of soil resistivity and electrode resistance; earthing of transmission lines: tower foot resistance, current division between ground and aerial earth wires, division of earth currents at substations; earth current distribution on faulted lines; distribution systems: MEN, SWER, safety during faults; flow of lightning currents to ground.

Courses: EE82, EE60, EE78
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 - common heat transfer correlations; radiation from hot surfaces - view factors; calculation of steady-state and time-varying temperatures in conductors; temperature measurement methods for high voltage equipment; thermal ratings of overhead lines - steady-state, cyclic and short-time ratings; cable rating - temperature rise due to step current, cyclic and emergency loads; temperature rise of power transformers - cooling methods, emergency overload.

Courses: EE82, EE60, EE78
Credit Points: 4 Contact Hours: 3 per week

■ EEP203 TESTING & CONDITION MONITORING

Courses: EE82, EE60, EE78
Credit Points: 4 Contact Hours: 3 per week

■ EEP204 POWER SYSTEM LOAD FLOW ANALYSIS
p.u. revision; Data collection methods; load flow algorithms: convergence criteria, multiple solutions, starting values, ordering and sparsity of matrices; single and three-phase models: transformers, tap changers, overhead transmission lines, underground cables, capacitors and filters, controlled reactive devices, generators and motors, load representation. Load flow applications: base case and contingency analysis in planning augmentation options, system operations contingency analysis; Load flow analysis methodology - use of load forecasts, establishment of 'base case'; Practice in analysis of transmission and distribution systems using an interactive package.

Courses: EE82, EE60, EE78
Credit Points: 4 Contact Hours: 3 per week

■ EEP205 POWER SYSTEM FAULT CALCULATIONS
Representation of generators, lines, transformers in positive sequence equivalent circuits; balanced fault analysis; selection of source voltages from pre-fault conditions; unbalanced fault conditions; complete sequence representation of power system equipment: transformers, cables and lines (including mutual coupling of parallel lines); 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 - inclusion of tower foot resistances in zero sequence models; residual currents in untransposed lines; interference with telecommunications circuits; short circuit calculations to AS3581 using an interactive computer package.

Courses: EE82, EE60, EE78 Prerequisite: EEP204
Credit Points: 4 Contact Hours: 3 per week

■ EEP206 PROJECT MANAGEMENT
Principles of project management and the operation of project management packages. Emphasis on the practical application of PC packages based on exercises related to the electricity supply industry and aimed at promoting the increased use of such packages by engineering and technical staff in the normal course of their work. Details include activity networks, Gantt charts, time schedules, analysis of critical path, types of resources, resource profiles, resource scheduling, project monitoring and reporting.

Courses: EE82, EE60, EE78
Credit Points: 4 Contact Hours: 3 per week

■ EEP207 OVERHEAD LINE ROUTE SELECTION - ENVIRONMENTAL FACTORS
Overview of Legislation, Standards and Guides: radio interference, electromagnetic fields, low frequency induction, touch potentials, structure earthing, electrolytic

Courses: EE82, EE60, EE78
Credit Points: 4  Contact Hours: 3 per week

■ **EEP208 ECONOMIC ANALYSIS FOR POWER SYSTEM ENGINEERS**
Principles of economic analysis for a tax paying entity. Various evaluation techniques are addressed including both discounted and non discounted techniques. The net present value approach is settled on as being the most appropriate approach. Issues such as the effect of interest and inflation on nominal cash flows are addressed. Cost benefit analysis for engineering decision making: econometric models for ES1, maintenance, refurbishment and replacement. Budgeting and cost control, budget preparation with spreadsheets, cash flows, monitoring expenditure and budget review, profit and loss and balance sheets. Risk analysis including WACC calculations, stochastic simulation and sensitivity.

Courses: EE82, EE60, EE78
Credit Points: 4  Contact Hours: 3 per week

■ **EEP209 POWER SYSTEM HARMONICS**
Generation of harmonics: converters, arc furnaces, SVC, inverters, electronic control; system response characteristics: resonance conditions, effect of load, typical system responses; effects of harmonics: motors, generators, power cables, capacitors, electronic equipment, metering, relaying, telephone interference; reactive power compensation and harmonic control; converter power factor; reactive power compensation, control of harmonic currents; measurement of harmonics; recommended practices including AS2279.

Courses: EE82, EE60, EE78  Prerequisite: EE205
Credit Points: 4  Contact Hours: 3 per week

■ **EEP210 ABNORMAL SYSTEM VOLTAGES**
Supply quality standards: review of criteria, statutory requirements, emergency and short term limits; 50 Hz voltage: cause of voltage deviations, voltages during faults, motor starting; negative phase sequence voltages; AS1359 requirements, voltage unbalance studies, modelling, measurement; voltage transients and flicker; AS2279 requirements, disturbing loads, remedial measures, transient disturbances and power system plant; Power system transient analysis; ATP studies.

Courses: EE82, EE60, EE78  Prerequisite: EE205
Credit Points: 4  Contact Hours: 3 per week

■ **EEP211 BASIC POWER SYSTEM PROTECTION**

Courses: EE82, EE60, EE78

Prerequisites: EEP205
Credit Points: 4  Contact Hours: 3 per week

■ **EEP212 ADVANCED POWER SYSTEM PROTECTION**
Specification of current transformer (CT) to cope with fault currents that include an exponentially decaying transient DC component, Voltage transformer (VT) transient performance. Design and implementation of distance relay protection schemes. Specification and understanding of protection signalling schemes. Principles associated with feeder current differential protection. Advanced principles and setting of high impedance protection. Principles of protection of large generators together with the determination of selected generator protection relay settings. Protection of large motors together with the determination of motor protection relay settings. Principles associated with the protection of high voltage capacitor banks together with the determination of capacitor bank protection relay settings. Overall principles of protection design and modern developments and trends with the application of protection to power systems.

Courses: EE82, EE60, EE78
Credit Points: 3  Contact Hours: 3 per week

■ **EEP213 STATISTICS**
The role of statistics in electricity supply engineering. Strategies for collecting and recording valid data from which statistical inferences can be made: use of operational and inventory data. Graphical and numerical techniques to summarise data using statistical or spreadsheet packages. Review of probability concepts, random variables, probability distributions. Specific distributions used in system and component reliability studies.

Courses: EE82, EE60, EE78
Credit Points: 4  Contact Hours: 3 per week

■ **EEP214 RISK ASSESSMENT IN THE ELECTRICITY SUPPLY INDUSTRY**
Identification of hazards; failure modes and effects analysis, failure modes effects and criticality analysis – outcomes from possible failure modes; Hazard and operability studies; Assessment of frequency – fault tree analysis, event tree analysis; Assessment of consequences: consequence analysis, critically assessment in terms of chance of failure and consequences, incident scenario, damage criteria, damage identification; legal and economic consequences; case studies including identification of hazards, assessment of risks, and consequences in ES1. Loss of load models in generation.

Courses: EE82, EE60, EE78  Prerequisite: EEP215
Credit Points: 4  Contact Hours: 3 per week

■ **EEP215 RELIABILITY**

Courses: EE82, EE60, EE78  Prerequisite: EEP213
Credit Points: 4  Contact Hours: 3 per week
EEP216 OVERHEAD LINE DESIGN – ELECTRICAL

Electrical design of transmission lines with ratings of 33kV to 500kV; economic conductor size; characteristics of conductors; standard and new technology insulators; power frequency, impulse and switching flashover voltage, pollution and ice; wet and dry flashover; mechanical characteristics; feasible structure type; tower footing resistance and counterpoise; insulation coordination methodology; determination of overvoltage withstand; design for required outage; determination of R₁ using state of the art methods; design to ensure that electrostatic and electromagnetic fields do not exceed NH & MRC guidelines.

Courses: EE82, EE60, EE78
Prerequisites: EEP201, EEP202, EEP203, EEP205, EEP207, EEP210
Credit Points: 4
Contact Hours: 3 per week

EEP217 OVERHEAD LINE DESIGN – MECHANICAL


Courses: EE82, EE60, EE78
Prerequisites: EEP208, EEP216
Credit Points: 4
Contact Hours: 3 per week

EEP218 INTRODUCTION TO AUTOMATED SYSTEM CONTROL & SUPERVISORY SYSTEMS

SCADA fundamentals and protocols; SCADA equipment: master station, remote terminal units; transmission SCADA systems, distribution automation systems, distribution control systems, PC software applications; alarm philosophy and control principles: definition of system displays, data logging, database point processing and attributes, master station configuration; specification of MMI: identification of system functional requirements; computer system platforms: computer technology, computer hardware – processors, peripherals, display, user interfaces; communication system principles, communications bearer fundamentals, data networks and protocols; 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: EE82, EE60, EE78
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: ratings, windings, core structure and materials, insulation and cooling methods, insulation and lifetime; leakage and magnetising reactance; losses, harmonics and inrush currents; short circuit forces; tests to measure: ratio, losses, impedance, phase, temperature rise, accuracy and traceability of tests, interpretation of test reports; surge phenomena in windings, RSG and impulse testing of power transformers, interpretation of test results; oil cooling systems; fire protection; tap changers and associated controls; analysis of transformer failure modes; in-phase and quadruple boost reactors; reactors for harmonic filters; SVCs; design considerations, equipment characteristics and equipment characteristics.

Courses: EE82, EE60, EE78
Prerequisites: EEP202, EEP203
Credit Points: 4
Contact Hours: 3 per week

EEP220 DISTRIBUTION PLANNING

Identify data and techniques used in load forecasting. Examine typical distribution network problems and identify performance limitations based on standards. Relate network problems to different configurations and the effects on customers. Study network reinforcement options on a simulation package. Options include regulators, series and shunt capacitors and reconductoring. Consider the above options to address a realistic network problem assessing line losses and voltage results. Analyse network reliability and assess the impact of ties, switches and various network configurations. Compare alternatives based on economic and technical considerations. Prepare a logical case which recommends one option in the form of a report.

Courses: EE82, EE60, EE78
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; excitation system models, turbine governor models, boiler models, hydraulic system models; characteristics of load plant; evaluation of small signal adequacy by eigenvalue analysis; determination of modes of electromechanical and control systems; identification of modes with insufficient damping, eigenvalue participating states and eigenvectors; establishment of transfer evaluation of gains/ phases at identified model frequencies; time domain dynamic simulations of power system operation; numerical models for prediction of large disturbance behaviour of interconnected power systems; stability of system under contingency and emergency conditions; stability improvement using: controlled reactive devices, special control systems, braking resistors, UPF load shedding, FACTS.

Courses: EE82, EE60, EE78
Prerequisite: EEP205
Credit Points: 4
Contact Hours: 3 per week

EEP222 MAINTENANCE OF ELECTRICITY SUPPLY SYSTEMS

Establishment of maintenance policies: review of failure rates, emergency spares, identification of maintenance liabilities, identification of critical success factors to minimise life cycle costs, approval and dissemination of policy, policy review; maintenance planning: identification of constraints, review of existing maintenance programs, establishment of plans for periodic actions, documentation of procedures, design of reporting procedures; data recording and analysis: registers of defects, design of data collection and reporting systems, preparation of control charts, computer systems, data base development; maintenance operations: identification of refurbishment needs, resource evaluations, design of work procedures, impact of Acts and regulations, identification of staff training needs, supervision, auditing of work practices; maintenance program evaluation: assessment against KPIs, modification of programs to account for continuing defects and failures or to reflect changing technologies.

Courses: EE82, EE60, EE78
Prerequisites: EEP208, EEP215
Credit Points: 4
Contact Hours: 3 per week
**EEP223 LOAD FORECASTING**

Nature of load patterns: historical patterns, links between customers and loads and between energy and demand demographics; categories of DSM, costs of DSM options; benefits, and limitations to DSM; tariffs and their impact; impact of economic trends on demand growth; load forecast methods: data collection and availability, weather correction, interpreting data, synthesising missing data, developing load forecast data, developing alternative scenario load forecasts: establishment of base loads from: historical load data, customer load predictions, and other contributing factors; prediction of growth rates; generation of load forecasts.

Courses: EEP223, EEP241, EEP242
Prerequisites: EEP212, EEP215, EEP218, EEP221, EEP222
Credit Points: 4
Contact Hours: 3 per week

**EEP224 POWER SYSTEM OPERATION**

Frequency control and A/GC 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; management of resources to restore system to normal in minimum time, abnormality control to prevent plant damage and maintain personnel safety, logging and reporting 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: EEP224, EEP241
Prerequisites: EEP202, EEP215, EEP218, EEP222
Credit Points: 4
Contact Hours: 3 per week

**EEP230 THESIS A**

Students work in industry for 100 days of supervised practice. 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. It is expected that the thesis will demonstrate that students have a deep background knowledge of the topic, can apply advanced knowledge to formulation and solution of engineering problems, and have an understanding of the relationship of the work to the overall objectives of the workgroup. The thesis will be examined by internal and external examiners appointed by the University.

Course: EEP230
Prerequisites: EEP208, EEP223, EEP241
Credit Points: 4
Contact Hours: 3 per week

**EEP242 EFFICIENT MARKETING & UTILISATION OF ELECTRICITY: DEMAND & SUPPLY SIDE SOLUTIONS**

Assessment of future DSM options: state, national and international DSM programs assessed; local opportunities examined; impact of new and evolving technology; compare options and select for cost effectiveness, load impact and community acceptance; determination of avoidable costs; assessment of marginal cost of supply and identification of unavoidable and avoidable costs; survey of customer needs and wants; conducting market research; application of existing tariffs or development of new tariffs; planning and estimating market potential for DSM; comparison of options to develop the optimum plan to meet customer needs and supply authority requirements; economic comparison of DSM and SSM options for a specific project including combined options; design and implement DSM program: targets, resources, in-house or contract; monitoring program performance; assessment of DSM on local and system load forecasts.

Courses: EEP242, EEP260, EEP78
Prerequisites: EEP208, EEP223, EEP241
Credit Points: 4
Contact Hours: 3 per week

**EEP243 CONTRACT ADMINISTRATION**

Categories of contracts: supply, supply, deliver and erect; performance guaranteed; services, e.g. maintenance; period for supply of stock items or services; general conditions of contract: terms of payment and security deposit; quality assurance procedures; retention conditions; special conditions of contract: delivery and penalties for delay; technical provisions; penalty/bonus for such factors as efficiency, performance, maintenance and reliability; pre-tender acceptance negotiation practice; evaluation of tenders: tender adjustments; determination of the lowest comparatively priced offer on a total capitalised cost basis which conforms with the specified technical and commercial requirements; tender acceptance; contract correspondence; drawings — standards, amendment; contract law, dispute resolving procedures; contract progress monitoring: approval of drawings and documents; approval of delivery, erection, site testing. Acceptance, takeover, maintenance period, retention provisions.

Courses: EEP243, EEP260, EEP78
Prerequisites: EEP208
Credit Points: 4
Contact Hours: 3 per week

**EEP244 CIRCUIT BREAKERS — SWITCHGEAR**

Basic switching theory for the main circuit breaker types: SF6, Vacuum, GIS, minimum oil, airbreak (11kV), bulk oil; characteristics and applications for these types at various voltage levels; circuit-breaking principles: interruption of load current, small inductive current, short-line faults and out-of-phase switching; TRV and TRV concepts; direct and synthetic testing; technical specifications of circuit breakers: operating voltage, impulse withstand, rated current, interrupting capacity, switching duties; operating mechanisms — single or 3 pole; clearing time; environment; selection of circuit breakers: analysis of tenders on a whole of life basis; circuit breaker failures: failure modes for different types; catastrophic failures; category of failure — design, operating or maintenance cause; reliability; circuit breaker testing and condition monitoring; circuit breaker maintenance and refurbishment; emerging circuit breaker technology.

Courses: EEP244, EEP60, EEP78
Prerequisites: EEP210
Credit Points: 4
Contact Hours: 3 per week
■ EEP245 INTRODUCTION TO SUBSTATION DESIGN
Preparation of design/site options; standard layouts (outdoor, indoor, GIS, package, single bus, 11/2 CR, etc.) - cost, site, reliability lead time and communication factors; estimating procedures; comparison of design/site options; whole of life cost comparison including capital and operating costs; environmental and public issues; identification of design parameters: voltages, ratings, protection, metering, SCADA, communication, operational - preparation of one-line diagram and general arrangement; design scope; review with other parties.
Courses: EEE2, EE60, EE78
Prerequisites: EEP202, EEP219, EEP244
Credit Points: 4 Contact Hours: 3 per week

■ EEP247 INTRODUCTION TO PLANT CONTROL IN INDUSTRY & POWER GENERATION
Using power station control systems as an example: power station control systems and practices outlined; control system scope specification in which required functions are identified, staffing options established and planning stage costs evaluated; preparation of project control plan - system scope defined, equipment and interfaces required and functional requirements identified; establishment of plant monitoring, control and performance parameters - plant process, characteristics and functions; plant location and environment; field equipment specification; matching available equipment to meet requirements; specification issue and tender analysis; preparation of plant input/output database; design of user/machine interface; system integration, testing and commissioning; post-commissioning tuning.
Courses: EBB2, EBB60, EBB78
Credit Points: 4 Contact Hours: 3 per week

■ EEP300 RESEARCH PROJECT
A computer engineering research project in the student's chosen field encompassing a literature search, design, hardware construction or writing of software, testing and publication of a thesis.
Courses: EE76
Credit Points: 48 Contact Hours: 168 hours total

■ EEP301 PROJECT
Students carry out research or development work on a mini-project in specified areas.
Courses: CE74, EE76
Credit Points: 12 Contact Hours: 3 per week

■ EEP302 RESEARCH COMPONENT 1
Research component of EEP301, EEP102, EEP104, EEP124, EEP127, EEP137.
Courses: CE74, EE76
Credit Points: 12 Contact Hours: 3 per week

■ EEP303 RESEARCH COMPONENT 2
Research component of EEP126, EEP127, EEP128, EEP135, EEP137 and maths elective.
Courses: CE74, EE76
Credit Points: 12 Contact Hours: 3 per week

■ EEP001 BUILDING FINANCIAL MANAGEMENT I
Commercial property financial management; the nature of accounts; capital structures, equity, liabilities and asset management; the role of taxation in financial decision-making; ownership; budgeting.
Courses: CN31, CN33
Credit Points: 12 Contact Hours: 2 per week
Incompatible with: FNB101

■ EEP002 FINANCIAL MANAGEMENT FOR ENGINEERS
Introduction to the theory and practice of financial management in Australia; the nature of business finance and firm objectives; business structures, debt and the organisation of the Australian capital markets; NPV calculations; project evaluation.
Courses: EE43, ME45, ME46
Credit Points: 8 Contact Hours: 2 per week
Incompatible with: FNB116

■ EFB003 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.
Course: EE44
Credit Points: 4 Contact Hours: 2 per week
Incompatible with: FNB125; this unit is not available to BS50 BU5 (Accy) or BU5 (B&F) majors and BS56 BU5 (Acc) or BU5 (B&F) majors.

■ EEF100 AUSTRALIAN ECONOMIC HISTORY
The Australian economy and its economic institutions from the 1890s to World War II; analysis of postwar 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, labour, investment and technology in historical context; Australia's deteriorating economic performance since the 1970s and the opportunities presented by the development of the Pacific Basin; the future for Australia.
Courses: BSS50, BSS53, BS56
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: EBP106

■ EEF101 DATA ANALYSIS FOR BUSINESS
This unit introduces students to the basic tools for the analysis of cross section and time series data. The major topics covered are a discussion of key features of published data, the calculation and meaning of descriptive measures of data, the concepts of sampling, sampling error and sampling distributions, hypothesis testing and regression analysis.
Courses: BSS50, BSS56
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: EBP109, EBP110

■ EEF102 ECONOMICS II
Consumer behaviour, the role of the government in market intervention and allocative efficiency are some of the fundamental issues in microeconomics addressed in this unit. Business cycles, 'booms and busts' and the related issue of macroeconomic stabilisation policy are important in policy debate in Australia today. Unemployment, its causes and cures, and the natural rate of unemployment are also important issues for most Western economies and will be discussed in an Australian context.
Courses: BSS50, BSS56
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: EBP109, EBP110

■ EEF103 MACROECONOMICS
Macroeconomics is that part of economics primarily concerned with the relationships between broad economic aggregates. The most important of these include the level of GDP, aggregate expenditure and saving, the
level of employment, the quantity of money, the average price level, and the balance of payments. The aim of this unit is to define and analyse the relationships between these aggregates, and their impact upon the national economy. The unit examines the problems associated with inflation, unemployment and the balance of payments in the context of the Australian economy; the role of the government and the central bank discussed within the framework of an income-expenditure model; international trade and capital flows.

### Courses
- **BS50, BS56**
- **ED50, IF31, IF37, IF52, IF54, IS43, IT20, NS48, PU48, BS56, IF40**

**Credit Points:** 12  
**Contact Hours:** 3 per week  
**Incompatible with:** EFB172, EFB113, EFB102, EBP116, EBP140

### EFB104 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, BS56, ED50, IF31, IF37, IF40, IF52, IF54, IS43, IT20, NS48, PU48

**Credit Points:** 12  
**Contact Hours:** 3 per week  
**Incompatible with:** BSB113, EFB102, EBP116, EBP172, EBP150

### EFB105 RESEARCH AND SURVEY METHODS
This unit deals with data (primary and secondary): the gathering of data via surveys, the understanding of data through the study of statistics and the analysis of data; Australian statistical information; demographic processes: the presentation of quantitative as well as qualitative data; questionnaire construction; how to conduct surveys; sampling design; sample accuracy; sample size; confidence intervals; hypothesis testing plus an introduction to correlation, regression and time series analysis.

**Courses:** BS50, BS56, ED50, PU48

**Credit Points:** 12  
**Contact Hours:** 3 per week  
**Incompatible with:** EBP163

### EFB200 APPLIED REGRESSION ANALYSIS
This unit builds on the basic multiple regression model introduced in EFB101, by examining the practical problems encountered in using the single equation econometric model. In particular, the major problems encountered using real data, such as multicollinearity, serial correlation in time series data and heteroskedasticity in the case of cross section data, specification error, and alternative functional form issues will be illustrated in the context of published Australian data. The unit includes extensive use of a commonly used computer package to allow the practical application of the various techniques.

**Courses:** BS50, BS56

**Prerequisites:** EFB101 or EFB110

**Credit Points:** 12  
**Contact Hours:** 3 per week  
**Incompatible with:** EBP102

### EFB201 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; trade and pricing of money market/capital market securities; the options and futures market.

**Courses:** BS50

**Prerequisites:** BSB113 or EFB140, and FNB102 or FNB107 or FNB111 or EFN406 or EFB206 or EFB210

**Credit Points:** 12  
**Contact Hours:** 3 per week  
**Incompatible with:** FNB100

### EFB202 BUSINESS CYCLES & ECONOMIC GROWTH
The unit develops an analytical framework in order to evaluate the macroeconomic performance of the Australian economy and the policy actions taken by government. Key issues addressed include business cycle stabilisation, unemployment, inflation; economic growth; the foreign debt; budget deficits; and national saving.

**Courses:** BS50, BS56

**Prerequisites:** EFB102 or EBP140 or EPN102 or EBP172

**Credit Points:** 12  
**Contact Hours:** 3 per week  
**Incompatible with:** EBP142

### EFB203 BUSINESS FORECASTING
This unit covers a wide range of forecasting methods which may be of use in forecasting business variables. The focus of the unit is single equation and time series modelling techniques. Smoothing models, including exponential and Winters smoothing, are the simplest of a wide range of forecasting models available to business. This unit takes these as the starting point. The classical decomposition approach to forecasting will be used to show how components of a time series may be extracted and used in forecasting. The more sophisticated ARIMA models will then be discussed in detail. Students will also be introduced to methods by which to evaluate model performance, and to compare and combine different forecasting techniques.

**Courses:** BS50, BS56

**Prerequisites:** EFB200 or EBP102

**Credit Points:** 12  
**Contact Hours:** 3 per week  
**Incompatible with:** EBP107

### EFB204 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; central planning; administrative decentralisation: the role of the state in the market economy; failure of soviet planning; socialist economic reforms; transition to a market economy; structural change and economic development.

**Courses:** BS50, BS56, ED50

**Prerequisites:** EBP140 and EBP150 or EBP172 or EBP102 or EBP102

**Credit Points:** 12  
**Contact Hours:** 3 per week  
**Incompatible with:** EBP111

### EFB205 COMPARATIVE FINANCIAL SYSTEMS
Introduction to the operations of important overseas capital markets, regulation and structure.

**Courses:** BS50  
**Prerequisite:** FNB100 or EFB201

**Credit Points:** 12  
**Contact Hours:** 3 per week  
**Incompatible with:** FNB103

### EFB206 CORPORATE FINANCE
An overview of the Australian financial system; technical tools used in financial decision making; the capital market, short and long-term finance; dividend policy; investment decision models.

**Courses:** BS50, ED50, IF56

**Prerequisite:** AYB100 or AYB110 or BSB110

**Credit Points:** 12  
**Contact Hours:** 4 per week  
**Incompatible with:** FNB111, FNB107
EFB207 DEVELOPMENT OF ECONOMIC THOUGHT
This unit is especially recommended for students wishing to study economics at a higher level. It traces the evolution of economic thought over time, and evaluates the contributions of key figures such as Adam Smith, David Ricardo, J.S. Mill, Karl Marx and others. Importantly, the unit reflects on the lessons of the past within the context of the economic policies currently favoured by governments in Australia and elsewhere in the world.
Courses: B550, BS56
Prerequisites: EFB102 or EFB140 and EFB150 or EFB172 or EPN102
Credit Points: 12 Contact Hours: 3 per week Incompatible with: EFB127

EFB208 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: EFB140 and EFB150 or EFB172 or EFB102 or EPN102
Credit Points: 12 Contact Hours: 3 per week Incompatible with: EFB151 and EFB152 and EFB211 and EFB171

EFB209 ENVIRONMENTAL ECONOMICS: ISSUES & POLICY
This unit provides an introduction to the foundations of environmental and natural resource economics, and examines the increasingly important role of economics in the formulation and implementation of environmental policy. Topics include: sustainable development, market failure, pollution and depletion of natural resources and analysis of environmental policy.
Courses: B550, BS56
Prerequisite: EFB102 or EFB150 or EFB140 or EFB116
Credit Points: 12 Contact Hours: 3 per week Incompatible with: EFB165

EFB210 FINANCE I
An introduction to the Australian institutional framework; terminology; debt and equity instruments. Financial mathematics applied to the pricing of debt and equity securities. A firm’s investment decision; Net Present Value (NPV) and Internal Rate of Return (IRR); introduction to risk and uncertainty; Capital Asset Pricing Model (CAPM) and Weighted Average Cost of Capital (WACC).
Courses: B550, BS56, IF37, IF40
Prerequisites: AYB110 or AYB100 or BSB110 and EFB150 or EFB116 or BS113
Credit Points: 12 Contact Hours: 4 per week Incompatible with: FNB107, FNB111

EFB211 FIRMS, MARKETS & RESOURCES
This unit refines and extends introductory microeconomic concepts and applies them to business decision making, the design and evaluation of public policy and to a general appreciation of the economic aspects of a modern mixed economy. It extends and refines the theoretical framework of microeconomics. It then investigates market failure, the role of government and its appropriate response of business.
Courses: B550, BS56
Prerequisites: EFB102
Credit Points: 12 Contact Hours: 3 per week Incompatible with: EFB152

EFB212 INTERNATIONAL TRADE & FINANCE
Surveys international trade and finance with an emphasis on current economic policy issues; the theories of trade and the bases, direction, volume and terms of trade; trade policy and economic welfare; tariffs and trade; FATT; industry policy; 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: B550, ED50
Prerequisites: EFB102 or EFB140 and EFB150 or EFB172 or EPN102
Credit Points: 12 Contact Hours: 3 per week Incompatible with: EFB132

EFB213 INTRODUCTION TO ANALYTICAL TECHNIQUES FOR BUSINESS
This unit introduces students to a range of modelling procedures which can be applied to assist business in decision making under uncertainty. Inventory analysis is important to minimise storage costs. The efficient scheduling of tasks, also vital for cost effectiveness, is addressed using PERT/CPM techniques. The problem of optimal resource allocation is explored using linear programming, including integer linear programming. Queuing models will also address the issue of optimal planning and use of resources. An introduction to decision theory is also included. The use of computers allows the student to concentrate on the applications of these techniques and their interpretation and to recognise the strengths and weaknesses of these models.
Courses: B550, BS56
Prerequisites: EFB101 or EFB109 or EFB110
Credit Points: 12 Contact Hours: 3 per week Incompatible with: EFB104

EFB214 MATHEMATICAL ECONOMIC APPLICATIONS
Differential calculus; rules of differentiation; comparative statistics; implicit function theorem with applications to market equilibrium models; classical optimisation; Lagrangean method with equality constraints; Kuhn Tucker’s method with inequality constraints; second order conditions for optimisation with Hessian determinants economic dynamic and integral calculus; differential equations and difference equations with applications to growth and trade cycles.
Courses: B550, BS56
Credit Points: 12 Contact Hours: 3 per week Incompatible with: EFB144

EFB215 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.
Courses: B550, BS56
Prerequisites: EFB140 and EFB150 or EFB172 or EFB102 or EPN102
Credit Points: 12 Contact Hours: 3 per week Incompatible with: EFB153

EFB216 SPECIAL TOPIC – ECONOMICS
This unit provides the opportunity for the student to examine in detail a specific current economic policy issue. The nature of the unit varies from year to year depending upon policy issues and the interests of the staff. Contact the Subject Area Coordinator of Economics and Public Policy for further details.
Courses: B550, BS56
Credit Points: 12 Contact Hours: 3 per week
■ EFB217 TRANSPORT & COMMUNICATION ECONOMICS
The application of microeconomic principles to transport and communication; location decision, demand, costs, pricing, investment principles, regulation, issues and policy.
Courses: BS50, BS56
Prerequisites: EPB140 and EPB150 or EPB172 or EFB102 or EPN102
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: EFB168

■ EFB300 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.
Courses: BS50, BS56, ED50
Prerequisite: EPB142 and EPB152 or EFB211 and EFB202
Credit Points: 12  Contact Hours: 3 per week

■ EFB301 ADVANCED LENDING
This unit introduces students to advanced aspects of security evaluation and the assessment of debt servicing capacity; the analysis of 'exotic' types of corporate loans; and rescheduling of sovereign debt.
Courses: BS50, BS56
Prerequisite: FNB111 or EFB210
Credit Points: 12  Contact Hours: 3 per week

■ EFB302 ADVANCED MACROECONOMICS
The unit covers all the major modern theoretical and policy macroeconomic debates in depth. Issues covered will draw from: the Neoclassical/Keynesian synthesis, New Classical economics, new Keynesianism, real business cycle theories, theories of unemployment, theories of consumption and investment, alternative open economy models of macroeconomic policy, macroeconomic forecasting, advanced aspects of monetary and fiscal policy, growth models and modern endogenous growth theory.
Courses: BS50, BS56
Prerequisites: EFB202 or EPB142
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: EPB101

■ EFB303 ADVANCED MICROECONOMICS
This unit will add to and further develop the theories and issues studied in EFB211 and will introduce additional advanced practical applications.
Course: BS50, BS56
Prerequisites: EFB211 or EPB152
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: EPB101

■ EFB304 APPLIED ECONOMETRIC TECHNIQUES
This unit progresses from EFB200, extending the student's knowledge to topics in applied econometrics. Single equation issues addressed include errors in variables, distributed lag models and causality testing. Recent developments in time series econometrics are examined in the context of the problem of nonstationarity of time series data. The identification of and estimation techniques used in simultaneous equation models are also covered in this unit. The application of these econometric techniques are illustrated in the context of economic modelling.
Courses: BS50, BS56
Prerequisite: EFB200 or EPB102
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: EPB103

■ EFB305 CURRENT ECONOMIC POLICY CHALLENGES
This is a 'capstone' unit which harnesses the foundational skills developed in previous units of the Economics major in order to illustrate the application of economic analysis to key policy problems through the in-depth consideration of selected topical issues. The selection of issues will be flexible and subject to continuous review in order to ensure relevance. Approximately four issues will be selected, and each treated in some depth. An indicative list of issues which could be explored in the current circumstances is: the national savings debate, economic solutions to environmental problems, the debate around a goods and services tax, the issue of regulation versus deregulation of the labour market.
Courses: BS50, BS56
Prerequisites: EFB211 and EFB202 or EFB141 and EFB151
Credit Points: 12  Contact Hours: 3 per week

■ EFB306 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.
Courses: BS50, BS56
Prerequisites: EPB104 or EFB213 and EPB140 and EPB150 or EFB172, or EFB102 or EPN102 or EFN405
Incompatible with: EFB115
Credit Points: 12  Contact Hours: 3 per week

■ EFB307 FINANCE II
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, BS56, IF37, IF40
Prerequisites: FNB111, EFB210
Credit Points: 12  Contact Hours: 4 per week
Incompatible with: FNB112

■ EFB308 FINANCE III
A study of contemporary finance research; event research; beta estimation; valuation theory; use of finance research tools; anomalies and extension of finance theories; students are required to complete a research project combining theory and practice.
Courses: BS50, BS56
Prerequisites: FNB112, EFB307
Credit Points: 12  Contact Hours: 4 per week
Incompatible with: FNB113

■ EFB309 FINANCIAL DERIVATIVES
This unit extends the students' knowledge of financial derivatives, to encompass exotic trading strategies in options, futures and physical instruments; option replication strategies; modifications to the basic option theory, to account for firm capitalisation changes (e.g. bonus shares); designer options; and option pricing models, other than the standard Black-Scholes OPM studied in EFB307.
Courses: BS50, BS56
Prerequisites: FNB112, EFB307
Credit Points: 12  Contact Hours: 4 per week
Incompatible with: FNB113

■ EFB310 FINANCIAL INSTITUTIONS - CONTROL
This subject is designed to familiarise students with the management considerations of a financial institution, particularly from a financial management perspective. Students will gain an understanding of the relevance of both financial management and managerial accounting.
within the financial institution.

Courses: BS50, BS56, IF40  
Prerequisites: FNB111 or FNB107  
Credit Points: 12  
Incompatible with: FNB124, FNB113

**EFB311 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 securitisation; financing international trade; problem loans and credit scoring.

Courses: BS50, BS56, IF40  
Prerequisites: FNB107 or FNB111 or FNN102 or EFB201  
Credit Points: 12  
Incompatible with: FNB114

**EFB312 INTERNATIONAL FINANCE & ECONOMICS**

To examine the theory and practice of international finance, including the mechanics and uses of the spot, forward, swap, futures and options markets in foreign exchange; the relationship between domestic and international capital markets; interest rate and exchange rate determination; risk management of foreign exchange; international trade finance; evaluation of offshore investment (including country risk).

Courses: BS50, BS56  
Prerequisites: FNB111 or FNB107 or EFB210 or EFB206  
Credit Points: 12  
Incompatible with: FNB120, FNB130, EFB314

**EFB313 INTERNATIONAL MACROECONOMICS**

This unit deals with the various theoretical and policy approaches to the macroeconomy as they are pursued in different countries. It examines the comparative macroeconomic performance in different countries over time, the distinction between interventionist and laissez-faire policies, as well as the differences in traditions and approaches between English speaking and non-English speaking countries.

Course: BS50, BS56  
Prerequisites: EFB302  
Credit Points: 12  
Incompatible with: FNB120, EFB314

**EFB314 INTERNATIONAL TRADE & ECONOMIC COMPETITIVENESS**

This unit analyses the increasing globalisation of world trade and finance, and develops an analytical framework to assess the impact of these flows on the Australian economy and its businesses and its policy makers. It examines trade and capital flows, exchange rate determination, and the impact of these external variables upon domestic interest rates, prices and levels of activity.

Courses: BS50, BS56  
Prerequisites: EFB211 and EFB202 or EFB142 and EFB152  
Credit Points: 12  
Incompatible with: EFB130 and EFB132 and EFB312

**EFB315 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.

Courses: BS50, BS56, IF40  
Prerequisites: FNB111, FNB123 or EFB210, AYB225  
Credit Points: 12  
Incompatible with: FNB121

**EFB316 LABOUR ECONOMICS**

This unit applies analytical tools acquired from the preceding units to investigate specific market applications both at the micro and macro levels. Topics include: the demand and supply of labour, investment in human capital; market structures and their effect on equilibrium wage levels; job search; discrimination; collective bargaining; minimum wages; enterprise bargaining; unemployment; inflation; the Phillips Curve in Australia.

Courses: BS50, BS56  
Prerequisites: EFB142 and EFB152 or EFB211 and EFB202  
Credit Points: 12  
Incompatible with: EFB134

**EFB317 MICROECONOMIC REFORM**

This unit applies the principles of welfare economics (applied microeconomic theory) to case studies of microeconomic reform in practice. Issues which are examined, include regulation, and the corporatisation and privatisation of key industries, such as transport, communications, electricity generation and distribution, and water supply.

Courses: BS50, BS56, IF40  
Prerequisites: FNB112 or FNN102 or EFB307  
Credit Points: 12  
Incompatible with: FNB126

**EFB318 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, BS56, IF40  
Prerequisites: FNB112 or FNN102 or EFB307  
Credit Points: 12  
Incompatible with: FNB126

**EFB319 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 completing goals of efficiency and equity; theories of first-best and second-best; the importance of externalities; the public goods controversy; privatisation, deregulation and regulation; alternative ways of financing government expenditure; and issues in public sector accounting.

Courses: BS50, BS56  
Prerequisites: EFB152, EFB211  
Credit Points: 12  
Incompatible with: EFB319

**EFB320 PERSONAL FINANCIAL PLANNING**

This unit extends students' knowledge of financial planning, to encompass the main personal finance products offered in practice. The unit introduces discussion of such key areas as superannuation (including rollovers and annuities), insurance, wills and estate planning, pensions and unemployment benefits.

Courses: BS50, BS56  
Prerequisites: FNB111 or EFB210 or FNB107 or EFB206  
Credit Points: 12  
Incompatible with: EFB320

**EFN400 ADVANCED CAPITAL BUDGETING**

Application of the theoretical constructs developed in undergraduate finance units to complex problems in investment appraisal.

Courses: BS75, BS87  
Prerequisites: FNB112 or EFB307  
Credit Points: 12  
Incompatible with: FNN100

**EFN401 ADVANCED FINANCIAL INSTITUTIONS MANAGEMENT**

The study of current technical issues facing managers of financial institutions including an examination of theoretical framework for the analysis of the function and operation of the modern financial institution. Topics in-
ECONOMICS, study by each student, and an analysis of the Common
and the depletion of non-renewable resource stocks. This
of the financial manager; the Australian financial envi­
Credit
of potential degradation of the environment, the proper
Courses:
II EFN406
ECONOMICS
II EFN405
ECONOMIC ANALYSIS
Australia’s international trading performance relative to
other industrialised nations; the potential economic im­
pected quality control systems on primary, secondary
and tertiary sections of Australian industry; economics
of the firm and the quality factor, quality as a determin­
ant of demand, demand elasticity, goods attribute
theory; tools for incorporating quality into investment
decisions; opportunity and marginal costs; x inefficiency;
increased profitability resulting from quality initiatives.
Courses: BS77, BS83, IF66, IF69
Credit Points: 6 Contact Hours: 3 per week
Incompatible with: EPN101

I EFN402 ECONOMIC ANALYSIS

The relationship between economics, economists and
public policy; currently influential bodies of economic
theory, and their application in the public policy envi­
ronment; the role of economists in the policy process.
Topics include: the role of government in the economy;
the role of government in the economy; the role of govern­
ment in the economy; the role of government in the eco­

II EFN403 ECONOMICS & PUBLIC POLICY

The role played by environmental economics in the for­
mulation of contemporary environmental policy in Aus­
tralia and globally.

I EFN401 ENVIRONMENTAL ECONOMICS &

Environmental economics is concerned with the inter­
action between economic systems and the natural envi­
ronment. Fundamental issues are sustainable economic
development, the economic cost to future generations
of potential degradation of the environment, the proper
definition of property rights, the economics of pollution
and the depletion of non-renewable resource stocks. This
unit provides a comprehensive analysis and critique of
the role played by environmental economics in the for­
mulation of contemporary environmental policy in Aus­
tralia and globally.

II EFN404 ENVIRONMENTAL ECONOMICS &

Managerial decision making in an economic environ­
mant. An introduction to economics, demand analysis,
cost analysis, market strategy and the macroeconomic
environment; problems of resource allocation at the firm,
in industry and the economy; completion of an industry
study by each student, and an analysis of the Common­
wealth Budget strategy.

II EFN405 MANAGERIAL ECONOMICS

Introduction to the world of finance and financial man­
agement. Topics include: the finance function, the role
of the financial manager; the Australian financial envi­
rionment; sources of funds; present and future value; time
value of money; financial mathematics; cost of funds,
the firm investment decision; investment evaluation tech­
niques; cash budgeting; working capital management;
capital budgeting; dividend policy and financial struc­
ture policy.

II EFN406 MANAGERIAL FINANCE

This unit is intended to provide students with the skills
needed to perform appropriate analysis of data. It fo­
cuses upon some of the more important multivariate
methods, of which multiple regression is but a part. Other
multivariate techniques covered include discriminant
analysis, principal component analysis and factor analy­
sis. The link between appropriate multivariate statistics
and a research question is thoroughly investigated.

II EFN407 MULTIVARIATE METHODS

This unit provides the opportunity to study in detail, at a
postgraduate level, specific current issues relating to
economics, banking or finance. The nature of the unit
varies from year to year depending upon contemporary
issues and the interests of staff. Contact the Head of
School, School of Economics and Finance for further
information.

II EFN408 SPECIAL TOPIC – ECONOMICS,

BANKING AND FINANCE

This unit provides the opportunity to study in detail, at a
postgraduate level, specific current issues relating to
economics, banking or finance. The nature of the unit
varies from year to year depending upon contemporary
issues and the interests of staff. Contact the Head of
School, School of Economics and Finance for further
information.

II EFN409 STATISTICAL METHODS

Statistics is the study of the procedures for collecting,
analysing and interpreting the data required for effec­
tive decision making: the basic concepts and techniques
of statistical analysis, with particular reference to their
application in management. Campus computers may be
used. Topics include: graphs, charts, descriptive statist­
cs, probability, sampling methods, analysis of sample
results and regression and correlation.

II EFN410 MANAGEMENT AND COMMER­
CIAL LENDING

This unit introduces students to the latest theoretical
developments in the field of macroeconomics using both
qualitative and quantitative approaches. It places these
theories in their historical, philosophical and societal
contexts. This unit looks at New Classical and New
Keynesian theoretical approaches to a range of issues.
These include: expectations theories, supply side econom­
ies, theories of labour markets, monetary theories and
growth theories (including the role of international trade).
Also differences in the theoretical foundations of macr­
oeconomic policies employed in different countries are
highlighted.

II EFN411 MANAGERIAL AND COMMERCIAL

This study of advanced lending issues and structures for
commercial applications. Examination of procedures for
analysis of specialist lending; credit rating, leasing struc­
tures, venture finance.
Course: G580  
Prerequisites: Undergraduate degree with a major in Economics or Finance  
Credit Points: 12  
Contact Hours: 3 per week  

### EFN502 DEVELOPMENTS IN MICROECONOMIC THEORIES
Discussion of refinements in microeconomic theory such as hedonic pricing models, invalid preference theory, contestable market theory, theories of regulation, strategic entry deterrence, networks and vertical integration theories, and public utility theories are considered in this unit. It explores refinements in microeconomic theory which have contemporary use in the development of government policies in areas such as the environment, energy, public enterprises, industrial development, transport and telecommunications.  
Courses: BS62, BS83, IF64, G580  
Prerequisite: Undergraduate degree or major in Economics or Finance  
Credit Points: 12  
Contact Hours: 3 per week  
Incompatible with: EFN108  

### EFN503 ECONOMIC AND FINANCIAL MODELLING
This unit is designed to introduce students to spreadsheet and other forms of modelling techniques which are frequently used in a business and financial environment. Modelling is used as an aid to decision making, as a means of communicating important variables and as a planning and analysis tool. Various modelling exercises are used to illustrate the use of these modelling techniques in an economic and financial context.  
Courses: BS70, BS94  
Prerequisite: Undergraduate degree or major in Economics or Finance  
Credit Points: 12  
Contact Hours: 3 per week  
Incompatible with: EFN108  

### EFN504 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 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  
Incompatible with: FNN103  

### EFN505 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 is on empirical research.  
Courses: BS70, BS87, IF64  
Credit Points: 12  
Contact Hours: 3 per week  
Incompatible with: FNN104  

### EFN506 INTERNATIONAL FINANCE
The theory and practice of international finance, the relationship between domestic and international capital markets, interest rate and exchange rate determination, risk in exchange, international trade, finance, offshore investment, legislation, transfer pricing, accounting and taxation aspects.  
Courses: BS70, BS87, IF64  
Credit Points: 12  
Contact Hours: 3 per week  
Incompatible with: FNN105  

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, geophysics, stratigraphy and economic geology.  
Courses: SC10, SC12  
Credit Points: 8  

### ESB122 PHYSICAL GEOLOGY
Basic geologic principles, physical geography, geomorphology, weathering, erosion, river and coastal environments, groundwater, deserts and aeolian processes. Origin and composition of the earth and the solar system; mineralogy; classification and origin of igneous, metamorphic and sedimentary rocks; structural geology; plate tectonics; economic geology. Practical work includes examination and identification of major rock-forming minerals, economic minerals and rocks; structural exercises; interpretation of topographic and geologic maps and aerial photographs. Field excursions to local areas of geological interest.  
Courses: EDS50, SC30  
Credit Points: 12  
Contact Hours: 5 per week  

### ESB222 HISTORICAL GEOLOGY
Geologic history of the earth; interpretation of past geologic events emphasising the geologic development of Australia and the evolution of life; principles of stratigraphy; radiometric dating; palaeontology and biostratigraphy. Practical work includes stratigraphic interpretations, study of fossils and map interpretation. Field excursions to local areas of interest.  
Courses: EDS50, SC30  
Credit Points: 12  
Contact Hours: 5 per week  

### ESB229 GEOLOGY FOR THE BUILT ENVIRONMENT
Basic principles and theories of geology, emphasising the way in which mineralogy and petrology, geologic structures, geomorphology and groundwater interact with, and are related to, surveying, and engineering design and construction. The engineering properties of rock and soil, and the effect of geologic hazards on the built environment; case histories on the relevance of geology to the surveyor's and civil engineer's workplace.  
Courses: CE42, IF52, PS47  
Credit Points: 6  
Contact Hours: 2 per week  

### ESB312 MINERALOGY
Introductory crystallography; fundamentals of crystal chemistry, mineral stability and reactions; crystallisation, growth and habit; the geologic context of minerals; classification of minerals; systematic treatment of the physical, chemical and structural properties of minerals; techniques of mineral analysis; theory and identification of minerals in transmitted light; the introduction to mineralogy with theory of reflected light; optical properties of ore minerals and identification of minerals in thin section, polished section and grain mounts.  
Courses: EDS50, SC30  
Prerequisite: ESB122  
Credit Points: 12  
Contact Hours: 2 per week  

### ESB332 GEOPHYSICS
Physical properties of the earth; geophysical methods including: seismic, gravity, magnetic, radiometric, resistivity, induced polarisation, electromagnetic, electrical properties of rocks and minerals; natural electrical sources. The unit covers both solid earth and exploration aspects.  
Courses: EDS50, SC30  
Prerequisites: One unit of maths or physics
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 crystalline materials, fracture and brittle behaviour: the Mohr envelope, role of cracks and fluid in the fracture of rocks, fracture experiments, effects of pre-existing fractures, failure 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, fracture formation: strain and rigid motion, measurements of strain in deformed rocks, deformation paths, strain rate, slip, thrust and classification, kink bands, chevron folds, boudinage, mechanisms and mechanics. Practical work includes a series of assignments of increasing complexity, and field work involves mapping deformed terrain.

Courses: ED50, SC30
Prerequisites: ESB122, ESB222
Corequisites: ESB392
Credit Points: 12
Contact Hours: 5 per week

ESB342 STRUCTURAL GEOLOGY AND GEOMECHANICS

Introduction to geomorphic systems, processes and landscapes: regolith, weathering, effects of climate and subsidence; drainage systems and river processes; volcanic terrains, volcanic hazards and volcanism monitoring; type and distribution of marine sediments; the sediment cycle and sediment transport; sedimentary structures, sediment textures, grain size analysis; depositional environments; fossiliferous sediments and microfossils; an introduction to biostratigraphy and basin analysis.

Courses: ED50, SC30
Prerequisites: ESB122, ESB222
Credit Points: 12
Contact Hours: 5 per week

ESB392 FIELD TECHNIQUES AND STUDIES

Methods used in the accumulation, analysis and interpretation of geological field data. Geological mapping, sampling and presentation of reports. This unit includes an extended excursion (five days or more), during which students are required (individually or in groups) to map the geology of an assigned area. During the field excursion, students are required to produce a geological map, together with supporting explanatory notes. Other weekend excursions to areas of geological interest may be included.

Courses: ED50, SC30
Prerequisites: ESB122, ESB222
Credit Points: 12
Contact Hours: 5 per week

ESB432 GEOMORPHOLOGY AND SEDIMENTARY GEOLOGY

Introduction to geomorphic systems, processes and landscapes: regolith, weathering, effects of climate and subsidence; drainage systems and river processes; volcanic terrains, volcanic hazards and volcanism monitoring; type and distribution of marine sediments; the sediment cycle and sediment transport; sedimentary structures, sediment textures, grain size analysis; depositional environments; fossiliferous sediments and microfossils; an introduction to biostratigraphy and basin analysis.

Courses: ED50, SC30
Prerequisites: ESB122, ESB222
Credit Points: 12
Contact Hours: 5 per week

ESB452 GEOCHEMISTRY

An introduction to the chemistry of the earth as a whole and of its component parts. Origin and distribution of the elements within the universe, the solar system, and the earth. Elemental associations, primary differentiation and geochemical classification. Crystal chemistry, nature of solids, bonding forces, covalent and ionic radii, crystal structures, unit cell composition, solid solution, introduction to thermodynamics, including equilibrium and equilibrium constants, chemical potential, fugacity, activity, the phase rule and phase diagrams. Isotope geochemistry. The geochemistry of aqueous environments, water chemistry, properties of water, solutions and solubilities, pH, oxidation and reduction, water reactions. Presentation of geochemical data. Practical aspects include experience in geochemical methodology, from sample collection in the field through analytical methods appropriate to geology (ICP, electron microprobe, XRD, AAS).

Course: SC30
Prerequisites: ESB312, CHB182, CHB282
Credit Points: 12
Contact Hours: 5 per week

ESB462 LITHOLOGY

Optical mineralogy: the description and classification of igneous, metamorphic and sedimentary rocks in thin section and hand specimen; the identification, classification and interpretation of textures. A field study of one day's duration is required.

Courses: ED50, SC30
Prerequisite: ESB312
Corequisite: ESB432
Credit Points: 12
Contact Hours: 5 per week

ESB472 MINERAL DEPOSITS AND MINE GEOLOGY

Ore concentration mechanisms according to classical and modern ore genesis theory. The different types of economic materials are then studied under the following headings: mineralogy, genesis, use and value, mining methods, beneficiation, major overseas deposits, Australian deposits. The role of the mine geologist. Practical work includes studies of economic minerals, and exercises in interpretation of mine data.

Course: SC30
Prerequisite: ESB312
Credit Points: 12
Contact Hours: 5 per week

ESB512 IGNEOUS AND METAMORPHIC PETROLOGY

Introduction to igneous and metamorphic rocks as determined from field and laboratory studies of occurrences, mineral assemblages, rock compositions and textures. Interpretation of rock and mineral compositional diagrams; application of experimental work and detailed computer modelling of petrochemical processes. Practical work examines the petrography and geochemistry of igneous and metamorphic suites. Field studies are an essential component of the unit.

Course: SC30
Prerequisite: ESB462
Credit Points: 12
Contact Hours: 5 per week

ESB522 HYDROGEOLOGY

A broad-based course on groundwater, directed to its occurrence and quality, from both resource and environmental aspects. The hydrological cycle; the origin, occurrence and movement of groundwater; geology and character of aquifers; the chemistry and quality of groundwater, and their monitoring; exploration methods; drilling and testing methods and equipment. Practical exercises with pump tests, groundwater flow, material permeability, field testing, chemical analysis, computer software and modelling. Laboratory visits, demonstrations and a field practical, interaction with government departments and private industry.

Course: SC30
Prerequisite: ESB462
Credit Points: 12
Contact Hours: 5 per week

ESB542 ENGINEERING AND ENVIRONMENTAL GEOLOGY

This unit is structured around the inter-related fields of engineering and environmental geology and soil and rock mechanics. The topics studied are those most likely to apply to the work of the engineering or environmental geologist in tropical urban and coastal areas. Topics include investigation techniques and philosophies for the engineering of slopes, coastal structures, dams, buildings and subsurface openings; practical investigation methods; the input of geology into urban and coastal developments; the mechanical and chemical properties of soils and rocks; seepage; shear strength; bearing ca-
scale exploration; the role of statistics in design and surface mapping techniques; basin analysis; coal properties, classification, genesis and analysis; hand specimen study and microscopy; hydrocarbon generation from coal and oil shale; coalfield geology and subsurface mapping techniques; basin analysis; coal production and economics. Origin and characteristics of petroleum fluids including; generation, accumulation and migration through time and space; study of structural and stratigraphic traps and reservoir rock characteristics; application of drilling, logging and geophysical techniques to quantify these aspects; correlation techniques including seismic stratigraphy; economics of production. Field excursions of short duration as required, together with practical assignments.

Course: SC30  
Prerequisites: ESB522  
Credit Points: 12  
Contact Hours: 5 per week

- ESB582 ORE GENESIS  
The formation of ore deposits. A wide variety of deposits are studied with an emphasis on metallic ore deposits, their characteristics, and environments of deposition. Ore-forming processes are discussed, together with tectonic perspectives, modern ore formation and techniques of study of ore deposits.

Course: SC30  
Prerequisites: ESB472  
Credit Points: 12  
Contact Hours: 5 per week

- ESB592 ADVANCED GEOLOGICAL MAPPING  
A field excursion conducted during the semester break emphasising geologic mapping skills in lithologically and structurally varied regions. Past excursions have focused on the Mt Isa region, and have been run in collaboration with the University of Queensland. Lectures/tutorials prior to the excursion review and develop mapping and geologic interpretation techniques. Assessment is based on tutorial exercises completed during the semester, and geologic maps, cross sections and reports in the field. All work is finalised at the conclusion of the excursion. Students are expected to cover their transport expenses to the field site, as well as accommodation and food costs during the excursion.

Course: SC30  
Prerequisites: ESB342, ESB392, ESB432, ESB512  
Credit Points: 12

- ESB602 GEOLOGICAL INVESTIGATIONS  
An introduction to geological research through the development and completion of a research project within a specified area of geology. Students are required to develop, in consultation with an appropriate staff member, a research proposal with specific aims and objectives, relevant methodology and appropriate background. The research problem must be field-based and include a laboratory component. Lecture/tutorial sessions in information retrieval, writing and presentation skills. Assessment is based on written and oral reports.

Course: SC30  
Prerequisites: Approval from Head of School  
Credit Points: 12  
Contact Hours: 5 per week

- ESB652 EXPLORATION GEOSCIENCE  
Design of mineral exploration programs: target generation, reconnaissance, detailed investigation, evaluation, time and budget schedules, risk factors. Introduction to the theoretical base of exploration geochemistry; main types of geochemical surveys in regional, local and mine scale exploration; the role of statistics in design and interpretation of exploration geochemical programs; analytical methods in geochemical prospecting: the role of biogeochemistry; Remote sensing in exploration; airborne geophysical surveys, design, acquisition, processing and interpretation leading to the design and operation of follow-up ground surveys; assessment of drilling results by geophysical logging and tomography; use of software applications; geophysical case histories.

Course: SC30  
Prerequisites: ESB332, ESB452, ESB582  
Credit Points: 12  
Contact Hours: 5 per week

- ESB672 FOSSIL FUEL GEOLOGY  
Coal properties, classification, genesis and analysis; hand specimen study and microscopy; hydrocarbon generation from coal and oil shale; coalfield geology and subsurface mapping techniques; basin analysis; coal production and economics. Origin and characteristics of petroleum fluids including; generation, accumulation and migration through time and space; study of structural and stratigraphic traps and reservoir rock characteristics; application of drilling, logging and geophysical techniques to quantify these aspects; correlation techniques including seismic stratigraphy; economics of production. Field excursions of short duration as required, together with practical assignments.

Course: SC30  
Prerequisites: ESB522  
Credit Points: 12  
Contact Hours: 5 per week

- ESB682 SEDIMENTOLOGY AND BASIN ANALYSIS  
Principles of fluid flow, flow regimes, sedimentary processes; facies and sequence models for alluvial, deltaic, estuarine, shoreline, shelf, turbidite, lacustrine, carbonate and evaporite depositional systems; how these systems respond to accommodation-space changes induced by changes in tectonic, eustatic and climatic conditions through time; integration of geophysical, geochemical, biostratigraphical, palaeoecological, diagenetic, thermal and other specialist datasets to the process of basin analysis. Involve compulsory field studies and practical exercises in modern and ancient sedimentary environments.

Courses: SC30, ESB50  
Prerequisites: ESB432, ESB432, ESB462  
Credit Points: 12  
Contact Hours: 5 per week

- ESB700 PROJECT  
This unit involves undertaking, in consultation with a supervisor and through interaction with lecturing and technical staff of the School of Geology, a substantial project in an appropriate area of earth science. The unit provides the opportunity for students to identify and solve geological problems logically and creatively. Students are required to relate the project work to published work in the field of study, and adopt the style of the Australian Journal of Earth Sciences for the written report. Each project is assessed on the basis of an extensive written report and an oral presentation.

Course: SC60  
Credit Points: 48

- ESB701 GEOLOGY REVIEWS  
Within this unit students develop a written discussion of a geological problem or issue that is comparable to the focus of their own research project. Using available published literature, students critically analyse data and conclusions presented by other researchers in order to synthesise a discussion of the geological issue or case. The report focuses on those geological components that justify its selection as a geological review.

Course: SC60  
Credit Points: 12  
Contact Hours: 3 per week

- ESB704 ADVANCED STUDIES IN EARTH SCIENCE  
Provides a selection of coursework appropriate to fourth-level studies in earth science disciplines. The unit has a modular structure that not only accommodates the range of advanced level studies needed to support research projects of individual students but also avoids promoting overspecialisation at the Honours level. From the 4- and 8-credit point modules indicated, students select any combination of modules appropriate to their interests and research project to total 20  
Credit Points: (a) Advanced Sedimentology and Stratigraphy [8 credit points]; (b) Advanced Resources Geology [8 cp]; (c) Coastal Zone Hazards [8 cp]; (d) Geochemical Systems: magmatic processes [4cp]; (e) Geochemical Systems: isotopes, fluids and phase equilibria [4 cp]; (f) Global Plate Tectonics [8 cp]; (g) Hydrogeology and Geochemistry [4 cp];
(h) Mineral Exploration Geophysics [4 cp]; (i) Seismic Exploration Geophysics [4 cp].
Course: SC60
Prerequisites: As approved by Honours (Geology) Coordinator
Credit Points: 20 Contact Hours: 10 per week

ESB706 COMPLEMENTARY STUDIES
Provides students with skills that allow them to formulate and write a research proposal, to be capable of reading scientific literature with a view of abstracting critical aspects, and to produce reports that are written in a journal format and at a standard that could lead to publication. The unit also addresses philosophical issues such as ethics, professional integrity and plagiarism, and provides workshops in practical methods relevant to research in geology. These workshops include: (a) SEM unit; XRD unit; ICP and AAS analysis; (b) computing skills; (c) sample collection and processing; (d) data presentation and geological mapping methods.
Course: SC60
Credit Points: 12 Contact Hours: 3 per week

ESN116 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.
Courses: 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

ESN160 SEMINARS
Students may present several seminars ranging from a summary of background to a particular topic to a preliminary data presentation. The unit may also involve attending external seminars or workshops.
Course: SC80
Credit Points: 12

ESN170 LITERATURE SURVEY
Develops the detailed background of a student's research topic and extends the student's knowledge into current and relevant literature.
Course: SC80
Credit Points: 12

EST219 ENGINEERING GEOLOGY
The basic principles and theories of geology, emphasizing the way in which mineralogy and petrology, geologic structures, geomorphology and groundwater interact with, and are related to, surveying, and engineering design and construction. The engineering properties of rock and soil, and the effect of geologic hazards on the built environment; case histories on the relevance of geology to the surveyor's and civil engineer's workplace.
Course: CE21
Credit Points: 7 Contact Hours: 2 per week

GSN100 GLOBAL BUSINESS STRATEGIES
This unit places business strategy and policy firmly in a global context, developing knowledge, analytical understanding and action-taking competencies. The paradigm adopted is that of strategic management: analysis of stakeholders, special emphasis on the global environment and capabilities, strategy formulation, implementation and evaluation. Teaching methodologies emphasise the process of management in a global environment as well as analysis, content and concepts.
Courses: GS70, GS80, GS81
Prerequisites: An undergraduate degree in business, commerce or economics; or 48 credit points from the core of GS81
Credit Points: 12 Contact Hours: 3 per week

GSN101 INTERNATIONAL ENVIRONMENT OF BUSINESS
This unit places business in the context of the world system. Business operates in an increasingly international environment and the aim of this unit is to provide a detailed theoretical and practical understanding of that environment, its current and future trends. The focus will be upon: the economic, social and political factors conditioning contemporary international business structures and relations as well as its likely future developments.
Courses: GS70, GS80, GS81
Prerequisites: An undergraduate degree in business, commerce or economics; or 48 credit points from the core of GS81
Credit Points: 12 Contact Hours: 3 per week

GSN102 INTERNATIONAL FINANCE AND RESOURCE MANAGEMENT
This unit analyses international trade in goods and services in the context of the firm and its management. While it looks at the theoretical foundations upon which trade rests and the financial institutions and mechanisms which facilitate it, it also looks at the practical aspects of export and import activities, foreign investment, and establishing operations in a host country. The unit also discusses the various national and international bodies and agreements which facilitate and regulate trade and financial flows. At the theoretical level, particular topics covered include: the theory of comparative advantage; the balance of payments; the role of tariff and non-tariff trade barriers; international financial markets; international financial management; exchange rate determination; and international banking. At the practical level, particular topics include: terminology; export and import documentation; foreign exchange; international financial markets; international financial management; exchange rate determination; and international banking. The unit also examines the role of multinational and transnational organisations in the international economy, and the implications of globalisation for national and international management.
Courses: GS70, GS80, GS81
Prerequisites: An undergraduate degree in business, commerce or economics; or 48 credit points from the core of GS81 including GSN203
Credit Points: 12 Contact Hours: 3 per week

GSN103 INTERNATIONAL HUMAN RESOURCE MANAGEMENT
This unit focuses on the specifically international dimensions of Human Resource Management, principally as they affect domestic organisations operating internationally, as well as global, transnational and multinational organisations. Particular reference is given to the management aspects of international HRM. Topics include: the strategic link between international business and international HRM; going international; international labour markets; cross-cultural issues; career management issues; staff performance appraisal and management; compensation; preparation for international experience; compensation; staffing, performance appraisal.
Courses: GS70, GS80, GS81
Prerequisite: An undergraduate degree in business, commerce or economics; or 48 credit points from the core of GS81 including GSN205
Credit Points: 12
Contact Hours: 3 per week

GSN104 INTERNATIONAL MANAGEMENT AND BUSINESS ORGANISATION

Whereas 'Business and the International Environment' is concerned with broad, international trends, this unit aims to provide a detailed examination of typical impacts of the international environment upon organisation: management, structure, work, operations and human resource capabilities. The unit also examines the interface between management/organisation and the external environment of business.
Courses: GS70, GS80, GS81
Prerequisite: An undergraduate degree in business, commerce or economics; or 48 credit points from the core of GS81 including GSN204
Credit Points: 12
Contact Hours: 3 per week

GSN105 INTERNATIONAL MARKETING

This unit covers international marketing theory and planning, with a strong applied emphasis. Issues will include the segmentation of international markets, life cycle and competition, approaches to international market entry, choice, organisation marketing, channels, and market development and extension. Planning issues will focus on the strategic marketing processes involved, including international market research, and their application to regions and countries in the Asia/Pacific, European and North American areas.
Courses: GS70, GS80, GS81
Prerequisite: An undergraduate degree in business, commerce or economics; or 48 credit points from the core of GS81 including GSN206
Credit Points: 12
Contact Hours: 3 per week

GSN106 LEADING AND MANAGING INTERNATIONALLY

This unit develops both a sensitivity and a skills base to lead and manage effectively in a global setting. The unit explores different patterns of behaviour, custom and practice across the world in order to prepare students for the challenge of leading and managing. Different levels of analyses - individual, group, organisational, industry/regional, societal/cultural - are brought to bear in this exploration.
Courses: GS70, GS80, GS81
Prerequisite: An undergraduate degree in business, commerce or economics; or 48 credit points from the core of GS81
Credit Points: 12
Contact Hours: 3 per week

GSN107 MANAGING INNOVATION AND ENTERPRISE DEVELOPMENT

The nature and processes of innovation (as applied to factors such as: products, services, technology, delivery, network structures) and enterprise creation and development. Assessment of the entrepreneur and new venture team as well as the business opportunity and resource requirements. The unit explores methods of establishing ventures from multidisciplinary perspectives. At the completion of this unit, students will possess the necessary skills and critical insight to contribute to the management of innovation and enterprise development in a global setting.
Courses: GS70, GS80, GS81
Prerequisite: An undergraduate degree in business, commerce or economics; or 48cp from the core of GS81
Credit Points: 12
Contact Hours: 3 per week

GSN108 INDUSTRY PLACEMENT

Students may proceed to this course of study if they have completed GSN207 Organisational Analysis and Consulting, and if they have arranged an industry placement and project acceptable to the Course Coordinator. The industry placement will take the form of a period of time spent with an organisation and during this period a consulting report will be undertaken.
Course: GS80, GS81
Prerequisite: 48 credit points in GS80 or GS81 including GSN207
Credit Points: 48

GSN109 INTERNATIONAL PROJECT I

This project enables students to undertake a piece of applied research with minimal supervision. Students should seek advice from the Course Coordinator regarding their choice of topic.
Course: GS80 Prerequisite: 48 credit points in GS80
Credit Points: 12

GSN110 INTERNATIONAL PROJECT II

This project enables students to undertake a significant piece of applied research with minimal supervision. Students should seek advice from the Course Coordinator regarding their choice of topic.
Course: GS80 Prerequisite: 48 credit points in GS80
Credit Points: 24

GSN200 BUSINESS STRATEGIES

This unit 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, implementation and evaluation. Teaching strategies emphasise the process of management as well as analysis, content and concepts.
Courses: GS70, GS80
Prerequisite: 48 credit points from core of GS81

GSN201 GLOBAL BUSINESS NETWORKS

Global communication technologies are developing at a rapid rate. They will undergird the operation of the global economy and change the operation of local business organisations, including the management of information and information flows. The unit examines this development from technological, cultural and business strategy perspectives. Experience with the INTERNET is provided with particular attention paid to its potential to change business fundamentals, such as marketing and advertising, strategic alliances and internal and external communication and management of information.
Courses: BS30, GS70, GS80, GS81
Credit Points: 12
Contact Hours: 3 per week

GSN202 MANAGERIAL ACCOUNTING

This unit, which deals with accounting concepts and principles, includes topics such as development of the profit and loss account and balance sheet, reporting aspects of the balance sheet, asset and liability recognition and management, cost/volume/profit analysis, manufacturing costs, budgeting, and managerial decision making.
Courses: BS30, GS70, GS80, GS81
Credit Points: 12
Contact Hours: 3 per week

GSN203 MANAGERIAL ECONOMICS

This unit examines principles of economics pertinent to managerial decision-making in the domestic and international economic environments. Topic areas include: an introduction to economics, demand analysis and forecasting, cost analysis, market strategy, investment analysis, international trade and the balance of payments. At the completion of the unit, students should be capable of applying economic principles to problems of resource allocation in the firm, in industry, and in the national and international economies. A principal means of achieving the end will be completion of an industry study.
by each student, and an analysis of the Commonwealth budget strategy.

Courses: BS30, GS70, GS80, GS81
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: EFN405

■ GSN204 MANAGEMENT AND THE BUSINESS ENVIRONMENT

This unit provides a broad overview of management and business in national and global contexts. The focus will be on both profit and not-for-profit organisations. It provides the key foundation for subsequent units in the program. The unit acquaints students with the role of the manager and the main concepts, principles and techniques of management. In addition to a general introduction to management, students will explore the nature, functions, structure, and processes.

Courses: BS30, GS70, GS80, GS81
Credit Points: 12  Contact Hours: 3 per week

■ GSN205 MANAGING HUMAN RESOURCES

This unit recognises the importance of the management of human resources for organisational effectiveness and quality of work life. It emphasises the relationship between the management of human resources and the business enterprise at a strategic level. Perspectives brought to bear in this examination include strategic, functional and multiple constituency models. Topics include: workforce planning, job analysis, staffing, employer/employee relations, enterprise bargaining, training and development, equity issues, remuneration and career management.

Courses: BS30, GS70, GS80, GS81
Credit Points: 12  Contact Hours: 3 per week

■ GSN206 MARKETING

This unit examines the role of marketing and its place within the firm. It examines key marketing decision areas, the marketing concept, marketing research, consumer behaviour, marketing segmentation and positioning, product policy, pricing, promotion and distribution. It further examines the role of marketing within the strategic processes of the modern firm and the complexities brought about by an increasingly complex, international environment.

Courses: BS30, GS70, GS80, GS81
Credit Points: 12  Contact Hours: 3 per week

■ GSN207 ORGANISATIONAL ANALYSIS AND CONSULTING

The ability to analyse organisations and organisational functioning is critical to management effectiveness. It is important to be able to gather data about an organisation and its performance in order to better understand it and, where needed, to recommend and guide the implementation of change. Various theoretical models of organisation and organisational analysis, including action research models, are explored. This unit helps students to understand the role of the “change agent” and equips them to perform the role of internal and/or external consultant from initial contact with the client/organisation through to completion, including proposal and report writing. This unit is compulsory for students undertaking industry placement.

Courses: BS30, GS70, GS80, GS81
Prerequisites: An undergraduate degree in business, commerce or economics; or 48 credit points from the core of GS81
Credit Points: 12  Contact Hours: 3 per week

■ GSN208 PERSONAL DEVELOPMENT AND ETHICS FOR MANAGERS

The focus of this unit is on the individual in interaction. Through it, individuals will identify and develop the competencies, interpersonal and intercultural, required to be an effective global manager. The competencies occur in both cognitive and affective domains at personal, interpersonal and professional levels. The unit also examines influence processes, personal behaviour and ethics, career management issues and reflective practice. Individuals will develop a sophisticated understanding of their personal style of interaction, allowing them to foster a healthy environment and alleviate dysfunctional processes.

Courses: BS30, GS70, GS80, GS81
Credit Points: 12  Contact Hours: 3 per week

■ GSN209 PROFESSIONAL PROJECT I

This project enables students to undertake a piece of applied research with minimal supervision. Students should seek advice from the Course Coordinator regarding their choice of topic.

Course: GS81  Prerequisite: 48 credit points in GS81
Credit Points: 12

■ GSN210 PROFESSIONAL PROJECT II

The project enables students to undertake a significant piece of applied research with minimal supervision. Students should seek advice from the Course Coordinator regarding their choice of topic.

Course: GS81  Prerequisite: 48 credit points in GS81
Credit Points: 24

■ HLN001 LITERATURE REVIEW

■ HLN002 RESEARCH PROJECT

■ HLN003 THESIS PRESENTATION

These three units combine to constitute the research/thesis component of the Master of Health Science. The thesis in total provides students with an opportunity to formally extend and synthesise knowledge gained in earlier semesters of the program. This study represents an independent and original piece of research conducted with the guidance of a supervisor. The thesis provides students with an opportunity for coursework conducted in the area of specialisation to be applied in a practical manner reflecting the student’s specific interest in health science. The thesis may be a report on research which makes a contribution to knowledge, or a study in which the student critically analyses and appraises existing knowledge and produces observations and conclusions of value to the field concerned. The thesis is divided into three distinct units: Literature Review 12cp, Research Project 12cp, Thesis Presentation 24cp. Units may be studied independently or concurrently.

Course: HL88
Credit Points: 48 total
Contact Hours: HLN001 – 3 per week, HLN002 – 3 per week

■ HLN405 QUALITATIVE RESEARCH

Addresses qualitative methodologies and methods pertinent to research in the health sciences.

Courses: HL88, HL50, HL52, HL58, NS85, NS64, PU65, PU69
Credit Points: 12  Contact Hours: 3 per week

■ HLP101 ADVANCED DISCIPLINE READINGS

This unit provides the opportunity for students to identify and review the literature relevant to their selected research topic. A one day seminar in advanced information retrieval skills is included.

Courses: HL50, HL52, HL58
Credit Points: 12

■ HLP102 RESEARCH SEMINARS

Preparation and completion of a seminar presentation in a professional and scientific manner plus attendance at scheduled seminars.

Courses: HL50, HL52, HL58
Prerequisites: MAN009 or HLN405
Credit Points: 12
The study of systems of the human being basic to physiological activity; the interrelationships of health, physical activity and wellness, historically and dimensionally; basic principles of conditioning and exercise prescription to demonstrate the impact of physical activity on lifestyle diseases, health behaviours and wellness.

Courses: ED50, ED51, HM42
Credit Points: 12

Contact Hours: 3 per week

HMB171 FITNESS, HEALTH & WELLNESS

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

HMB276 RESEARCH IN HUMAN MOVEMENT

Principles of research: purposes, philosophy, applications. Quantitative research: principles of test construction and administration; basic statistics; design hypothesis testing. Qualitative research: methodology; data collection; theory building. Research presentation: writing a research report; developing conclusions. Application of research: examples in human movement; related literature.

Course: HM42
Credit Points: 12

Contact Hours: 4 per week

HMB301 HEALTH & PHYSICAL EDUCATION 1

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

HMB302 HEALTH & PHYSICAL EDUCATION 2

The nature of the symbiotic relationship between social patterns and the nature and role of physical activity and its influence upon physical education, sporting and fitness programs in primary schools. The importance of both social and cultural change and of the role of teachers in the design and implementation of such programs.

Course: ED51
Credit Points: 12

Contact Hours: 3 per week

HMB304 PHYSICAL ACTIVITY & MODERN SOCIETY

An examination of the range of factors influencing personal health including lifestyle and a range of social, economic and environmental factors. A holistic perspective on personal health.

Courses: ED50, ED51
Credit Points: 12

Contact Hours: 3 per week

HMB305 PERSONAL HEALTH

Provides the theoretical basis to enable teachers of physical education to program for and implement physical activity for all children. Topics include: normal motor development and variations in these patterns in children with an intellectual, sensory, neurological, physiological or orthopaedic disability. Students taking this unit participate in the community based physical activity programs for such children.

Course: ED51
Credit Points: 12

Contact Hours: 3 per week
HMB308 PHYSICAL ACTIVITY STUDIES
An overview of the breadth of the exercise science field with reference to the structure and function of the human body and key issues associated with the development of health related and motor fitness.
Course: ED51  Prerequisite: HMB304
Credit Points: 12  Contact Hours: 3 per week

HMB310 PHYSICAL EDUCATION CURRICULUM STUDIES I
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.
Courses: ED50, ED54
Prerequisites: EDB323 and at least 48 credit points in the relevant discipline area
Credit Points: 12  Contact Hours: 3 per week

HMB311 PHYSICAL EDUCATION CURRICULUM STUDIES II
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.
Courses: ED50, ED54
Prerequisites: EDB323 and at least 48 credit points in the relevant discipline area
Credit Points: 12  Contact Hours: 3 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; thermo-regulation and fluid balance.
Courses: BS50, ED50
Credit Points: 12  Contact Hours: 5 per week

HMB313 SOCIO-CULTURAL FOUNDATIONS OF PHYSICAL ACTIVITY
Lays a foundation in the disciplines of the socio-cultural areas which underpin the study of human movement. It serves as an introduction to the historical, sociological, philosophical, anthropological and cultural foundations of sports, games and leisure activities.
Courses: ED50, HM42
Credit Points: 12  Contact Hours: 4 per week

HMB314 PERFORMANCE SKILLS 1
Involves application of scientific principles to the analysis and development of techniques in all major swimming strokes, water rescue methods and track and field events. Students are also taught to explore instructional strategies, motivational, conditioning and training activities, the development of activity programs for various ability levels, and event rules application.
Course: ED50
Credit Points: 12  Contact Hours: 6 per week

HMB315 PERFORMANCE SKILLS 2
Various game forms are analysed in order to identify fundamental game skills and problem areas in skill development. Emphasis is placed on the application of relevant skills to suit game situations; of appropriate strategies for teaching and coaching selected sports to a variety of age groups and on the interpretation of rules in a competitive situation.
Course: ED50
Credit Points: 12  Contact Hours: 6 per week

HMB316 PERFORMANCE SKILLS 3
Basic theoretical principles fundamental to the performance and teaching of gymnastics and dance, physical fitness and basic biotechnical principles of excellence in gymnastics; routines incorporating a variety of gymnastic and dance skills on floor/apparatus; recognise/remedy of unsafe practices.
Course: ED50
Credit Points: 12  Contact Hours: 6 per week

HMB317 OUTDOOR EDUCATION
The value and place of outdoor education in schools and the community; development of proficiency in a number of outdoor pursuits; lightweight, minimum impact camping; leadership skills and safety techniques; the Australian natural environment; promotion of positive attitudes towards natural environments.
Course: ED50  Prerequisite: HMB314
Credit Points: 12  Contact Hours: 6 per week

HMB321 SPORT IN SOCIETY
The relationship between sport and the social world. The nature and importance of the role of sport in modern Australian society through an analysis of such contemporary issues and developments in sport as drugs in sport, sport and the law, violence in sport, equity and sport and socialisation.
Courses: BS50, ED50
Prerequisites: HMB313 or consent of lecturer
Credit Points: 12  Contact Hours: 3 per week

HMB324 ADVANCED PERFORMANCE LABORATORIES
Investigation of selected advanced theoretical structures and application to a performance activity.
Course: ED50
Prerequisites: Compulsory Level 1 and Level 2 units
Credit Points: 12  Contact Hours: 3 per week

HMB325 INTERNATIONAL PHYSICAL EDUCATION & SPORT
Provides students with an international perspective on physical education and sport. Comparative studies in this field give insight into life in other countries and act to enhance international understanding of the global village.
Course: ED50
Prerequisites: HMB394 or HMB321 or consent of lecturer
Credit Points: 12  Contact Hours: 3 per week

HMB326 PLAY & CULTURE
A study of the play element in non-literate societies providing insight into play in contemporary societies. The anthropology of play provides a perspective not only for analysing play behaviour itself, but also for describing other cultural experience.
Course: ED50
Prerequisites: HMB313 or consent of lecturer
Credit Points: 12  Contact Hours: 3 per week

HMB327 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

HMB332 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

HMB333 ORGANISATION & MANAGEMENT IN PHYSICAL EDUCATION & SPORT
School physical education departments and sporting associations are medium-sized organisations requiring direction for servicing a large client base with a fluctuating budget. Students examine the role of administrators, management and leadership styles, and the administration of monies, facilities and human resources in a sports setting.
Course: ED50
Credit Points: 12  Contact Hours: 3 per week
HMB340 PHYSICAL EDUCATION CURRICULUM STUDIES IB

Designed for those students who have chosen to do a double major in physical education, this unit extends the understanding developed in HMB310 and focuses particularly on teaching within the classroom setting. Students are introduced to strategies used to develop higher order thinking skills and are encouraged to experiment with their use.

**Courses:** ED50, ED54
**Credit Points:** 12
**Contact Hours:** 3 per week

HMB341 SPORTING & CAMPING ADMINISTRATION

The primary school physical educator is responsible for the organisation of educational programs both at school and in other educational and sporting settings. This unit assists students in understanding and organising a variety of sporting tournaments, carnivals and camping programs as educationally sound, safe and enjoyable experiences for children.

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

HMB342 THE DEVELOPMENT OF TEACHING SKILLS IN PHYSICAL EDUCATION

Designed around micro-teaching and involving student teachers, children and their working environment in schools, this unit promotes excellence in teaching, preparation and planning with an 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 unit is on educational responses to the growing concern about environmental hazards and their detrimental effects on human health. Emphasis on the curriculum implications of knowledge will assist children to make a positive contribution to health policy.

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

HMB344 HUMAN RELATIONSHIPS EDUCATION

This unit has a dual focus: effective interpersonal communication by teachers as members of the school community; and the curriculum and pedagogical process for teaching children. Care, personal development, work experience and community-based learning characterise these curriculum programs. Students are introduced to these processes through lectures, seminars, workshops and appropriate field study experiences.

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

HMB345 MOTOR DEVELOPMENT & PERFORMANCE IN DISABLED CHILDREN

Examination of the effects of a wide range of intellectual, sensory, neurological, orthopaedic and physiological disorders on the motor development and performance of children. Assessment techniques for evaluating motor development and performance are combined with program planning and implementation with specific cases.

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

HMB361 FUNCTIONAL ANATOMY 2

A project-based unit designed to enable students with a background in Functional Anatomy to develop greater expertise in one or a combination of the following areas: electromyography, orthopaedic biomechanics, kinesiology of sport and work, comparative functional anatomy, locomotion and posture and research techniques in functional anatomy.

**Course:** HM42
**Prerequisite:** HMB274
**Credit Points:** 12
**Contact Hours:** 3 per week

HMB362 BIOMECHANICS 2

Research techniques within biomechanics; analysis of force systems; photographic, cinematographic, goniometric and electrographic analysis of movement; mass of inertial characteristics of the human body and biomechanical models.

**Courses:** HM42, HM46
**Prerequisite:** HMB272 or equivalent
**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 situation, and proposal for future action. The student works at an advanced level and autonomously under the supervision of a lecturer.

**Courses:** ED50, HM42
**Prerequisite:** Consent of Course Coordinator
**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.

**Courses:** ED50, HM42
**Prerequisite:** Consent of Course Coordinator
**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.

**Courses:** ED50, ED54
**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 schemata; visual-spatial, force and temporal aspects and sequencing of complex movements. Research design in motor control and learning.

**Courses:** ED50, HM42
**Prerequisite:** HMB271
**Credit Points:** 12
**Contact Hours:** 4 per week

HMB372 BIOPHYSICAL BASES OF MOVEMENT REHABILITATION

Overview of rehabilitation including medico-legal aspects; health professionals in the rehabilitation process; exercise specialist, medical practitioner, physiotherapist, specialist physician; exercise prescription: overview of responses to injury implications for exercise programs; modalities of treatment: exercise and rest; immobilisation, cryotherapy and hydrotherapy; exercise prescription rehabilitation.

**Courses:** ED50, HM42
**Prerequisites:** HMB271, HMB272, HMB273, HMB274
**Credit Points:** 12
**Contact Hours:** 4 per week
■ HMB374 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.
Courses: ED50, HM42
Prerequisite: HMB275, HMB372
Credit Points: 12  Contact Hours: 4 per week

■ HMB375 ADAPTED PHYSICAL ACTIVITY
Similarities and differences in the motor development and performance with intellectual, sensory, neurological, physiological, orthopaedic, musculo-skeletal and cardio-respiratory conditions; assessment and programming for individuals with impairments including program organisation and service delivery models; importance of fitness, sport and leisure for disabled individuals in mainstreamed and disorder specific groups; dance and aquatics.
Courses: ED50, HM42
Prerequisite: HMB271 or at lecturer’s discretion.
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 behavioural aspects; underlying sensory, perceptual, neurological and cognitive changes which influence motor development in children. A theoretical understanding of gross and fine movement behaviour; and intellectually disabled, auditorily impaired and neurologically impaired children. Programs for motor impaired children.
Courses: ED50, 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.
Courses: ED50, HM42
Credit Points: 12  Contact Hours: 4 per week

■ HMB380 PHYSICAL EDUCATION CURRICULUM STUDIES 2B
This unit is designed for those students doing a double major in physical education and focuses particularly on the areas of assessment and the use of action research in curriculum innovation. Students are required to undertake individual projects which allow them to practice critical reflection and autonomous learning in their pursuit of knowledge.
Course: HMB340
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
Corequisite: HMB382
Credit Points: 12  Contact Hours: 4 per week

■ HMB382 EXERCISE PRESCRIPTION
Students research and analyse the physiological methods and procedures used in training and conditioning programs of all forms and levels of physical activity. The conditioning needs of specific populations are studied. The application of fitness assessment and exercise prescription is an integral aspect.
Courses: ED50, HM42
Prerequisite: HMB273 or at lecturer’s discretion.
Credit Points: 12  Contact Hours: 4 per week

■ HMB383 WORKPLACE HEALTH
The historical and current position of workplace health as one emerging focus of occupational health and safety. Issues, laws, policies, programs and union, employer and employee perspective are analysed in conjunction with the role of workplace health professionals. The planning, development, promotion, implementation, administration and evaluation of programs from a fitness counselor’s perspective.
Course: HM42
Credit Points: 12  Contact Hours: 4 per week

■ HMB384 INJURY PREVENTION & REHABILITATION
Roles and responsibilities of health professionals: first aid, injury prevention, rehabilitation, health training and facility management; prevention of injury: conditioning and fitness components, methods of evaluation of performance, personal responsibilities, protective equipment; types of injury: primary (indirect, direct and overuse) and secondary; structural classification of injury; procedures for management and rehabilitation: specific injuries.
Courses: ED50, HM42
Prerequisite: HMB372
Credit Points: 12  Contact Hours: 4 per week

■ HMB390 HEALTH EDUCATION CURRICULUM STUDIES 1
The nature of health education as an applied curriculum area. Insights into relevant Queensland syllabus and curriculum documents are provided; competencies in planning and teaching are developed and close links are made with teaching practice.
Courses: ED50, ED54
Prerequisite: 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.
Courses: BS50, ED50
Credit Points: 12  Contact Hours: 3 per week

■ HMB392 ORGANISING TOURNAMENTS & EVENTS
Competition is fundamental to all sports whether it be against oneself or another party. In this unit the philosophies related to competition and award systems for a varying client mix are examined; the complexities of, and skills required for, organisation of major sporting events in schools and other settings are discussed; and utilisation of human and facility resources in these settings is considered.
Courses: BS50, 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 development of knowledge of government policy and legislation regarding equity in public, private and corporate establishments, as well as within educational settings.

Courses: BS50, ED50
Prerequisites: HMB321 or HMB394 or consent of lecturer
Credit Points: 12 Contact Hours: 3 per week

HMB394 HISTORY OF PHYSICAL EDUCATION & SPORT
The historical evolution of physical education, sports and games with their role and relevance in societies past and present. It extends the historical focus of HMB313 and itself provides the foundation for contemporary analyses of sport in society.

Courses: BS50, ED50 Prerequisite: HMB313
Credit Points: 12 Contact Hours: 3 per week

HMB395 HEALTH EDUCATION CURRICULUM STUDIES 2
The focus of this unit is divided between issues and directions associated with current trends in curriculum development and advanced strategies used to achieve variety in the presentation of health lessons.

Courses: ED50, ED54 Prerequisite: HMB390
Credit Points: 12 Contact Hours: 3 per week

HMB410 PHYSICAL EDUCATION CURRICULUM: SECONDARY
The factors responsible for current physical education curriculum development. Emerging trends are studied to highlight the implications for physical education programs; challenges the student to design a secondary curriculum that reflects current trends.

Courses: ED26, ED32
Credit Points: 12 Contact Hours: 3 per week

HMB411 PHYSICAL EDUCATION CURRICULUM: PRIMARY
The notion of the teacher of physical education and the classroom teacher reflecting on their experiences is of prime import to the nature of this unit. An examination of the principles and procedures which are used within the physical education curriculum and the individual’s classwork is central to the outcome. Action research methods are explained and linked to the sociological qualities of current curriculum practices. These issues relate to individual relationships within the physical education settings.

Courses: ED26, ED31
Credit Points: 12 Contact Hours: 3 per week

HMB420 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.

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 sequential development; development of comprehension and manipulation; theories of motor learning; evaluation of perceptual-motor, sensory-motor and psychomotor theories.

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

HMB441 SOCIOLOGY OF SPORT
A sociology of sport; historical and contemporary perspectives; sport in Australia; Australia’s sporting heritage; corruption of sport; control of sport; media and sport; inequality in sport; social issues in sport.

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

HMB442 ADMINISTRATION IN PHYSICAL EDUCATION & SPORT
Identification of duties of the administrator; administration theory; leadership styles and conflict resolution; budgeting and money management including sponsorship and fundraising; planning for a range of events; processes and procedures of management against a school and club setting.

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

HMB471 PROJECT 1
Students in the Bachelor of Applied Science are required to undertake a project in Year 4. Students work in small groups on original topics. Work includes: a literature review and the presentation of experimental hypotheses, research methodology and analysis procedures. Groups present a formal colloquium at the end of Semester 1.

Course: HM42 Credit Points: 12

HMB472 PROJECT 2
The implementation of the plan, the analysis of results and publication of a report. Groups present a formal colloquium at the end of Semester 2.

Course: HM42 Credit Points: 12

HMB473 PRACTICUM 1
A pre-placement work skills program followed by a structured and supervised initial vocational experience linked to the student’s selected specialisation strand of study; the reality of the workplace; professional expectations; work ethics; client contact; guided practical application of specialist knowledge and skills in clinic settings. Reflective analysis of the experience.

Course: HM42 Credit Points: 12

HMB474 PRACTICUM 2
An extension of HMB473, a comprehensive vocational experience undertaken as a supervised full-time internship supervised full-time: operational tasks to include management and administration: independent professional skills and knowledge and full client services; and a comprehensive reflective analysis and internship.

Course: HM42 Credit Points: 24

HMB610 CLINICAL MEASUREMENT
Blood flow and volume, plethysmography; cardiorespiratory measurement; electrical impedance imaging; anthropometry and body composition; measurement of normal and pathological gait; kinematic and kinetic analyses of human movement and performance; functional evaluation of orthotics and prostheses; electromyography; ergonomic and environmental issues; measurement of special populations.

Course: ME46 Prerequisites: HMB272, HMB274
Credit Points: 8 Contact Hours: 3 per week

HMB611 HUMAN PERFORMANCE
Human adaptation to physical activity; performance efficiency and enhancement in children and adolescents; performance characteristics of adults and the elderly; human performance and the environment; performance evaluation and restoration/enhancement in the injured or disabled population.

Course: ME46
Prerequisites: HMB272, HMB274, HMB615
Credit Points: 8 Contact Hours: 3 per week
The rehabilitation process; introduction to rehabilitation
exercise prescription in rehabilitation.

Exercise; muscle structure and function; circulatory
protocols; mechanisms of injury and repair and
evaluation process.

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 condition-
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 strate-
gies; 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 asso-
ciated professionals; trends in mortality and morbidity;
workplace health promotion agencies and programs;
planning, development, promotion, implementation and
evaluation process.

Course: ME46
Credit Points: 8  Contact Hours: 3 per week

HMB801 SPORT & MASS MEDIA
The commercialisation and development of sport and
the mass media are inextricably linked and the nature
and implications of this relationship are the foundation
for the investigation of this unit. Examination of the past,
present and future aspects of this relationship through
examination of current issues.

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

HMB802 STRUCTURE & POLICY OF
AUSTRALIAN SPORT
An understanding of the structure and policies of Aus-
tralian sport is fundamental for administrators who are
required to operate through the levels of government for
the conduct, promotion and funding of their chosen sport.
The relevant documentation and strategies for operating
within the system.

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

HMN601 EXERCISE & HEALTH ACROSS
THE LIFESPAN
Physical activity is almost universally accepted as be-
ing relevant to health, although the pattern of activity
(nature, intensity, frequency and duration of individual
exercise bouts, cumulative years of participation) re-
quired to induce maximum health benefits remains un-
certain. Exercise throughout the lifespan and the impli-
cations for good health.

Course: HL88
Credit Points: 12  Contact Hours: 3 per week

HMN602 READINGS IN HUMAN
MOVEMENT STUDIES
Enables students to explore the breadth of their chosen
sub-discipline in contrast to the more specific focus of
their thesis topic to follow. Provides the opportunity for
students to develop a compendium of readings in an
area(s) not catered for in other units comprising their
specialisation. Students select advanced readings in their
chosen field and submit a comprehensive annotated bib-
liography that critically reviews the available literature.
This work is conducted under the supervision of a lec-
turer allied to the chosen area of study.

Course: HL88
Credit Points: 12  Contact Hours: 3 per week
relevant Queensland syllabus and curriculum documents; competencies in planning and teaching are developed and close links made with teaching practice.

Course: ED32, ED37
Credit Points: 12 Contact Hours: 3 per week

**HMP404 HEALTH EDUCATION CURRICULUM STUDIES 2**
Issues and directions associated with current trends in curriculum development; advanced strategies used to achieve variety in the presentation of health lessons.

Course: ED32, ED37
Credit Points: 12 Contact Hours: 3 per week

**HUB002 CONTEMPORARY MORAL PROBLEMS**
The central questions of applied ethics and moral philosophy through an analysis of contemporary issues: uses of technology, genetic engineering, nuclear energy, over-population, environmentalism, war, terrorism, civil disobedience, pacifism, racism, sexism, abortion, euthanasia, suicide and sexuality.

Course: ED26
Credit Points: 8 Contact Hours: 3 per week

**HUB003 PHILOSOPHY & NURSING 1**
A general introduction to philosophical questions and reasoning. Students have the opportunity to examine the ways in which personal beliefs and values impact on the nature of human beings and on nursing practice. Topics include: the nature of philosophy and political philosophy; the concept of personhood; spirituality and caring; critical thinking in nursing practice.

Course: NS40, NS48
Credit Points: 8 Contact Hours: 3 per week

**HUB004 PHILOSOPHY & NURSING 2**
Exploration of bioethics providing a foundation for the nursing professional in the handling of moral dilemmas intrinsic in the provision of health care. Topics include: introduction to ethics; bioethics in the social context; the process of moral decision-making; ethics and professional nursing practice.

Course: NS40, NS48
Credit Points: 8 Contact Hours: 3 per week

**HUB005 SOCIAL ETHICS & HUMAN RELATIONSHIPS**
Philosophical and pedagogical issues underpinning the human relationships dimension of classroom practice and school cultures (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

**HUB007 HEALTH & ETHICS**
An introduction to ethics within a health care context. Particular focus on the role of health care educators exploring the ethical challenges confronting them and the ways in which they may cultivate moral sensitivity as part of community ‘well-being’.

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

**HUB008 RESEARCH METHODS IN ETHICS & BIOETHICS**
Health care practice, including that of nursing practice, is both constituted by ethical values and embedded in a broader area of social provision, that of health care, where ethical concerns and dilemmas are constantly emerging. Consequently, the areas of health care ethics, bioethics and nursing ethics challenge the contemporary health care professional as a reflective practitioner and provide an emerging focus of postgraduate and professional research. This unit has been designed for those who plan to pursue postgraduate research in an area of applied ethics or bioethics or for those health care professionals who wish to develop a further expertise in their grasp of the ethical dimension to health care practice.

Course: NS40, NS48
Credit Points: 12 Contact Hours: 3 per week
• HUB600 AUSTRALIAN SOCIETY & CULTURE
Historical, political, economic and cultural information about Australia and Australians; egalitarianism; religion, frontiers and rural Australia; the historical and future role of technology in Australia.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

• HUB601 HUMAN IDENTITY & CHANGE
What it means to be human; ways human identities (e.g. 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

• HUB610 APPROACHES TO ASIA/PACIFIC STUDIES
General introduction to the history and emerging political economy of the Asia/Pacific region; historical core/periphery structures; the ascent and decline of powerful imperial and new Asian cores such as Japan; systemic and anti-systemic movements and Australia’s particular role in this region.
Courses: ED50, ED51, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

• 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

• HUB617 WOMEN, AID & DEVELOPMENT
Challenges existing notions of development; evaluates current models of development and aid in terms of their implications for women; suggests that real development for women and their dependents requires a woman-centric approach.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

• HUB618 ASIAN WOMEN: TRADITION, COLONISATION & REVOLUTION
Uses case studies to provide a broad analysis of Asian women’s experiences of tradition, colonialism and revolution; highlights the linkages between traditional culture, colonialism and revolution; provides an appreciation of both the historical experiences and some of the contemporary concerns of Asian women.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

• HUB619 PACIFIC CULTURE CONTACT
Key concepts including mobility, religion, morality, leadership, civilisation, society, change and continuity; develops an appreciation of culture and sensitivity towards those groups or individuals who do not share a particular cultural heritage; case studies and comparative analysis focus on the people of the Pacific at the time of initial European contact.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

• HUB620 THE PACIFIC SINCE 1945
Analyses the link between culture and history in a post-contact context of change and continuity in the contemporary Pacific; overviews the events since 1945 that are important in the lives of Pacific Island peoples; presents key concepts including mobility, adaptation, change, tradition, continuity, modernisation, conflict and independence.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

• HUB621 NORTH AMERICAN STUDIES
A comparative approach to the histories of Canada, the United States and Mexico; key themes include patterns of early settlement, the development of political institutions, the treatment of minorities, and the interaction of these three nations up to the present.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

• HUB622 LATIN AMERICAN STUDIES
Uses case studies dealing with Latin American history and political economy from pre-conquest period to the present; 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 (e.g. Taiwan) and non-systemic models (e.g. NPA) are undertaken.
Courses: ED50, HU20, IF36
Credit Points: 12 Contact Hours: 3 per week

• HUB624 ISLAM & POLITICS IN SOUTH-EAST ASIA
An advanced seminar in Asian Pacific Studies normally taken by third and fourth year (Honours) students.
Courses: HU20, HU21, ED50
Credit Points: 12 Contact Hours: 3 per week

• HUB625 AMERICAN LITERATURE
Concentrates principally on twentieth century American literature in the years preceding World War II and in the postwar construction period to the present. Particular emphasis on major preoccupations 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

• HUB626 CONTEMPORARY SOUTH-EAST ASIA
An introduction to Southeast Asia as a region focusing on geographic characteristics, recent political developments, population and urban studies, economic development and social and cultural characteristics.
Courses: HU20, IF26, ED50
Credit Points: 12 Contact Hours: 3 per week
• HUB627 AUSTRALIA AND THE SOUTH PACIFIC
Critical analysis of the history of Australian bilateral and multilateral links with the Pacific islands region, including Pacific frontier theory, sub-imperialism, colonial rule and contemporary dialogue over aid, trade, regionalism, defence, cultural exchange and migration. The unit will focus on events from 1788 to the present.
Courses: HU20, IF36, ED50
Credit Points: 12 Contact Hours: 3 per week

• HUB628 MODERN JAPAN
The history of nineteenth and twentieth century Japan: the range of contemporary issues confronting Japan, including those associated with Japan’s increased power in the Asia-Pacific region. Where possible, primary source documentation is used to enhance historical understanding.
Courses: HU20, IF36, ED50
Credit Points: 12 Contact Hours: 3 per week

• HUB629 MODERN CHINA
A historical survey of China during the nineteenth and twentieth centuries. The primary focus will be on the decline of the traditional Chinese state and the impact of foreign imperialism. Stress is placed on the growth of nationalism and the Chinese revolution. The modernisation of Chinese culture, the position of women and the forces which have brought China to resume its place as the major Asian power.
Courses: HU20, IF36, ED50
Credit Points: 12 Contact Hours: 3 per week

• HUB630 GEOGRAPHY OF EAST ASIA
A geographical interpretation of the East Asia region covering China, Japan and Korea. This includes an examination of the region’s physical landscapes, human population distribution, demographic and cultural change, environmental issues and the role of the East Asian countries in the geopolitics of the Asia-Pacific region.
Courses: ED50, IF36, HU20
Credit Points: 12 Contact Hours: 3 per week

• HUB631 SEMINAR IN JAPANESE ISSUES
An advanced seminar in Asia Pacific Studies normally taken by third and fourth year (Honours) students.
Courses: HU20, HU21, ED50
Credit Points: 12 Contact Hours: 3 per week

• HUB646 INTERNATIONAL INTENSIVE PROGRAM
Short period of intensive language study conducted at an approved institution in the country where the target language is used; aims to enhance language skills and introduce students to the culture of the country in an immersion situation.
Courses: BS50, ED50, HU20
Credit Points: 12 Contact Hours: 3 per week

• HUB647 INTERNATIONAL 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 INTERNATIONAL SEMESTER OR EQUIVALENT
Students follow an approved course of study at a designated foreign university for a semester. The unit aims to improve language skills in an immersion situation and at the same time provide the cultural experience of living in the country of the language being studied for an extended period of time.
Course: ED50, HU20
Credit Points: 48

• HUB649 HISTORY WRITING IN MODERN EUROPE
An advanced seminar in European Studies normally taken by third and fourth years (Honours) students.
Courses: HU20, HU21, ED50
Credit Points: 12 Contact Hours: 3 per week

• HUB650 INTRODUCTORY INDONESIAN 1
This unit assumes no prior knowledge of Indonesian, and aims to equip beginning students with elementary communicative competence in a range of common everyday situations.
Courses: HU20, IF36, BS50, ED50, ED51
Credit Points: 12 Contact Hours: 4 per week

• HUB651 INTRODUCTORY INDONESIAN 2
This unit expands beginners’ repertoire of communicative competence into a wider range of situations. Relatively more emphasis upon speaking and listening rather than reading and writing.
Courses: HU20, IF36, BS50, ED50, ED51
Prerequisite: HUB650 or equivalent
Credit Points: 12 Contact Hours: 4 per week

• HUB652 INDONESIAN LANGUAGE & CULTURE 1
This unit advances learners’ competence to intermediate level, with some analytical focus on syntactic and morphological structures in Indonesian.
Courses: HU20, IF36, BS50, ED50, ED51
Prerequisite: HUB651 or equivalent
Credit Points: 12 Contact Hours: 4 per week

• HUB653 INDONESIAN LANGUAGE & CULTURE 2
This unit continues to develop fluency in all macroskills to an intermediate level, with increased use of authentic source materials.
Courses: HU20, IF36, BS50, ED50, ED51
Prerequisite: HUB652 or equivalent
Credit Points: 12 Contact Hours: 4 per week

• HUB654 INDONESIAN LANGUAGE & CULTURE 3
This unit continues to develop proficiency in all macroskills, using mainly authentic texts (written, audio and audio-visual).
Courses: HU20, IF36, BS50, ED50, ED51
Prerequisite: HUB653 or equivalent
Credit Points: 12 Contact Hours: 4 per week

• HUB655 INDONESIAN LANGUAGE & CULTURE 4
The unit extends learners’ proficiency, with almost exclusive use of authentic texts.
Courses: HU20, IF36, BS50, ED50, ED51
Prerequisite: HUB654 or equivalent
Credit Points: 12 Contact Hours: 4 per week

• HUB656 INDONESIAN LANGUAGE & CULTURE 5
This unit enhances learners’ linguistic skills to a level where they can read modern Indonesian sources, understand television programs, as well as discuss and write intelligently about issues.
Courses: HU20, IF36, BS50, ED50, ED51
Prerequisite: HUB655 or equivalent
Credit Points: 12 Contact Hours: 4 per week

• HUB657 INDONESIAN LANGUAGE & CULTURE 6
This unit fine tunes learners’ proficiency in all four macro skills and deals with contemporary issues almost entirely in the Indonesian language.
Courses: HU20, IF36, BS50, ED50, ED51
Prerequisite: HUB656 or equivalent
Credit Points: 12 Contact Hours: 4 per week
This unit is for students who have completed Year 12 Japanese or equivalent; it consolidates and further develops the four skills of listening, speaking, reading and writing through an integrated approach; 150 additional Kanji are introduced; cultural aspects are incorporated with relevant language situations.

Courses: BS50, ED50, ED51, HU20, IF36
Prerequisite: HUB660
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 and an additional 130 Kanji are introduced; cultural issues are integrated with relevant language situations.

Courses: BS50, ED50, ED51, HU20, IF36
Prerequisite: HUB661
Credit Points: 12  Contact Hours: 4 per week

HUB662 JAPANESE LANGUAGE & CULTURE 1
This unit is for students who have completed Year 12 Japanese or equivalent; it consolidates and further develops the four skills of listening, speaking, reading and writing through an integrated approach; 150 additional Kanji are introduced; cultural aspects are incorporated with relevant language situations.

Courses: BS50, ED50, ED51, HU20, IF36
Prerequisites: HUB661, 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; 150 additional Kanji are introduced; cultural aspects are incorporated with relevant language situations.

Courses: BS50, ED50, ED51, HU20, IF36
Prerequisite: HUB662
Credit Points: 12  Contact Hours: 4 per week

HUB664 JAPANESE LANGUAGE & CULTURE 3
An intermediate level unit aiming enhancing students' language skills by concentrating on more complex grammatical structures; 150 additional Kanji are introduced; cultural aspects are incorporated with relevant language situations.

Courses: BS50, ED50, ED51, HU20, IF36
Prerequisite: HUB663
Credit Points: 12  Contact Hours: 4 per week

HUB665 JAPANESE LANGUAGE & CULTURE 4
In this intermediate level unit, students' language skills are further enhanced through authentic resources adapted for classroom use; 150 additional Kanji are introduced; cultural aspects are integrated with language materials.

Courses: BS50, ED50, ED51, HU20, IF36
Prerequisite: HUB664
Credit Points: 12  Contact Hours: 4 per week

HUB666 JAPANESE LANGUAGE & CULTURE 5
Extends language skills through exposure to the natural language of newspapers and television; students should know 1000 Kanji by the end of this unit.

Courses: BS50, ED50, ED51, HU20, IF36
Prerequisite: HUB665
Credit Points: 12  Contact Hours: 4 per week

HUB667 JAPANESE LANGUAGE & CULTURE 6
Focusing on the media, extends students' linguistic skills to a level where they can access authentic materials, express opinions and discuss issues; Kanji knowledge is extended beyond 1000.

Courses: BS50, ED50, ED51, HU20, IF36
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.

Courses: BS50, ED50, ED51, HU20, IF36
Credit Points: 12  Contact Hours: 4 per week

HUB671 INTRODUCTORY FRENCH 2
Develops a range of language skills; stresses oral/aural skills; extends reading comprehension and begins the development of writing skills.

Courses: BS50, ED50, ED51, HU20, IF36
Prerequisite: HUB670
Credit Points: 12  Contact Hours: 4 per week

HUB672 FRENCH LANGUAGE & CULTURE 1
Designed for students who have completed Year 12 French or equivalent; focuses on speaking, listening and reading skills.

Courses: BS50, ED50, ED51, HU20, IF36
Prerequisites: Year 12 French or equivalent
Credit Points: 12  Contact Hours: 4 per week

HUB673 FRENCH LANGUAGE & CULTURE 2
Continues the development of speaking, listening and reading skills. Attention is paid to writing skills. Aims to help students communicate orally with ease and confidence before embarking on a more sustained study of written French.

Courses: BS50, ED50, ED51, HU20, IF36
Prerequisite: HUB672
Credit Points: 12  Contact Hours: 4 per week

HUB674 FRENCH LANGUAGE & CULTURE 3
In-depth review of the expression of time in French through the study of a feature film and other forms of narrative. Further develops the four macro skills.

Courses: BS50, ED50, ED51, HU20, IF36
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.

Courses: BS50, ED50, ED51, HU20, IF36
Prerequisite: HUB674
Credit Points: 12  Contact Hours: 4 per week

HUB676 FRENCH LANGUAGE & CULTURE 5
Individual study program on a topic selected in consultation with staff. Aims to develop advanced reading and writing skills.

Courses: BS50, ED50, ED51, HU20, IF36
Prerequisite: HUB675
Credit Points: 12  Contact Hours: 4 per week

HUB677 FRENCH LANGUAGE & CULTURE 6
This advanced unit explores the potential of French expression, verbal and non-verbal. It looks at gesture and idiomatic expressions, drawing on the satirical press, films, cartoons and theatre.

Courses: BS50, ED50, ED51, HU20, IF36
Prerequisite: HUB676
Credit Points: 12  Contact Hours: 2 per week

HUB678 FRENCH FOR BUSINESS AND THE PROFESSIONS
Equips students to use French in business or professional contexts. The focus is on the professional experience of guest speakers; background information needed for
survival in the French-speaking business world; and everyday business documents.
Courses: BS50, HU20, IF36
Prerequisites: HUB675 (4 or better)
Credit Points: 12  Contact Hours: 3 per week

■ HUB680 APPROACHES TO AUSTRALIAN STUDIES
Introduces the Australian Studies major; focuses on cultural themes within Australian history; includes an examination of the shock felt by pre-1850s immigrants, racial conflict and naturalisation processes.
Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

■ HUB682 SOCIAL MOVEMENTS IN AUSTRALIA
New social movements in Australia since the 1960s; includes green, women's, peace, Aboriginal and Third World development movements; comparison with overseas and old social movements.
Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

■ HUB683 AUSTRALIAN GEOGRAPHICAL STUDIES
Expands the geographical understanding of students into the cultural area, enabling them to appreciate the significance and interrelationship of issues of people, land, resources, energy and technology.
Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

■ HUB685 AUSTRALIAN RESOURCE MANAGEMENT
Considers the various development options open to Australia. Attention is paid to Australia's economic history and current economic structures.
Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

■ HUB687 CONTEMPORARY MORAL PROBLEMS
Introduction to applied ethics and moral philosophy through an analysis of a range of contemporary issues within an Australian context, e.g. 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 architectural 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

■ HUB694 AUSTRALIAN POLITICS
The political life of the Australian citizen; the democratic political traditions and institutional bases of Australian political life; the process by which political decisions get made at all levels of Australian politics.
Courses: HU20, IF36, ED50
Credit Points: 12  Contact Hours: 3 per week

■ HUB700 ABORIGINAL & TORRES STRAIT ISLANDER CULTURE STUDIES
An appreciation of the two distinct indigenous cultures of Australia; how external forces to Aboriginal and Torres Strait Islander cultures caused social, economic and political changes; traditional family life and organisation.
Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

■ HUB701 ABORIGINAL & TORRES STRAIT ISLANDER LITERATURE
Despite the fact that it represents the indigenous culture of Australia, the oral tradition of Aborigines and Torres Strait Islanders has only recently begun to be appreciated. By examining this tradition, its continuation to the present day and its transformation into published texts, this unit seeks to open the eyes of students to a different world view.
Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

■ HUB702 THE AUSTRALIAN DREAMING: THE INDIGENOUS CONSTRUCTION
A philosophical overview of Aboriginal and Torres Strait Islander culture; draws upon a variety of conceptual approaches; examines theories which underpin indigenous constructions of reality.
Courses: HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

■ HUB703 INDIGENOUS POLITICS & POLITICAL CULTURE
Examines issues and influences underlying the world of indigenous politics: political representation; land rights; health; education; community development; criminal justice; culture and heritage. An Australian focus with New Zealand and North American comparisons.
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 genre; 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
The literary contribution of Australian women writers from the nineteenth and twentieth centuries to Australian culture and society; focuses on a number of significant texts that raise crucial issues in their representation of women's lives and identities.

Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

HUB712 AUSTRALIAN CHILDREN'S & ADOLESCENT FICTION
Children's and adolescent novels within the cultural context of nineteenth and twentieth century Australia; focuses on textual analysis of major generic types; considers issues such as race, gender, class and regionalism in fiction for young Australians.

Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

HUB713 SEMINAR IN AUSTRALIAN URBAN STUDIES
An advanced seminar in Australian Studies normally taken by third and fourth year (Honours) students.

Courses: HU20, HU21, ED50
Credit Points: 12  Contact Hours: 3 per week

HUB714 ABORIGINAL COMMUNITIES IN CRISIS AND RECOVERY
An advanced seminar in Australian Studies normally taken by third and fourth year (Honours) students.

Courses: HU20, HU21, ED50
Credit Points: 12  Contact Hours: 3 per week

HUB720 APPROACHES TO EUROPEAN STUDIES
A broad introduction to the major studies sequence in European studies; uses historical and literary perspectives to highlight major themes in the development of European society and culture.

Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

HUB721 THE CLASSICAL WORLD
The emergence and development of European society from earliest times to 500 AD; in alternate semesters it examines 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 eighteenth century and the emergence of nationalism and the rise of nation states.

Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

HUB723 WAR & REVOLUTION IN EUROPE 1914-1945
This subject selectively examines political, social, economic and intellectual developments in Europe from 1914-1945

Courses: HU20, IF36, ED50
Credit Points: 12  Contact Hours: 3 per week

HUB724 NINETEENTH CENTURY ENGLISH LITERATURE & CULTURE
Focuses on two major literary genres: the novel and poetry; their evolution and variety in a time of profound economic, political and social change in England between 1790 and 1880; examines the variety of response of a number of literary artists to these changes and the ways narrative and verse forms were adapted and evolved.

Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

HUB725 TWENTIETH CENTURY ENGLISH LITERATURE & CULTURE
Critical analysis of key British literary texts of the twentieth century (prose, poetry, drama); the theoretical and cultural movements that underpin them.

Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

HUB726 EUROPEAN LITERATURE & SOCIAL CHANGE
Uses a broadly defined European perspective to explore how literary texts respond to, influence and are in turn influenced by social and cultural forces; set texts are explored from a range of thematic perspectives: industrialisation and the impact of new technologies, war and civil unrest, political power and citizenship, colonialism and post-colonialism.

Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

HUB727 EUROPEAN LITERATURE & IDENTITY
Explores selected European literary texts from different periods and regions with a focus on identity e.g. gender, individual development, sexual and social relations, normality and abnormality, crime and the problems of evil, imagination and fantasy.

Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

HUB728 POPULAR LITERATURE
Explores the psychological, political and ideological functions of popular literature by studying texts from different popular genres (e.g. romance, crime fiction; spy thrillers; fantasy; science fiction; family sagas; horror; comics); methods of analysing the historical development of generic forms relating to the varying social contexts in which they are produced.

Courses: ED50, HU20, IF36
Credit Points: 12  Contact Hours: 3 per week

HUB729 SHAKESPEARE
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, IF36
Prerequisite: HUB735
Credit Points: 12  Contact Hours: 4 per week

HUB737 GERMAN LANGUAGE & CULTURE 1
Designed for students who have completed Year 12 Ger-
man or its equivalent; consolidates the four language skills of reading, writing, listening and speaking; introduces students to a selection of postwar literature from German-speaking countries.

Courses: B530, ED50, ED51, HU20, IF36
Prerequisites: Year 12 German or equivalent
Credit Points: 12 Contact Hours: 4 per week

- **HUB738 GERMAN LANGUAGE & CULTURE 2**
  Continues the consolidation of the four macro skills; aims to further cultural awareness through a study of some examples of contemporary German literature from East and West Germany.
  Courses: B530, ED50, ED51, HU20, IF36
  Prerequisite: HUB737
  Credit Points: 12 Contact Hours: 4 per week

- **HUB739 GERMAN LANGUAGE & CULTURE 3**
  Develops linguistic competence in the German language to a higher level; equips students with the language skills necessary for more demanding linguistic interactions and situations; an introduction to a major period in the development of German culture through a study of the German enlightenment and classical and romantic German texts.
  Courses: B530, ED50, ED51, HU20, IF36
  Prerequisite: HUB739
  Credit Points: 12 Contact Hours: 4 per week

- **HUB740 GERMAN LANGUAGE & CULTURE 4**
  Develops linguistic competence in the German language to a higher level; equips students with the language skills necessary for more demanding linguistic interactions; introduction to the major cultural traditions of the nineteenth century through a study of a selection of nineteenth century texts.
  Courses: B530, ED50, ED51, HU20, IF36
  Prerequisite: HUB739
  Credit Points: 12 Contact Hours: 4 per week

- **HUB741 GERMAN LANGUAGE & CULTURE 5**
  Develops linguistic competence in the German language to a more advanced level by extending students' vocabulary and range of registers and expressions; introduces the culture of modernity through the literary movements of modernism, expressionism and Viennese fin de siecle and the avant-garde.
  Courses: B530, ED50, ED51, HU20, IF36
  Prerequisite: HUB740
  Credit Points: 12 Contact Hours: 4 per week

- **HUB742 GERMAN LANGUAGE & CULTURE 6**
  Develops linguistic competence in the German language to a more advanced level necessary for dealing with more complex linguistic interactions and texts; provides a survey of postwar East and West German literature and a discussion of the problems of writing after Auschwitz and under the censorship.
  Courses: B530, ED50, ED51, HU20, IF36
  Prerequisite: HUB740
  Credit Points: 12 Contact Hours: 4 per week

- **HUB743 NATIONS AND NATIONALISM**
  This course selectively examines political, social, economic and intellectual developments in modern Europe, from the French Revolution to the era before the Great War of 1914-18
  Courses: HU20, IF36, ED50
  Credit Points: 12 Contact Hours: 3 per week

- **HUB750 UNDERSTANDING ETHICS**
  Introduces students to the theory and practice of moral decision-making; covers questions such as 'Why be moral?'; 'What is the good or the right?' and 'How do we make moral decisions?'; questions are related to current practical ethical dilemmas.
  Courses: HU20, IF36
  Credit Points: 12 Contact Hours: 3 per week

- **HUB751 PUBLIC & PROFESSIONAL ETHICS**
  The ethical dimensions of public and professional life; the ethical rights and responsibilities of the individual citizen and the state within a liberal democracy; the ethical responsibilities of institutional and professional agencies and the roles and ethical responsibilities of individual citizens in such agencies.
  Courses: HU20, IF36
  Credit Points: 12 Contact Hours: 3 per week

- **HUB752 THE JUST SOCIETY**
  Justice and concepts such as equity in various ethical and political traditions are applied to recent policy debates about affirmative action, the criminal justice system, political practice, health and the environment.
  Courses: HU20, IF36
  Credit Points: 12 Contact Hours: 3 per week

- **HUB753 ETHICAL DECISION-MAKING**
  The ways in which various decision-making practices can be morally grounded; the practical value of such procedures for human transformation and emancipation; the ways in which decision-making practices either sustain or subvert moral communities.
  Courses: HU20, IF36
  Credit Points: 12 Contact Hours: 3 per week

- **HUB754 FEMINISM & ETHICS**
  The impact of the feminist movement on ethical and political theory; what does it mean to say the differences between men and women are natural or socially cultivated? What are the normative implications of these differences? What counts as equality between the sexes? Do women think differently about ethical situations than men?
  Courses: HU20, IF36
  Credit Points: 12 Contact Hours: 3 per week

- **HUB755 VULNERABLE IDENTITIES**
  Vulnerability and the experiences of persons who are vulnerable due to exploitation, abandonment, confusion or suffering and other unethical practices; ways of relating with the vulnerable; students develop a richer appreciation of others as well as themselves.
  Courses: HU20, IF36
  Credit Points: 12 Contact Hours: 3 per week

- **HUB756 SEMINAR IN ETHICS AND PUBLIC PHILOSOPHY (ADVANCED SEMINAR)**
  An advanced seminar in Applied Ethics normally taken by third and fourth year (Honours) students.
  Courses: HU20, HU21, ED50
  Credit Points: 12 Contact Hours: 3 per week

- **HUB757 ETHICS, TECHNOLOGY AND THE ENVIRONMENT**
  How decisions about new technologies and the environment are based not only on factual evidence but also on ethical judgements; ethical aspects of issues such as genetic engineering, free-riding problems with 'caring for' the environment, human obligations toward non-human animals, whether wilderness areas have value independent of their value to humans, and whether a proper concern for the environment requires a new 'environment or ecological ethic'.
  Courses: HU20, IF36
  Credit Points: 12 Contact Hours: 3 per week

- **HUB758 SEMINAR IN HEALTH CARE ETHICS**
  An advanced seminar in Applied Ethics normally taken...
courses to feminist studies and to the major theoretical debates about
gender by third and fourth year (Honours) students.

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- **HUB760 APPROACHES TO FEMINIST STUDIES**
  - Introduces a broad spectrum of issues related to feminist studies and to the major theoretical debates about gender in fields including literature, history, psychology, philosophy, sociology and ethics.
  - Course: HU20
  - Credit Points: 12
  - Contact Hours: 3 per week

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- **HUB761 NINETEENTH CENTURY COMPARATIVE WOMEN'S WRITING**
  - An advanced seminar in Feminist Studies normally taken by third and fourth year (Honours) students.
  - Courses: HU20, HU21, ED50
  - Credit Points: 12
  - Contact Hours: 3 per week

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- **HUB762 SEMINAR IN WOMEN'S HISTORICAL PERSPECTIVE**
  - An advanced seminar in Feminist Studies normally taken by third and fourth year (Honours) students.
  - Courses: HU20, HU21, ED50
  - Credit Points: 12
  - Contact Hours: 3 per week

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- **HUB772 INTRODUCTION TO POLITICS: POLITICAL IDEOLOGIES**
  - The political spectrum of the traditional Left-Right-Centre ideologies including Fascism; Conservatism; Liberalism; Socialism; Communism; Anarchism are discussed, along with cross-spectrum ideologies such as Feminism: Imperialism: Racism: Environmentalism.
  - Course concludes with reference to post-modernist politics and its implications for the traditional ideological spectrum.
  - Courses: HU20, IF36, ED50
  - Credit Points: 12
  - Contact Hours: 3 per week

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- **HUB800 POLITICS & MARKETS**
  - Introduces major debates in political economy about mixed economy and balance between collective and individual provision; theories of production and consumption, modes of production and regulation, studies of public intervention.
  - Course: HU20
  - Credit Points: 12
  - Contact Hours: 3 per week

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- **HUB801 POLITICS & CONSUMPTION**
  - Forms and patterns of consumption of market and social goods, income distribution and measures of quality and level of living: concepts of social wage, theories of public revenue and organisation of public services.
  - Course: HU20
  - Credit Points: 12
  - Contact Hours: 3 per week

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- **HUB802 POLITICS & PRODUCTION**
  - Political economy of production; form of economic calculation and theories of value, profit and interest; ownership and control of production in market and non-market situations.
  - Course: HU20
  - Credit Points: 12
  - Contact Hours: 3 per week

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- **HUB803 PATTERNS OF REGULATION**
  - Examination of regulatory strategies: political economy of economic and social compromises in advanced countries; strategies of regulation in domestic economies; case studies of media, public health, urban development and transport.
  - Course: HU20
  - Credit Points: 12
  - Contact Hours: 3 per week
philosophy and education; development of an integrated and clearly articulated agreement for a philosophy of human relationship education.

**Courses:** ED22, ED30, ED67
**Credit Points:** 12 **Contact Hours:** 3 per week

- **HUP002 PUBLIC SECTOR ETHICS**
  Exploration of conceptual and theoretical issues; practical dilemmas and strategies for institutionalising ethics in the public sector.
  **Course:** BS83
  **Credit Points:** 12 **Contact Hours:** 3 per week

- **HUP003 ETHICS: THEORY & PRACTICE**
  The theory and practice of moral decision-making; current ethical issues.
  **Course:** BS30
  **Credit Points:** 12 **Contact Hours:** 3 per week

- **HUP004 HEALTH CARE ETHICS & BIOETHICS**
  Bioethics in the social context; the process of moral decision-making; ethics and professional nursing practice.
  **Course:** BS30
  **Credit Points:** 12 **Contact Hours:** 3 per week

- **IF8890 PROJECT**
  Students undertake a project requiring research, investigation or design of some topic or problem of interest to the profession.
  **Courses:** IF24, IF25
  **Prerequisites:** Successful completion of units totalling not less than 120 hours of weekly contact time.
  **Credit Points:** 24 **Contact Hours:** 2 per week

- **IFN001 ADVANCED INFORMATION RETRIEVAL SKILLS**
  This unit provides postgraduate research students with the skills to implement a literature search in their research area, and to set up a personal system for managing the references collected. The seven modules which form this unit include: using the QUT libraries; indexing and abstract services; electronic information retrieval; developing a current awareness strategy; thesis writing: personal file management; evaluating information.
  **Courses:** BN73, BN78, PS69, SC60, SC80
  **Credit Points:** 4 **Contact Hours:** 2 per week

- **IFN100 FULL-TIME MASTERS' RESEARCH (JUSTICE STUDIES)**
  This unit provides full-time postgraduate research students with study in a relevant area leading to the development of a thesis of not less than 50 000 words. Relevant areas include criminology, law enforcement, intelligence and security, corrections and legal and justice policy.
  **Course:** JS52
  **Credit Points:** 96

- **IFN201 PART-TIME MASTERS' RESEARCH (JUSTICE STUDIES) (EXTENSION)**
  This unit provides full-time postgraduate research students with study in a relevant area leading to the development of a thesis of not less than 50 000 words. Relevant areas include criminology, law enforcement, intelligence and security, corrections and legal and justice policy.
  **Course:** JS52
  **Credit Points:** 96

- **IFP22 PROJECT**
  This unit provides students with the opportunity to gain insight and improve their understanding of quality management practices through the study of workplace quality related problems. Students are given assistance to develop their capacity to apply ideas and knowledge gained during the course and to improve their communication and writing skills in furnishing a detailed project report.
  **Course:** IF69
  **Prerequisites:** HRB131 or HRN105
  **Credit Points:** 12 **Contact Hours:** 3 per week

- **ITB001 COMPUTING PRACTICE (NOTE) 1**
  Linked with unit ITB002.

- **ITB002 COMPUTING PRACTICE (NOTE) 2**
  These units are designed to coordinate the practical aspects of the lecture material presented so that students both develop essential practical skills and benefit from cross-fertilisation of the individual units.
  **Course:** BN10
  **Credit Points:** 6 **Contact Hours:** 3 per week

- **ITB101 LABORATORY 1 (COMPUTING ENVIRONMENTS)**
  Professionals in information technology must have an ability to work in a variety of computing environments and to utilise general application packages. This unit provides students with 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 and to implement basic functions of existing databases, wordprocessors and spreadsheets.
  **Courses:** IF33, IF38, IF54, IT20
  **Credit Points:** 12 **Contact Hours:** 3 per week

- **ITB102 LABORATORY 2 (COMPUTER APPLICATIONS)**
  Professionals in information technology must have an ability to design and implement computer solutions for various applications using a variety of computing languages, systems and environments. Students are provided with a practical experience in the design, implementation and testing of software systems. Emphasis is on design documentation, user documentation, programming style, test documentation, the use of diagnostic aids, software monitors, analysis of results and test coverage, and the oral and written presentation of results.
  **Courses:** IF25, IF33, IF38, IF54, IT20
  **Prerequisites:** ITB101, ITB210, ITB410
  **Credit Points:** 12 **Contact Hours:** 3 per week

- **ITB310 FORMAL REPRESENTATION**
  This unit provides a foundation with regard to the specification and implementation of information systems. As such, it gives an introduction to topics built on subsequent units, notably those in database and system analysis and design. Topics covered include models; facts;
sets; relations; relational calculus; SQL; defining the database; referential integrity; knowledge; schemata; state transitions.

Courses: IF25, IF33, IF38, IF54, IT20
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: ITN210

■ ITB220 DATABASE DESIGN
Covers the conceptual design of a database and its implementation in either relational, network or hierarchical logical file design; network and hierarchical database systems in detail; additional relational system techniques.

Courses: IF33, IF38, IF54, IT20, IT40
Prerequisite: ITB210
Credit Points: 12  Contact Hours: 3 per week

■ ITB221 LABORATORY 3 (COMMERCIAL
PROGRAMMING)
Extends student skills in program design and implementation by applying them to typical commercial problems through a widely used third generation language. The task-oriented approach supplies a vehicle for reinforcing students' knowledge of elementary design and planning theory.

Courses: BS50, IF33, IF38, IT20
Prerequisites: ITB210 and ITB410
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: ITB211

■ ITB222 SYSTEMS ANALYSIS & DESIGN 1
Develops basic systems development skills by teaching a methodology and techniques of systems analysis and design and gives an introduction to all phases of the classical systems development life cycle. The aim is to give students a balanced overview of the process of analysing and designing information systems, while ensuring that they 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, IF33, IT20
Prerequisites: BS8118, ITB210
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: ITB211

■ ITB223 LABORATORY 4 (4GL
PROGRAMMING)
Introduction to the role of application generators and Fourth Generation Language technology in developing information systems. As well as using these tools to create programs from detailed specifications, students develop standards for comparing the applicability of one environment to another.

Courses: IF33, IF38, IT20  Prerequisite: ITB220
Credit Points: 12  Contact Hours: 3 per week

■ ITB224 SYSTEMS ANALYSIS & DESIGN 2
Expands upon the systems analysis and design techniques introduced in ITB222. Also, alternative approaches practised 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, IF38, IT20
Prerequisite: Successful completion of at least 72 credit points from the Information Systems major or in IF33
Credit Points: 12

■ ITB231 APPLICATIONS DEVELOPMENT
Synthesises techniques and theory learned in earlier units by providing an opportunity for students to integrate these skills through team-based development of a major online system processing database. Requires students to re-examine major design, programming and planning issues within the context of a 4GL software environment.

Course: IT20  Prerequisites: ITB223, ITB224
Credit Points: 12  Contact Hours: 3 per week

■ ITB232 DATABASE MANAGEMENT
Examination of the functions of database management systems; query optimisation; concurrency control; transaction processing; crash recovery; security and integrity; the fundamentals of physical file organisation.

Courses: IF33, IT20, IT40
Prerequisites: ITB223 or ITB421
Credit Points: 12  Contact Hours: 3 per week

■ ITB233 FILE STRUCTURES
Examination of file structures and their processing; the various forms of persistent storage (conventional disks, tapes and CDs); different approaches to file indexing; tree structured storage; the cost of accessing these structures is estimated.

Courses: IF38, IT20, IT40
Prerequisites: ITB220, ITB221
Credit Points: 12  Contact Hours: 3 per week

■ ITB235 MULTIMEDIA SYSTEMS
TECHNOLOGIES
Image, sound and video now make up a new dimension in computer stored databases. The technical problems of dealing with these new media in a digital way pose a challenge to information technologists. This unit introduces interactive multimedia system technologies and provides students with the basic knowledge required to contend with existing and future technical problems. Students integrate this knowledge in creating an interactive multimedia system.

Course: IT20
Credit Points: 12  Contact Hours: 3 per week

■ ITB236 OBJECT-ORIENTATED ANALYSIS & DESIGN
The goal is to develop basic skills in methodologies and techniques of object-orientated analysis and design. Covers all phases of the object-orientated software development life cycle.

Course: IT20  Prerequisite: ITB422
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: ITB448 and ITN221

■ ITB240 PROJECT
The ability to apply knowledge and skills to real-life situations is essential for information systems professionals. A six-month project, under academic supervision, is considered useful in developing students' ability to apply their knowledge and skills.

Course: IT20
Prerequisites: Completion of at least 72 credit points from the Information Systems major
Credit Points: 12

■ ITB241 INFORMATION SYSTEMS
MANAGEMENT
Information systems practitioners have responsibility for the acquisition of computer hardware and software and for its effective and efficient use. Many practitioners also have responsibility for managing other information systems personnel. The knowledge and skills relevant to these planning, organising and staffing responsibilities are covered.
Courses: IF33, IF38, IT20
Prerequisite: Completion of at least 60 credit points from the Information Systems major
Credit Points: 12 Contact Hours: 3 per week

■ ITB242 DECISION SUPPORT SYSTEMS
There is increasing pressure for computer use to be closely aligned to organisational goals. Associated with this is an increasing emphasis on the computer assisting 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
Examination of the requirements for and development of knowledge-based systems in modern mainstream computing; provides an understanding of the techniques used in capturing and automating knowledge; and gives practical experience in designing, implementing and maintaining knowledge-based systems using a variety of software tools.
Course: IT20 Prerequisite: ITB222 Contact Hours: 3 per week
Incompatible with: ITB449

■ ITB244 SPECIAL TOPIC 1
This unit is linked with unit ITB245.

■ ITB245 SPECIAL TOPIC 2
This unit is linked with unit ITB244. These units are designed to allow for the significant development of, or emphasis in, business computing not dealt with in other course units. Selected topics and study areas are offered as required and when the necessary expertise is available. See School of Information Systems announcements for details of topics being offered.
Course: IT20 Prerequisite: See School announcements Credit Points: 12 Contact Hours: 3 per week

■ ITB246 UNIX & C
Introduction to the Unix operating system environment and to the C programming language. It covers the basics of both, and advanced topics relevant to software development under Unix and C. Emphasis is placed on the production of high quality software and documentation.
Course: IT20 Prerequisite: ITB101, ITB111 Credit Points: 12 Contact Hours: 3 per week
Incompatible with: ITB442 and ITB448

■ ITB247 PROJECT
This unit provides for students to undertake a two-semester project. The work in one semester can be followed up in the second, or students can extend their practical skills through the second semester project.
Course: IT20 Prerequisite: Completion of at least 60 credit points from the Information Systems major Credit Points: 24

■ ITB249 THEORETICAL FOUNDATIONS OF DATABASE SYSTEMS
Covers the theoretical foundations for the design, analysis and the unprocedural languages used in modern database systems; set theory; abstract algebra and theory of algorithms.
Course: IT20 Prerequisite: ITB220 Credit Points: 12 Contact Hours: 3 per week

■ ITB310 INFORMATION MANAGEMENT 1
The concept of information management has emerged from a number of disciplines which have become more associated as a result of the development of information technologies. This unit reviews this development, and introduces the principles of information management as they are presently defined. It therefore identifies the basic processes involved in handling information, with the context of an information life cycle, and introduces the concept of managing information as an organisational resource.
Courses: IF33, IF38, IF54, IT20 Credit Points: 12 Contact Hours: 3 per week

■ ITB320 LABORATORY 3 (DATABASE APPLICATIONS)
Graduates from the course are expected to have skills in the creation, maintenance and utilisation of databases of various types. This unit gives them practical exposure to the tasks involved using higher level applications programming environments.
Courses: IF52, IF54, IT20 Prerequisite: ITB102 Corequisite: ITB220 Credit Points: 12 Contact Hours: 3 per week
Incompatible with: ITB222 and ITN211

■ ITB321 SYSTEMS ANALYSIS
Examination of the ability to obtain accurate, up-to-date, business information on an ongoing basis which is today accepted as an important component of competitive success. A variety of computer and documentary sources are investigated, and information retrieval techniques are learnt.
Course: IT20 Prerequisite: ITB310 Credit Points: 12 Contact Hours: 3 per week

■ ITB323 LABORATORY 4 (INFORMATION SUPPORT METHODS)
Provides students with practical exposure to a range of methods that are used to support information management implementations, including data dictionary and repository maintenance, thesaurus construction and maintenance, and interface development for Internet tools.
Courses: IF52, IF54, IT20 Prerequisite: ITB320 Corequisite: ITB520 Credit Points: 12 Contact Hours: 3 per week

■ ITB330 INFORMATION ISSUES & VALUES
Concepts of information and the associated technology create fundamental issues for society, particularly in the legal, political and social arenas. Exploration of the development of such concepts in order to create awareness of both the indirect and direct impacts of information and the associated technology. Such an awareness is crucial in the effective direction of management of information.
Courses: IF52, IF54, IT20 Prerequisite: ITB322 Credit Points: 12 Contact Hours: 3 per week

■ ITB331 INFORMATION MANAGEMENT 2
Covers auditing information resources in an organisation; relates information provision to the information needs of end users, as well as to the strategic objectives of organisations.
Courses: IF52, IF54, IT20 Prerequisite: ITB310 Credit Points: 12 Contact Hours: 3 per week

■ ITB340 PROJECT
The ability to apply knowledge and skills to real-life situ-
ations is essential for information management professionals. A one-semester project, under academic supervision, is considered useful in developing students' ability to apply their skills.

Course: IT20
Prerequisites: Completion of at least 72 credit points from the Information Management major
Credit Points: 12

■ ITB341 INFORMATION MANAGEMENT 3
Pulls together many of the themes previously identified in the course of the Information Management major, with particular reference to information as a commodity and its use in strategic planning and enterprise information modelling. Functions and practices of management that relate to provision of information services, and utilisation of technology to support them.

Courses: IF52, IF54, IT20  Prerequisites: ITB331
Credit Points: 12  Contact Hours: 3 per week

■ ITB342 SPECIAL TOPIC (INFORMATION MANAGEMENT)
Covers aspects of information management of specific interest at that time. Makes allowances for significant developments or emphasis in information management not included in the remainder of the course program.

Course: IT20  Prerequisites: Topic dependant
Credit Points: 12  Contact Hours: 3 per week

■ ITB348 PROJECT
Allows students to undertake a large project in one semester.

Course: IT20  Credit Points: 24

■ ITB350 PROJECT-H
The ability to apply knowledge and skills to real-life situations is essential for people planning to work as information management professionals. A one-semester project, under academic supervision, is considered useful in developing students' ability to apply their knowledge and skills. As this unit is for students intending to proceed to the Honours course, this project must include an evaluative component.

Course: IT20
Prerequisites: Completion of at least 72 credit points from the Information Management major and two Pre-Hons units
Credit Points: 12

■ ITB351 INFORMATION MANAGEMENT 3H (STRATEGY & PLANNING)
Pulls together many of the themes previously identified in the course of the Information Management major, with particular reference to information as a commodity and its use in strategic planning and enterprise information modelling. Functions and practices of management that relate to provision of information services, and utilisation of technology to support them, are dealt with. In order to prepare students who are intending to proceed to an Honours program, this unit addresses performance analysis and evaluation work in more depth than the standard version of the course.

Course: IT20  Prerequisite: ITB331
Credit Points: 12  Contact Hours: 3 per week

■ ITB352 LABORATORY 4H (INFORMATION MANAGEMENT METHODS & EVALUATION)
Provides practical exposure to a range of techniques that are used to support information management implementations including data dictionary and repository maintenance, thesaurus construction and maintenance and interface development for Internet tools. In order to prepare students who are intending to proceed to an Honours program, a greater amount of evaluative work is introduced in the exercises and assessment undertaken.

Course: IT20  Prerequisites: ITB330
Credit Points: 12  Contact Hours: 3 per week

■ ITB410 SOFTWARE DEVELOPMENT 3
Quality software development increasingly requires design of algorithms using modules, and algorithms and data-structures for building modules. Provides the foundation knowledge for the external and internal perspective of software modules in a system context. Provides students with an understanding of modules in the context of programmable systems. The external view and internal view of modules and their realisation is a modular programming language are covered. Abstract data types, specification of interfaces and methods for achieving program correctness provide the theoretical basis. Standard data structure modules are examined.

Courses: IF25, IF33, IF38, IF54, IT20  Prerequisites: ITB410
Credit Points: 12  Contact Hours: 3 per week

■ ITB411 SOFTWARE DEVELOPMENT 2
Quality software development increasingly requires design of algorithms using modules, and algorithms and data-structures for building modules. Provides the foundation knowledge for the external and internal perspective of software modules in a system context. Provides students with an understanding of modules in the context of programmable systems. The external view and internal view of modules and their realisation in a modular programming language are covered. Abstract data types, specification of interfaces and methods for achieving program correctness provide the theoretical basis. Standard data structure modules are examined.

Courses: IF25, IF33, IF38, IF54, IT20  Prerequisites: ITB410
Credit Points: 12  Contact Hours: 3 per week

■ ITB412 TECHNOLOGY OF INFORMATION SYSTEMS
Computer hardware and system software together provide the context within which computer applications operate. Topics include the von Neuman model; instruction execution; registers and addressing modes; program and data representation; assembly language programming; i/o, interrupts and DMA; introduction to boolean algebra and computer hardware; FSMs; hard-wired versus microprogrammed control; i/o and secondary storage devices; advanced computer architectures; networking.

Courses: IF25, IF33, IF38, IF54, IT20  Prerequisites: ITB412
Credit Points: 12  Contact Hours: 3 per week

■ ITB421 DATA STRUCTURES & ALGORITHMS
Quality software development requires the design and implementation of efficient data structures with their associated algorithms. Builds upon the concepts of encapsulation and abstraction which were introduced in ITB411 by examining a number of implementations of the Table abstraction and evaluates the efficiency of each implementation.

Courses: IF25, IT20  Prerequisite: ITB411
Credit Points: 12  Contact Hours: 3 per week

■ ITB422 LABORATORY 3 (ADTS IN A UNIX ENVIRONMENT)
Extends students' knowledge of the Unix environment and introduces the language C, with an emphasis on the implementation of ADTs in that language. Students obtain extensive experience with this important practical language, including documentation and report writing. Topics covered include the Unix environment, the shell and shell programming; the language C; implementation of a variety of data structures in C; generic ADTs; programming styles, documentation and standards.

Courses: IF25, IT20  Prerequisite: ITB411
Credit Points: 12  Contact Hours: 3 per week

■ ITB423 LABORATORY 4 (SOFTWARE DEVELOPMENT)
Consolidates the software engineering principles studied in earlier units as well as augmenting the material in
ITB424. Provides students with an opportunity to work in small groups on a major project which requires them to take a problem from statement to a well documented and researched solution.

Courses: IF25, IT20 Prerequisites: ITB422, ITB424  
Credit Points: 12  Contact Hours: 3 per week

**ITB424 SOFTWARE ENGINEERING PRINCIPLES**
Examination of the problems of developing and maintaining reliable large-scale software product and the techniques needed to overcome them, as students need to appreciate the seriousness of the problem, and the value of a disciplined approach to the solution. Students are made aware of the variety of tools and methodologies to support software development.

Courses: IF25, IT20  Prerequisite: ITB421  
Credit Points: 12  Contact Hours: 3 per week

**ITB430 CONCURRENT SYSTEMS**
Examination of the process structure of concurrent systems and the symbiosis of hardware and system software required to support such systems. Topics include: concurrency, processes and process synchronisation; 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 multiprocessorUNIX systems.

Courses: IF25, IT20  Prerequisite: ITB421  
Credit Points: 12  Contact Hours: 3 per week

**ITB431 PROGRAMMING LANGUAGE PARADIGMS**
Introduction to non-procedural language paradigms; viz functional, logical and object-oriented programming techniques. Each is studied in the context of a well-known computer language with its computational environment. A major component of this unit is laboratory based. For each paradigm, substantial program development is included.

Courses: IF25, IT20  Prerequisite: ITB411  
Credit Points: 12  Contact Hours: 3 per week

**ITB440 LANGUAGES & LANGUAGE PROCESSING**
Syntax-directed programs permeate computing - examples are editors, formatters, command interpreters and compilers. In order to rapidly and reliably create such tools, it is necessary to understand the underlying theory of language definition, recognising automata and grammar classifications, as well as the practical realisation of recognisers in stylised, reusable code.

Courses: IF25, IT20  Prerequisite: ITB421  
Credit Points: 12  Contact Hours: 3 per week

**ITB441 GRAPHICS**
Examines the nature of computer graphics hardware and software and the design and implementation of computer graphics software so as to enable students to implement graphics systems in their application areas. Topics include: graphics hardware; graphics Kernel System and Phigs; fundamental algorithms for 2-D graphics; 3-D transformations; curve and surface modelling; colour models; hidden surface removal.

Courses: IF23, IF52, IT20  Prerequisite: ITB422  
Credit Points: 12  Contact Hours: 3 per week

**ITB442 FOUNDATIONS OF ARTIFICIAL INTELLIGENCE**
As artificial intelligence is coming out of the laboratory into the marketplace, it is important that students are exposed to the major ideas of artificial intelligence and in particular to the role of knowledge engineering in the design of practical knowledge-based systems. This unit provides a broad and comprehensive introduction to the field of artificial intelligence.

Courses: ED50, IF23, IT20  Prerequisite: ITB431  
Credit Points: 12  Contact Hours: 3 per week

**ITB443 SYSTEMS PROGRAMMING**
Concurrent programming is the basis for operation system implementations, much systems programming and parallel application programming. It is a central idea in advanced computer science and an important concept in multiprocessor computers and parallel computer hardware. This unit builds upon previous introduction to concurrent systems. Introduces systems programming in an operating system that supports processes and inter-process communications. Topics covered include a review of UNIX operating system commands; process and file management; UNIX administration, security; shell programming; the C/UNIX interface; remote procedure calls.

Courses: IF23, IT20  Prerequisite: ITB422  
Credit Points: 12  Contact Hours: 3 per week

**ITB444 SPECIAL STUDIES 1**
Aspects of current scientific interest; making allowances for significant developments in computing science not provided for in the remainder of the course program. Details of topics are published before the start of each semester.

Courses: IF23, IT20  
Credit Points: 12  Contact Hours: 3 per week

**ITB445 SPECIAL STUDIES 2**
Aspects of current scientific interest; making allowances for significant developments in computing science not provided for in the remainder of the course program. Details of topics are published before the start of each semester.

Courses: IF23, IT20  
Credit Points: 12  Contact Hours: 3 per week

**ITB446 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, students(s) and supervisor must agree on the scope of the work to be attempted. The role of the supervisor is to provide broad guidance on the methods and techniques to be used but progress depends largely on student initiative and problem-solving ability.

Course: IT20  
Prerequisites: Completion of at least 72 credit points from the Computing Science major  
Credit Points: 12  Contact Hours: 3 per week

**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 re-
search 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 su­

prvisor is to provide broad guidance on the methods
and techniques to be used but progress depends largely
on student initiative and problem-solving ability.

Course: IT20
Prerequisites: Completion of at least 72 credit points
from the Computing Science major
Credit Points: 12

■ ITB448 OBJECT TECHNOLOGY
Examination of methods and techniques of object-orien­
ted design and implementation based on careful as­
se ssment of the underlying software engineering issues.
The design of effective module interfaces is emphasised
to achieve the full benefit of the object-oriented ap­
proach. Practical work focuses on building reusable com­
ponents and constructing object-oriented systems by
combining existing and custom-made components. In
Semester 2, 1996, this unit may be run as a series of
intensive short courses on some Saturdays during the
semester. Check with the Unit Coordinator for details.

Course: IT20  Prerequisite: ITB422
Corequisite: ITB424
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: ITB236 and ITN221

■ ITB449 EXPERT SYSTEMS
Formal mathematical logic is the main theme of this unit.
Some fundamental theories in the formal representation
of domain knowledge are introduced. The introductory
topics include: propositional and predicate logic, reso­
lution, temporal logic, fuzzy logic and connectionist
knowledge representation themes. This unit is designed
to establish a strong theoretical foundation for students
who will work in knowledge and engineering.
Courses: IF23, IT20  Credit Points: 12  Contact Hours: 3 per week
Incompatible with: ITB243

■ ITB450 ADVANCED COMPUTER
ARCHITECTURE
A continuation of the material introduced in the units
ITB412 and ITB420. Intended to provide students with
an understanding of the organisation of contemporary
computer systems and the variety of different structures
which may be used for specific tasks. Topics covered
include the physical basis of the constraints of proces­
sor speed; high performance "von Neumann" architec­
tures; pipelined processors, vector processors and
supercomputers; machines for protected multitasking;
conceptual models for parallel computation.
Courses: IF25, IF33, IT20  Prerequisite: ITB420
Credit Points: 12  Contact Hours: 3 per week

■ ITB451 PROJECT
Enables students to undertake a two-semester project.
The work in one semester can be followed up in the sec­
ond, or students can extend their practical skills through
the second semester project. See ITB446/7 for a general
description of project units.
Course: IT20
Prerequisites: Completion of at least 60 credit points
from the Computing Science major
Credit Points: 24

■ ITB452 PROJECT WORK
This unit is for students intending to proceed to the Hon­
rours course following the Bachelor of Information Tech­
nology. The project has a significant research compo­
ten of greater size and complexity than previously un­
der taken by a student. See ITB446/7 for a general de­
scription of project units.
Course: IT20
Prerequisites: Completion of at least 72 credit points
from the Computing Science major and ITB440
Credit Points: 24

■ ITB453 PROJECT
This unit allows students to undertake a large project in
one semester. See ITB446/7 for a general description of
project units.
Course: IT20
Prerequisites: Completion of at least 60 credit points
from the Computing Science major
Credit Points: 24

■ ITB454 SOFTWARE QUALITY ASSURANCE
Software quality assurance is concerned with ensuring
that software products are of high quality, and that the
software development process supports the production
of high quality software. In this unit it is presented as an
integral part of software development, affecting all stages
of the life cycle of a software product. Practical work
focuses on the techniques and tools for defining, meas­
uring and achieving high quality software products; and
for helping to increase overall productivity.
Course: IT20  Prerequisite: ITB424
Credit Points: 12  Contact Hours: 3 per week

■ ITB455 INTEGRATED SOFTWARE
ENGINEERING ENVIRONMENT
Provides a thorough understanding of the rationale for
the use of software tools in the software engineering
process. The information stored in various software en­
gineering constructs and the software tools used to aid
their construction are examined. The interrelationship
between the information generated in the software engi­
neering process will also be examined. In the light of
this examination, the relationship between the various
software tools can be defined. Existing software tools
and methodologies will also be examined and evaluated.
Implementation issues for a fully integrated software
engineering environment are examined by inspecting the
implementation of one or more software engineering
tools.
Course: IT20  Prerequisites: ITB222 and ITB424
Credit Points: 12  Contact Hours: 3 per week

■ ITB456 INTELLIGENT GRAPHIC USER
INTERFACES
Introduction to the design and construction of GUIs.
Conventional User Interfaces (CUIs) and graphical tech­
niques are discussed as the basis for the development of
GUIs. Although a computing science perspective is em­
ployed in the approach to the topics treated in this unit,
influences from other disciplines are discussed.
Course: IT20  Prerequisite: ITB424
Credit Points: 12  Contact Hours: 3 per week

■ ITB457 FUNCTIONAL PROGRAMMING
Introduction to an alternative programming language and
method of programming. An emphasis is placed on two
important new techniques for building programs: higher
order functions and lazy evaluation. Application areas
include: AI, symbolic processing, rapid prototyping and
reusable software design.
Course: IT20  Prerequisite: ITB421
Credit Points: 12  Contact Hours: 3 per week

■ ITB458 FOUNDATIONS OF
NEUROCOMPUTING
Presents the neurocomputing paradigm and explains the
biological concepts on which it is based. Focus on how
neurocomputing complements the tools of the comput-
strengths and limitations of the most used neural net­
work architectures and training methods; reviews neu­
ral network hardware.

Course: IT20
Credit Points: 12 Contact Hours: 3 per week

■ ITB462 COGNITIVE SYSTEMS
Expert systems, natural language processing (with the ex­ception of speech recognition), reasoning, high-level vi­
sion, and machine learning. Symbolic as well as neu­
rocomputing methods, and hybrid systems, and is open to extensions.
Course: IT20 Prerequisites: ITB442, ITB461
Credit Points: 12 Contact Hours: 3 per week

■ ITB463 PATTERN RECOGNITION
Focus on pattern recognition problems using the three main approaches: statistical, syntactical and neu­rocomputing. It demonstrates two applications of pattern recognition: speech recognition and image ana­
lysis and description.
Course: IT20 Prerequisites: ITB442, ITB461
Credit Points: 12 Contact Hours: 3 per week

■ ITB520 DATA COMMUNICATIONS
An introductory treatment of the major topics and is­sues in data communications including the terminol­ogy and concepts of data and telecommunications networks, the services and architectures; the facilities and func­tions of the data and telecommunications products and services used in national and international communica­
tions networks; the main issues in the design, manage­
ment, security and control of data and telecommunications networks and services; and the social, political, and economic effects of communications technologies.
Courses: BS50, IF38, IF54, IT20
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: ITNS10

■ ITB521 LABORATORY 3 (COMPUTER NETWORKS)
Provides a practical study of the current network proto­
cols in use today. Topics include the installation, con­figuration, management, performance and security of communication products and services. Students gain a theoretical understanding of the transport protocols for internetworking via repeaters, bridges, routers, and gate­ways; and also an understanding of the application serv­ices and protocols provided by different LANs.
Course: IT20 Prerequisite: ITB411
Corequisite: ITB522
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: ITNS20

■ ITB522 ADVANCED DATA COMMUNICATIONS
Topics covered include data link protocols, transport layer services, upper layer services; data communica­tions network design and management (techniques and case studies); performance modelling of communica­tions networks; evaluation of data communications products and services (mostly Australian-based); data communica­tions software design and implementation; provision of integrated communications services (voice, data, video, etc.); LAN/WAN integration; high speed networking; internetworking and network management.
Course: IT20 Prerequisites: ITB320, ITB410
Credit Points: 12 Contact Hours: 3 per week

■ ITB530 TRANSPORT PROTOCOLS
Students study the principles, protocols, and architec­tures of internetworking. Topics include: rout­ing strategies used by bridges and gateways; security and management of routing data over global networks; network interface design; and error and flow control.
Course: IT20
Prerequisites: MAB177 and either ITB521 or ITNS20
Credit Points: 12 Contact Hours: 3 per week

■ ITB531 APPLICATION SERVICES
A study of the protocols provided by the process layers of the Open Systems Interconnection (OSI) Reference Model and the application services provided in the pro­cess layer, in particular message handling, directory serv­ices, file transfer access and management, network man­
agement, and distributed processing. Other topics include: abstract syntax notation; profiles for government, office and manufacturing; and security issues.
Course: IT20 Prerequisite: ITB521
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: ITNS21

■ ITB532 LABORATORY 4 (NETWORK MANAGEMENT)
Network management forms a vital part of the overall control and operation of computer networks and inter­con­nection of these networks on a local, national or world­wide basis. Topics include: principles of computer network management and control; practical experi­ence in the configuration of network management soft­ware systems and in the interpretation of management information provided by these sub-systems; factors needed in assessment of the control, management, per­formance, availability and security of data networks.
Courses: IT20, IT40 Prerequisite: ITB521
Corequisite: ITB531
Credit Points: 12 Contact Hours: 3 per week

■ ITB533 COMPARATIVE NETWORK SYSTEMS
Various operating systems and the techniques used to perform interprocess communication. The client/server model is examined, address schemes, ports, sockets, re­mote procedure calls are programmed in the C language on UNIX, DOS and OS/2 systems.
Course: IT20, IT40 Prerequisite: ITB542
Credit Points: 12 Contact Hours: 3 per week

■ ITB534 TELECOMMUNICATION MODELLING
The growing complexity of communication networks and services in the world today requires a detailed knowledge of how they perform and how they should be de­signed and managed in a cost effective way. This unit lays the foundations for a proper understanding of the factors involved. Covers the basic concepts and models used in teletraffic theory as they are applied to current telecommunication networks. Studies the mathematical techniques for achieving efficient, cost-effective communica­tion networks.
Course: IT20 Prerequisite: MAB178
Credit Points: 12 Contact Hours: 3 per week

■ ITB541 TRANSMISSION TECHNIQUES
An examination of high speed networks, satellite com­munications, fibre optics and wireless LANs; perform­ance and optimisation of network links and the inter­connection of telecommunications equipment based on the international standards: ISDN, B-ISDN, ATM.
Course: IT20 Prerequisite: ITB520, MAB177
Credit Points: 12 Contact Hours: 3 per week

■ ITB542 NETWORK PROGRAMMING
Students require a detailed understanding of the proc­esses involved in the design, development, programming and management of communications software. The interprocess communications on various systems and the necessary practical skills to utilise the concepts of net-
work programming enable them to set up network facilities, develop and modify network code, and ethics of network programming. Topics include: streams, sockets, remote procedure calls.

Courses: IT20, IT40
Prerequisite: ITB422 or ITN410
Corequisite: ITB522
Credit Points: 12  Contact Hours: 3 per week

■ ITB543 DATA SECURITY
Information security within an organisation deals with the managerial and technical aspects involved in protecting the information. At the completion of this unit, students are able to demonstrate knowledge of the factors which impact upon the availability, integration and confidentiality of data; make a realistic assessment of the needs for data security in an organisation; discuss the implications of security decisions on the organisation's information systems.

Courses: IT20, IT40
Prerequisite: ITB520 or ITN510
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
Prerequisites: Completion of at least 72 credit points from the Data Communications major
Credit Points: 12

■ ITB545 PROJECT
Students undertake a two-semester project. The work in one semester can be followed up in the second, or students can extend their practical skills through the second semester project.

Course: IT20
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 are published before the start of each semester.

Course: IT20
Credit Points: 12  Contact Hours: 3 per week

■ ITB547 SPECIAL STUDIES 2
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 are published before the start of each semester.

Course: IT20
Credit Points: 12  Contact Hours: 3 per week

■ ITB548 INTRODUCTION TO CRYPTOLOGY
This unit covers classical ciphers; modern symmetric ciphers; public key ciphers; practical cryptology.

Courses: IF23, IT20, IT40, MA34, SC30, SC60
Prerequisite: MAB177 or MAB493 or MAB620
Credit Points: 12  Contact Hours: 3 per week

■ ITB549 ERROR CONTROL & DATA COMPRESSION
This unit covers data compression techniques; introduction to block codes; convolutional codes; cyclic codes and Reed-Solomon codes; coding techniques and applications.

Courses: IF23, IT20, IT40, MA34, SC30, SC60
Prerequisite: MAB177 or MAB493 or MAB620
Credit Points: 12  Contact Hours: 3 per week

■ ITB555 PROJECT
This unit allows students to undertake a large project in one semester.

Course: IT20
Prerequisites: Completion of at least 60 credit points from the Data Communications major
Credit Points: 24

■ ITB560 INTRODUCTION TO CRYPTOLOGY
This unit covers number theory; finite field theory; information theory; classical ciphers; key ciphers and cryptography.

Courses: EE44, IF23
Prerequisite: MAB493
Credit Points: 7  Contact Hours: 4 per week

■ ITB561 ERROR CONTROL & DATA COMPRESSION
This unit covers data compression technique; introduction to block codes; convolutional codes; cyclic codes and Reed-Solomon codes; coding techniques and applications.

Courses: EE44, IF23
Prerequisite: MAB493
Credit Points: 7  Contact Hours: 4 per week

■ ITN100 RESEARCH METHODOLOGIES
Provides a basis for students to undertake a research project in the Honours and Masters programs. Examines the nature of information technology and the specific research approaches which are commonly applicable to it. Students will learn how to review literature relevant to their research and how to select the research method most appropriate to their project. Provides the foundation skills required in research: critical reviewing, analysis and writing.

Courses: ITN10, ITN20, ITN30
Prerequisites: IT20, IT40
Credit Points: 24  Contact Hours: 3 per week

■ ITN110 PROJECT (HONOURS)
Designed to enable a student to pursue, in some depth, a particular area of interest, either professional or personal, in information technology.

Courses: ITN10
Corequisite/prerequisite: ITN100
Credit Points: 12

■ ITN120 DISSERTATION
Designed to enable students to undertake significant research work in a particular area of information technology.

Course: ITN10
Prerequisites: ITN100 and ITN110
Credit Points: 24

■ ITN130 DISSERTATION (PART-TIME)
Designed to enable students to undertake significant research work in a particular area of information technology.

Course: ITN10
Prerequisites: ITN100 and ITN110
Credit Points: 24

■ ITN140 PROJECT
Designed to enable a student to pursue, in some depth, a particular area of interest, either professional or personal, in information technology.

Course: ITN10
Prerequisite: ITN100
Credit Points: 48
**ITN150 PROJECT (PART-TIME)**
Refer to ITN140.
Course: IT40  Credit Points: 48

**ITN160 RESEARCH PLAN**
Preparation of a comprehensive research proposal including: a complete review of the literature, review of research methodologies appropriate to the research proposal, identification of the research methodology to be adopted, specification of the research schedule, presentation and justification of the proposal via a seminar to other students and academic staff.
Course: IT60  Credit Points: 12

**ITN210 FOUNDATIONS OF INFORMATION MODELLING**
It is common to sharply distinguish between the specification and the implementation of organisational information systems. There are, however, many important ideas that are shared. This unit introduces notation from mathematics and logic that may be used to describe these ideas. An information 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 program. This unit describes how such statements may be specified in the Z notation and implemented in SQL.
Courses: IT35 / IT40, IT25  Credit Points: 12  Contact Hours: 3 per week
Incompatible with: ITB210

**ITN211 SYSTEMS ANALYSIS AND 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: IT35 / IT40, IT25  Credit Points: 12  Contact Hours: 3 per week
Incompatible with: ITB222 and ITB321

**ITN220 MAJOR ISSUES IN INFORMATION SYSTEMS**
Explores aspects of information technology of great potential significance to information systems professionals, such as the status of information system standards, the extent of integration of computer technology and data communications technology, as well as emerging social and ethical considerations with regard to information technology.
Courses: IT64, IT40  Credit Points: 12  Contact Hours: 3 per week

**ITN221 OBJECT-ORIENTED ANALYSIS AND DESIGN**
The goal is to develop basic skills in methodologies and techniques of object-oriented analysis and design. Covers all phases of the object-oriented software development life cycle.
Courses: IT30, IT40  Prerequisite: ITB222 or equivalent  Credit Points: 12  Contact Hours: 3 per week
Incompatible with: ITB236 and ITB448

**ITN230 CURRENT ADVANCES IN DATABASE TECHNOLOGY**
Current research activities and development in the area of the next generation database systems; a mixture of research papers and lecture notes on existing systems; practical and theoretical methodologies
Courses: IT30, IT40  Prerequisite: ITB232 or equivalent  Credit Points: 12  Contact Hours: 3 per week

**ITN231 KNOWLEDGE-BASED SYSTEMS**
This unit assumes a background in conventional systems concepts, programming and database, and an exposure to fundamental expert systems concepts. Explores four major themes in knowledge-based systems: (a) conceptual; problem selection and structure, inference and knowledge representation; (b) technical: declarative and functional programming; (c) pragmatic: improving the yield from existing information base; and (d) methodological: questions associated with the definition, design and control of knowledge-based systems.
Courses: IT30, IT40  Prerequisite: ITB243 or equivalent  Credit Points: 12  Contact Hours: 3 per week

**ITN241 ADVANCED TOPICS IN HUMAN-COMPUTER INTERACTION**
The most significant issues and activities of human computer interaction and software design include the perceptual basis of the presentation of visual information, the basic aspects of visual information processing and facets of representation of knowledge; the development of expert systems and how they change the nature of interaction between person and machine and review features of interactions with systems, e.g. keyboards through to advanced input modes. On completion, students should be able to apply principles from the current research in difference aspects of human computer interactions and are aware of future developments in this field.
Courses: IT30, IT40  Prerequisite: ITB224 or equivalent  Credit Points: 12  Contact Hours: 3 per week

**ITN242 DISTRIBUTED TRANSACTION MANAGEMENT SYSTEMS**
Distributed transactions management systems are the object of active research. Data sharing makes imperative the need to address the problem of making different transaction managers talk to each other in homogeneous and heterogeneous environments. Therefore the techniques which are covered in this unit have a far-reaching benefit as far as mastering the technology of the next generation database systems.
Courses: IT40  Prerequisite: ITB232 and ITN243  Credit Points: 12  Contact Hours: 3 per week

**ITN243 ACCESS METHODS FOR INFORMATION SYSTEMS**
Modern information systems are built around fast access methods and flexible structuring mechanisms. In this unit these techniques are studied using both analysis and experimentation. Trees, lists, tables, hashing and stacks are reviewed. Extensible hashing, K-d trees, quadtrees, multiattribute hashing and signature files are studied.
Courses: IT30, IT40  Prerequisite: ITB246 or equivalent  Credit Points: 12  Contact Hours: 3 per week

**ITN244 SPECIAL TOPIC 1**
These units are designed to allow for the significant development of, or emphasis in, information systems not dealt with in other course units. Selected topics and study areas are offered as required and when the necessary expertise is available. See School of Information Systems announcements for details of topics being offered.
Courses: IT30, IT40  Prerequisite: See School announcements  Credit Points: 12  Contact Hours: 3 per week

**ITN245 SPECIAL TOPIC 2**
These units are designed to allow for the significant development of, or emphasis in, information systems not dealt with in other course units. Selected topics and study areas are offered as required and when the necessary
expertise is available. See School of Information Systems announcements for details of topics being offered. Courses: IT30, IT40
Prerequisites: See School announcements
Credit Points: 12  Contact Hours: 3 per week

■ ITN246 MINOR PROJECT 1 (IS)
Students may pursue a specialised area or broaden their knowledge in an area of relevance to their employment. Topic is decided by agreement between the student and a staff member acting as supervisor.
Course: IT35 / IT40
Prerequisite: At least 60 credit points completed
Credit Points: 12  Contact Hours: 3 per week

■ ITN248 MINOR PROJECT 2 (IS)
Students may pursue a specialised area or broaden their knowledge in an area of relevance to their employment. Topic is decided by agreement between the student and a staff member acting as supervisor.
Course: IT35 / IT40
Prerequisite: At least 60 credit points completed
Credit Points: 12  Contact Hours: 3 per week

■ ITN250 DISTRIBUTED DATABASE SYSTEMS
Distributed DBMS architectures, data replication and fragmentation; query decomposition and optimisation; transaction management in distributed settings; distributed concurrency control; recovery and multi-databases.
Courses: IT30, IT40
Prerequisites: IT2B32 and ITN243
Credit Points: 12  Contact Hours: 3 per week

■ ITN340 INFORMATION AGENCIES
In-depth understanding of the history and development of information agencies and their services, to enable approaches to their advancement based upon performance analysis and analysis of user needs.
Courses: IF64, IT30, IT40
Credit Points: 12  Contact Hours: 3 per week

■ ITN341 INFORMATION POLICY AND PLANNING
The relationship between the public and private sectors in information provision, and an examination of the information industry and corporate and government policies relating to it.
Courses: IF64, IT25, IT30, IT35 / IT40
Credit Points: 12  Contact Hours: 3 per week

■ ITN342 INFORMATION SCIENCE
An understanding of theories and principles that have been adopted from a variety of disciplines and which together give some pointers towards a model for information and communication theory.
Courses: IT30, IT40
Credit Points: 12  Contact Hours: 3 per week

■ ITN343 PRINCIPLES OF INFORMATION MANAGEMENT
The information resource; information as an organisational resource; evolution of information resources management; information management with reference to management principles; management information systems; applications of environmental scanning; information technology management; information flows and information mapping; information resource evaluation; information management and business strategy; information added value; information and competitive advantage; social intelligence.
Course: IT35 / IT40, IT25
Credit Points: 12  Contact Hours: 3 per week

■ ITN344 INFORMATION PROCESSING APPLICATIONS
A series of learning modules relating to different database, spreadsheet, information retrieval, desktop publishing, network interface and other information management packages is provided. Each student undertakes three of these modules and is required to report on each module, making creative use of word processing, electronic mail, project management and presentation software.
Course: IT40
Credit Points: 12  Contact Hours: 3 per week

■ ITN345 INFORMATION SYSTEMS AUDIT
A general approach to IS auditing; the management controls framework; the application controls framework; security administration; audit software; the IS audit function; controls over asset safeguarding, data integrity, system effectiveness and efficiency.
Course: IT40
Prerequisite: Completion of Information Management module 1
Credit Points: 12  Contact Hours: 3 per week

■ ITN346 SPECIAL TOPIC - INFORMATION MANAGEMENT
Topic be developed on an individual basis.
Course: IT40
Prerequisite: Dependent on individual topic
Credit Points: 12

■ ITN347 INFORMATION MANAGEMENT PROJECT 1
Students may pursue a specialised area or broaden their knowledge in areas of relevance to their employment. Topic is decided by agreement between the student and a staff member acting as supervisor.
Course: IT40
Prerequisite: Dependent on individual topic
Credit Points: 12

■ ITN348 INFORMATION MANAGEMENT PROJECT 2
Students may pursue a specialised area or broaden their knowledge in areas of relevance to their employment. Topic is decided by agreement between the student and a staff member acting as supervisor.
Course: IT40
Prerequisite: Dependent on individual topic
Credit Points: 12

■ ITN350 INFORMATION CONTEXTS
Survey research methods; proposal writing; ethics in the provision of information resources and information services; marketing of information services; user education; referral services; an overview of programs providing information resources and services for persons with special needs; developing reliable and valid measuring instruments for program evaluation.
Course: IT40
Prerequisites: HRN104, ITP329
Credit Points: 12  Contact Hours: 3 per week

■ ITN351 INFORMATION SOURCES 2
Role of the search intermediary and reference librarian; implications of a National Information Policy; news sources; other information sources related to R&D, long-range planning, marketing; advanced online, network and CDROM information retrieval; expert systems as tools in reference work.
Course: IT40
Prerequisite: ITP328
Credit Points: 12  Contact Hours: 3 per week

■ ITN352 INFORMATION ORGANISATION 2
Rules for description of material in library collections; application of computer-based cataloguing rules to all types of materials; comparison of description of materials in OPACs, MARC format, shared cataloguing and cataloguing networks; comparison of general classification systems and the use of main systems such as DDC and LC in libraries; alternative classification systems
such as BS; special classification systems for specific subject areas; development and use of structured interfaces to Internet resources.

Course: IT40  Prerequisite: ITP327  Credit Points: 12  Contact Hours: 3 per week

**ITN353 RECORDS MANAGEMENT**
History and role of records management; file storage and equipment; records survey; classification and indexing; office functions and controls and computer applications; disaster recovery; disposition; ergonomics; micrographics; automation; forms design; office machines and equipment; RMAA.

Course: IT40  Prerequisite: ITN343, ITP330  Credit Points: 12  Contact Hours: 3 per week

**ITN354 ORGANISING MULTICULTURAL INFORMATION RESOURCES & SERVICES**
Initial and ongoing information gathering and decision making required; market research for a multicultural service; coping with the transient nature of many ethnic groups in a given location; the particular problems of ageing ethnic communities; second and later generation Australian-born ethnic community members and their needs; the complexities of total illiteracy and monolanguage literacy; handling intra and inter ethnic group sensitivities and hostilities; non-English language resource providers; selection methodologies appropriate where in-library language expertise is nonexistent; providing effective resources catalogues; physical organisation of multiple language resource collections; linkages to the English language resource collection; space provision and signage for a multicultural service; marketing and public relations: targets, strategies and tactics.

Course: IT40  Prerequisite: ITP329, HRN104, ITP328  Credit Points: 12  Contact Hours: 3 per week

**ITN355 INFORMATION RESOURCES FOR BUSINESS & INDUSTRY**
Commercial information services: historical perspective on the types of services offered in academic, state, public and special libraries; consideration of the ongoing debate about the opposing philosophies of freedom of access to information versus a feebased information service; the information requirements of the business and industrial community and the implications for library services; investigation of what types of services are required and can be targeted to help further develop existing library resources (can our commercial information service run at a profit?); issues involved in selling information, including legal liabilities and ethical concerns; how to establish a fee-based service, including staff selection; staff skills, client relationships, confidentiality, management and location of the service; implications for the future; costs and the relationship of costs to the rapid expansion of the Internet.

Course: IT40  Prerequisite: ITP328, HRN104, ITP329  Credit Points: 12  Contact Hours: 3 per week

**ITN356 RESOURCES & SERVICES FOR YOUNG PEOPLE**
Goals and objectives of library services for young people; community outreach and activity programs for children; activity programs and services for young people; psychology of the child: reading, development and tasks; bibliotherapy; booktalks; storytelling; selection of fiction and nonfiction for young people; library services to schools, curriculum support materials; user surveys; history of children's literature; censorship; special collections; book awards; picture books and books for the young child; children's book illustration/illustrators; Australian children's literature; the Aborigine in Australian children's literature; genres in children's literature: science fiction, fantasy, etc.; nonsexist children's literature.

Course: IT40  Prerequisite: ITP329  Credit Points: 12  Contact Hours: 3 per week

**ITN357 SPECIAL TOPIC - INFORMATION STUDIES**
Topic developed on an individual basis.

Course: IT40  Prerequisite: Dependent on individual topic  Credit Points: 12

**ITN358 MANAGEMENT OF INFORMATION PROGRAMS**
The specific role and functions of the manager of an information agency; social, ethical and legal responsibilities of information agencies; the managerial challenges associated with modern dependence on computer and other technologies in the day-to-day operations of information agencies; the need to prioritise an information agency's resource and service commitments; report writing; aids to decision-making and decision implementation; skills and techniques for converging 'good ideas' into credible and persuasive plans; budgeting, cash flow and marketing in both profit and nonprofit information agencies.

Course: IT40  Prerequisite: HRN104  Credit Points: 12  Contact Hours: 3 per week

**ITN359 PRESERVATION MANAGEMENT OF RESOURCE MATERIALS**
The principles, strategies and practices of preservation of materials; evaluation of the various preservation techniques appropriate to the major storage media (e.g. paper, film, electronic, etc.); the importance of preservation planning and security as a part of all routines and the implications of consequent losses to organisations and society should information agencies fail to formulate a preservation plan; risk analysis, prioritising, costing and budgeting.

Course: IT40  Prerequisite: HRN104, ITN343  Credit Points: 12  Contact Hours: 3 per week

**ITN360 EVALUATION OF INFORMATION PROGRAMS**
Project goal setting; project design and planning; evaluation/measurement tools, including locating appropriate tools and establishing their reliability and validity; implementing the project plan; managing the project within time and budget constraints; maintaining good relations with information service personnel; data analysis; report and recommendations.

Course: IT40  Prerequisite: ITP329, ITP328, ITP330  Credit Points: 12  Contact Hours: 3 per week

**ITN410 SOFTWARE PRINCIPLES**
Use of efficient data structures; languages illustrating the variety of features found in computer programming languages; structured program design techniques; advanced algorithms and methods of providing program correctness.

Course: IT40  Credit Points: 12  Contact Hours: 3 per week  Incompatible with: ITB422

**ITN411 SYSTEMS ARCHITECTURE & OPERATING SYSTEMS**
Computer organisation; the nature and roles of system software and the nature of microcomputers and computer graphics; computer systems architecture; micro-operations; instruction formats; microprocessor types; machine language; system software including operating systems, assemblers, compilers, loaders.
• ITN420 COMPARATIVE PROGRAMMING LANGUAGES

Language is the fundamental conceptual tool and means of expression within information technology so its principles need to be understood and the similarities and differences between different languages appreciated. This unit provides an understanding of the languages currently used and, importantly, in what directions they can be expected to develop. Language is also the major tool used for software engineering so it can be seen as a large part of the solution to current and future software engineering problems.

Courses: IT30, IT40
Prerequisites: Knowledge of ADTs
Credit Points: 12  Contact Hours: 3 per week

Incompatible with: ITB412

• ITN421 SOFTWARE SPECIFICATION

The use of formal methods is viewed as an integral part of the software engineering process. The unit includes formal specifications and the laws of reflection to derive Modula-2 code. Later temporal logic to deal with real-time issues is introduced.

Courses: IT30, IT40
Credit Points: 12  Contact Hours: 3 per week

• ITN430 ADVANCED OPERATING SYSTEMS

This unit has two themes: the nature, design and implementation of real-time systems on the one hand, and the nature of object-oriented programming environments and operating systems on the other. Students are expected to be familiar with systems programming and object-oriented concepts.

Courses: IT30, IT40
Prerequisites: ITN410 and ITN411 (IT40 only)
Credit Points: 12  Contact Hours: 3 per week

• ITN431 DISTRIBUTED SYSTEMS

The rationale for distributed computer systems, their domain of application and the principles of distributed control underlying their construction. A number of representative systems are examined.

Courses: IT30, IT40
Prerequisite: ITB430
Credit Points: 12  Contact Hours: 3 per week

• ITN440 ADVANCED GRAPHICS

Advanced level extension of the material in the undergraduate curriculum; the use of facilities provided by existing graphics systems.

Courses: IT30, IT40
Prerequisite: ITB441
Credit Points: 12  Contact Hours: 3 per week

• ITN441 ARTIFICIAL INTELLIGENCE

Artificial intelligence in the computing industry; aspects of artificial intelligence which have given rise to commercial products; background research efforts which promise to have a major impact on the use of computers in the near future.

Courses: IT30, IT40
Prerequisite: ITB442
Credit Points: 12  Contact Hours: 3 per week

• ITN442 COMPILER CONSTRUCTION

The organisation and structure of language translator and compilers. Some emphasis is placed on those parts of these software tools which are amenable to formal analysis. The material extends undergraduate studies in algorithm design and in the semantics of formal languages. Special attention is paid to techniques which are applicable in the implementation of special purpose languages such as database query languages and production systems.

Courses: IT30, IT40
Prerequisite: ITB440
Credit Points: 12  Contact Hours: 3 per week

• ITN443 NEUROCOMPUTING

An introduction to the principles upon which current artificial neural network computing is based, giving examples of current applications, and exploring the potential future development of the technology.

Courses: IT30, IT40
Credit Points: 12  Contact Hours: 3 per week

• ITN444 PARALLEL PROCESSING

The modelling of parallel systems and the design methodologies used in their construction; applicable software systems and methodologies; the formal analysis of concurrent systems is based on the theory of communicating sequential processes.

Courses: IT30, IT40
Credit Points: 12  Contact Hours: 3 per week

• ITN445 PATTERN RECOGNITION

Introduction of new methods for producing more powerful software for tasks traditionally considered as requiring intelligence. Hands-on experience is provided by computer simulations exercises and assignments using MATLAB.

Courses: IT30, IT40
Prerequisites: ITB442 and ITB461 or equivalent
Credit Points: 12  Contact Hours: 3 per week

• ITN446 MINOR PROJECT 1 (CS)

Students may pursue a specialised area or broaden their knowledge in an areas of relevance to their employment. Topic is decided by agreement between the student and a staff member acting as supervisor.

Course: IT40
Prerequisite: At least 72 credit points completed
Credit Points: 12  Contact Hours: 3 per week

• ITN447 SPECIAL STUDIES

Aspects of current scientific research interest; it makes allowances for significant developments in computing science not provided for in the remainder of the course program. See noticeboard for further information.

Courses: IT30, IT40
Prerequisites: Topic dependent
Credit Points: 12  Contact Hours: 3 per week

• ITN449 MINOR PROJECT 2 (CS)

Students may pursue a specialised area or broaden their knowledge in an area of relevance to their employment. Topic is decided by agreement between the student and a staff member acting as supervisor.

Course: IT35 / IT40  Prerequisite: At least 60 credit points completed
Credit Points: 12  Contact Hours: 3 per week

• ITN510 DATA NETWORKS

Basic data communications and topics of fundamental importance concerning the technology and architecture of data networks at a postgraduate level. It emphasises communications software and hardware, telecommunication services, local area networks, wide area networks, interconnectivity and network management.

Courses: IT40
Credit Points: 12  Contact Hours: 3 per week

Incompatible with: ITB510

• ITN520 INTERNETWORKING

Students entering the field of computer networks are expected to possess practical skills in various aspects of the installation and management of communications systems. particularly local area networks.

Course: IT40
Prerequisite: ITN510
Credit Points: 12  Contact Hours: 3 per week

Incompatible with: ITB521

• ITN521 NETWORK APPLICATIONS

Students will study the distributed application services...
Students will also gain insight into future industry trends in the area of open systems.

Course: IT/40  Prerequisite: ITN510  Credit Points: 12  Contact Hours: 3 per week

Incompatible with: ITB531

■ ITN526 MINOR PROJECT 1 (DC)

Students may pursue a specialised area or broaden their knowledge in an area of relevance to their employment. Topic is decided by agreement between the student and a staff member acting as supervisor.

Course: IT35 / IT40

Prerequisite: At least 60 credit points completed

Credit Points: 12  Contact Hours: 3 per week

■ ITN528 MINOR PROJECT 2 (DC)

Students may pursue a specialised area or broaden their knowledge in an area of relevance to their employment. Topic is decided by agreement between the student and a staff member acting as supervisor.

Course: IT35 / IT40

Prerequisite: At least 60 credit points completed

Credit Points: 12  Contact Hours: 3 per week

■ ITN530 CORPORATE TELECOMMUNICATIONS

The issues of design, control, security and management of enterprise-wide networks. The corporate network encompasses integrating a company's telecommunications systems, including local area networks, metropolitan area networks, wide area networks (national and international), voice networks, and other special services.

Courses: IT30, IT40  Prerequisite: ITN521

Credit Points: 12  Contact Hours: 3 per week

■ ITN531 NETWORK SECURITY

Ensures that students recognise the requirement to design, implement and manage facilities in a manner consistent with an overall organisational security policy. Development of a security plan; risk analysis; access control; cryptography; network security and encryption; key management; database security; secure operating systems and access control. On completion, students should be able to incorporate security and management controls into information systems in accordance with a formal risk analysis and assessment for the system.

Courses: IT30, IT40

Prerequisites: ITB543 or ITB548 and ITN520 or equivalent

Credit Points: 12  Contact Hours: 3 per week

■ ITN540 ADVANCED NETWORK TECHNOLOGIES

Details the latest network technologies for moving information across the room or across the world. Investigates the network protocols used in the transport of information using this new hardware.

Courses: IT30, IT40  Prerequisite: ITN520

Credit Points: 12  Contact Hours: 3 per week

■ ITN553 OS SECURITY AND MANAGEMENT

Computer professionals need to be able to identify, assess, and advise on the security features (in particular the enforcement techniques used) in computer systems.

Courses: IT30, IT40  Corequisite: ITN531

Credit Points: 12

■ ITN554 SPECIAL TOPIC

An advanced topic in data networks is studied in detail. The topic concerned will depend on the interests of the Faculty member or visitor responsible for the unit in any semester in which the unit is offered.

Courses: IT30, IT40

Prerequisites: Approval of Head of School of Data Communications

Credit Points: 12  Contact Hours: 3 per week

■ ITN555 SPECIAL TOPIC

Refer to ITN554.

Course: IT30

Credit Points: 12

■ ITN556 ADVANCED TOPICS IN CRYPTOLOGY

Design and cryptanalysis of ciphers; indepth study of methods for forming secure ciphers and attacking various ciphers; secret sharing schemes; crypto-protocols, including zero knowledge systems; current topics in crytography.

Courses: IT30, IT40  Prerequisite: ITB548

Credit Points: 12  Contact Hours: 3 per week

■ ITP312 ORGANISATION OF KNOWLEDGE

The organisation of knowledge in libraries and information agencies. Emphasis is placed on the description, classification and subject analysis of information in print media using AACR2 (1988 revision), DDC and LCSH. Other related topics are mentioned briefly, e.g. LCC, MARC, ABN and other efforts.

Courses: IS25, IT20

Credit Points: 12  Contact Hours: 3 per week

■ ITP313 INFORMATION SOURCES & SERVICES

Interpersonal communication, the reference interview and search strategies, and general and Australian reference tools; national information policy, reference theory and service, communication and the reference interview, search strategies, lead-in tools, general reference tools, government documents, resources in the humanities, social sciences, science and technology, user pays, document delivery, microcomputers.

Courses: IS23, IT20

Credit Points: 12  Contact Hours: 3 per week

■ ITP316 FIELD EXPERIENCE

Designed to give students an opportunity to participate in the day-to-day work of a library at a beginning professional level. Students are required to undertake work at a level appropriate to beginning professionals in two approved libraries for a total period of 30 working days, gaining substantial experience in at least two different areas of library work under the supervision of qualified librarians.

Courses: IS25, IT20

Prerequisites: Completion of 50 per cent of other units

Credit Points: 4

■ ITP317 LIBRARY SERVICES TO YOUNG PEOPLE

The most important aspects of library services to children and young adults; the evolution of literature with emphasis on the effects of social, political and religious movements on its purposes, form and content; the development of library services in both schools and public libraries; the importance of literary awards; the criteria for selection of resources; the planning and carrying out of programs to promote reading, including effective storytelling.

Course: IS25  Prerequisites: ITP311, ITP313

Credit Points: 12  Contact Hours: 3 per week

■ ITP318 ADVANCED ORGANISATION OF KNOWLEDGE

The organisation of knowledge in libraries and information agencies. Topics include description of selected non-print media, enumerative and faceted classifications, special classifications, problems with alphabetical index and automated indexing.
Course: IS25  
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  
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 already dealt with in other units. Topics and study areas are offered as required and when the necessary expertise is available.
Course: IS25  
Prerequisites: See School announcements  
Credit Points: 12  
Contact Hours: 3 per week

ITP321 SPECIAL TOPIC – LIBRARY SCIENCE
Allows for the significant development of or emphasis in library science not already dealt with. Selected topics and study areas are offered as required and when the necessary expertise is available.
Course: IS25  
Prerequisites: See School announcements  
Credit Points: 8  
Contact Hours: 2 per week

ITP322 INDIVIDUAL STUDY
Students can pursue in depth a personal interest in library science not covered by the Graduate Diploma course core or other elective units. On completion of this unit, students should be able to demonstrate a detailed knowledge of the area chosen.
Course: IS25  
Prerequisites: To be determined by the nature of the study  
Credit Points: 8  
Contact Hours: 2 per week

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, e.g. 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

ITP326 INDIVIDUAL STUDY
Students can pursue in depth a personal interest in library science not covered by the Graduate Diploma course core or other elective units. On completion of this unit, students should be able to demonstrate a detailed knowledge of the area chosen.
Course: IS25  
Prerequisites: To be determined by the nature of the study  
Credit Points: 12  
Contact Hours: 3 per week

ITP327 INFORMATION ORGANISATION I
Description of recorded knowledge in its various forms, rules and standards for description and organisation in different environments; database creation, control and report formatting; comparison of bibliographic and nonbibliographic report formats; citation and citation software; content analysis and vocabulary control; indexing and indexing display formats; classification and introduction to general classification systems, and comparison with subject-specific systems.
Course: IT25  
Credit Points: 12  
Contact Hours: 3 per week

ITP328 INFORMATION SOURCES I
Different media and the publishing process; primary, secondary and tertiary published information resources; critical success factors and environmental scanning; what environmental scanning is and how it works; characteristics of information in the humanities, social sciences, sciences and technology; 'lead in' tools, general reference tools, abstracting and indexing services both hard copy and machine readable; conducting a client interview; selecting an online or hardcopy database, selecting a database provider, developing a search strategy, designing a search query, the proliferation of Internet resources; identification and location of specialist publications.
Course: IT25  
Credit Points: 12  
Contact Hours: 3 per week

ITP329 INFORMATION RESOURCES PROVISION
The concept of information and the information life cycle; intellectual property and intellectual freedom; assessing community information needs and wants; evaluation and maintenance of resource collections; cooperative collection development and resource sharing; the multifaceted role of conspectus; writing and testing a collection policy document; print, nonprint and multimedia publishers/producers; legal and ethical issues in information resource provision; locating alternative information resource providers; selection aids and tools for acquiring information resource forms; techniques for accessing community information needs.
Course: IT25  
Credit Points: 12  
Contact Hours: 3 per week

ITP330 PROFESSIONAL PRACTICE
Historical perspective of the role of libraries and information agencies; alternative approaches and technologies for information provision and dissemination; processes and techniques of communication; social and legal framework affecting information provision; the role of librarians and other information professionals; field experience involving day to day employment in a library or other information agency.
Course: IT25  
Prerequisite: Successful completion of the four units from the first module of the course  
Credit Points: 12  
Contact Hours: 3 per week

JSB011 SOCIAL ISSUES FOR JUSTICE PROFESSIONALS I
This unit introduces students to the concepts of race,
ethnicity, class and gender in order to provide a framework for understanding the way in which inequality is produced and reproduced. This unit will argue that such knowledge informs our interpretation and understanding of justice and injustice in Australian society.

Course: JSB012 COMMUNICATION FOR JUSTICE
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: JSB101

■ JSB012 COMMUNICATION FOR JUSTICE PROFESSIONALS
Personnel in human service agencies such as law enforcement and justice administration are highly dependent upon communication skills. In particular, good written communication is essential. It is also essential for academic success. This unit aims to lay the foundation for effective writing skills which will form the basis for academic success and professional competence. Students will be assisted to think, plan and write effectively and will be encouraged to assess and improve the technical aspects of their writing and to explore and practise a variety of writing styles.

Courses: JS31, JS33, LW41
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: JSB104

■ JSB013 LAW AND GOVERNMENT 1
This unit aims to introduce students to the institutions of government, bureaucracy and the law. With legal processes under increasing scrutiny and social change occurring at a far greater pace than in the past it is no longer sufficient or possible to 'know what the law is'. Instead, students will acquire an understanding of the relationship between law and society as well as legal problem-solving skills to equip them to adapt as change occurs.

Courses: JS31, JS33
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: JSB103

■ JSB014 INTRODUCTION TO JUSTICE STUDIES
Justice Studies adopts a multidisciplinary approach to knowledge. Several disciplines such as sociology, psychology, criminology, philosophy and law form the basis of the Justice Studies program. This subject will focus on these different knowledges which various professions use to inform their research and practice.

Courses: JS31, JS33, LW41
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: JSB108

■ JSB015 SOCIAL ISSUES FOR JUSTICE PROFESSIONALS 2
This unit uses the knowledge and understanding of inequality and injustice gained in JSB011 to introduce students to the concepts of rights, equality, justice and citizenship. These concepts form the basis for a more detailed explanation of social justice and its relationship to criminal justice.

Course: JS31, JS33, LW41
Prerequisites: JSB011, JSB012
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: JSB202

■ JSB016 INTERPERSONAL SKILLS FOR JUSTICE PROFESSIONALS
Skills development and their application in relation to the self and in interaction with others. Both functional and dysfunctional styles are examined.

Courses: JS31, JS33, LW41
Prerequisite: JSB012
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: JSB105

■ JSB017 LAW AND GOVERNMENT 2
This unit complements Law and Government 1. It critically examines the role of the courts, the resolution of disputes and the criminal justice system.

Courses: JS31, JS33
Prerequisites: JSB012, JSB013
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: JSB216

■ JSB018 CRIMINOLOGY 1
This unit traces the development of theories of criminal behaviour and criminal law from the Enlightenment to the present day. Examination will also be made of the impact criminological theory has upon institutional practices within the criminal justice system.

Courses: JS31, JS33, LW41
Prerequisite: JSB012
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: JSB107

■ JSB021 CRIMINOLOGY 2
Examination of the theories of punishment. Having defined punishment and the nature and limits of the criminal law, students assess the traditional justifications for punishment: retribution and just deserts, deterrence, rehabilitation and elimination and incapacitation. Justifications for severity of punishment, the control of judicial discretion and the political significance of punishment are examined. Options for reform are also canvassed.

Courses: JS31, JS33, LW41
Prerequisite: JSB018
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: JSB304

■ JSB022 PRINCIPLES OF CRIMINAL LAW 1
This subject exposes students to fundamental principles of criminal law as well as the social and political forces that shape those laws. It focuses on crimes of violence including sexual assault, child abuse, elder abuse and domestic violence. It also looks at criminal defences and property offences.

Courses: JS31, JS33, LW41
Prerequisite: JSB017
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: JSB201

■ JSB023 HUMAN DYNAMICS AND THE CRIMINAL JUSTICE PROCESS 1
The human factors involving personality, inheritance and moral development, and crime are explored in the context of policing, the courts and the correctional system. Eyewitness testimony, offender rehabilitation and societal reactions are examined.

Courses: JS31, JS33, LW41
Prerequisite: JSB016
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: JSB203

■ JSB024 PRINCIPLES OF CRIMINAL LAW 2
This subject exposes students to fundamental principles of criminal law as well as the social and political forces that shape those laws in the areas of crimes of morality; drug, traffic and public order offences; war crimes and hate crimes; state corruption and whistleblowers; white collar crime, proceeds of crime and victims of crime. It also looks at the due process aspects of criminal procedure.

Courses: JS31, JS33, LW41
Prerequisite: JSB022
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: JSB204

■ JSB031 INVESTIGATION AND EVIDENCE
Professionals involved in the fields of law enforcement and justice administration are frequently required to exercise investigative skills. This unit provides students with a clear understanding of the law relating to the gathering of evidence, interrogation and admissibility of evidence in court. Study includes an examination of the general principles of judicial evidence, witnesses, rules of evidence, admissions and confessions. Issues of evidence of current importance (e.g. issues arising out of inquiries such as 'Operation Trident', new forms of evi-
dence such as DNA, phone taps and the erosion of the right to silence will also be explored.

Courses: JS31, JS33, LW41 Prerequisites: JSB024
Credit Points: 12 Contact Hours: 3 per week Incompatible with: JSB301

■ JSB032 ALTERNATIVE JUSTICE PROCESSES

The state approach to conflict and dispute resolution is explored, highlighting the differences between the institutionalised legal system and alternatives promised by other schemes. This subject takes both a theoretical and a practical focus, with skills training comprising an important part of tutorials. A critical examination of the policies, philosophy and the practice of dispute resolution is undertaken in order to test apprise justice professionals of their personal and professional options when faced by conflict.

Courses: JS31, JS33, LW41 Prerequisites: JSB017
Credit Points: 12 Contact Hours: 3 per week

■ JSB033 HUMAN DYNAMICS AND THE CRIMINAL JUSTICE PROCESS

Acquaints students with the nature of the unique stresses and their effects upon workers within the justice professions. Theories of counselling are examined and practical counselling skills developed.

Courses: JS31, JS33, LW41 Prerequisite: JSB023
Credit Points: 12 Contact Hours: 3 per week Incompatible with: JSB303

■ JSB034 JUSTICE AND ACCOUNTABILITY

Perspectives on accountability; personal, social and organisational; issues of justice in accountable practice; legal issues and professional issues, and a work component on accountable practices.

Courses: JS31, JS33, LW41
Credit Points: 12 Contact Hours: 3 per week

■ JSB051 INTRODUCTION TO CRIMINAL LAW AND EVIDENCE

The principles, rules and concepts of criminal law and evidence; the understanding and applications of such principles, concepts and rules as they relate to the operation of the criminal justice system.

Course: JS31, JS33 Prerequisite: JSB013, JSB014
Credit Points: 12 Contact Hours: 3 per week Incompatible with: JSB109

■ JSB052 POLICE PROCEDURE AND PRACTICE

The role and function of policing; enforcement practices; non-arrest, arrest situations; supporting documentation; evidentiary sources and gathering methodology; crime trends and their impact on policing practices.

Courses: JS31, JS33, LW41 Prerequisite: JSB051
Credit Points: 12 Contact Hours: 3 per week Incompatible with: JSB210

■ JSB053 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 gain an understanding of the historical development, social perceptions and consequences and the perceived extent of organised crime. Students also consider the strategies employed to combat organised crime including the extent of investigation and/or Commissions of Inquiry documented to date.

Courses: JS31, JS33, LW41
Credit Points: 12 Contact Hours: 3 per week Incompatible with: JSB310

■ JSB054 ISSUES IN POLICING

This unit endeavours to expose students to the multifarious nature of policing and the impact that societal developments have on policing and vice versa.

Courses: JS31, JS33, LW41
Credit Points: 12 Contact Hours: 3 per week

■ JSB055 INTERPROFESSIONAL CO-OPERATION

The role and function of policing in conjunction with other agencies, particularly emergency service agencies; the cooperation necessary and the awareness of reciprocal roles and functions in given situations.

Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week Incompatible with: JSB212

■ JSB056 INTRODUCTION TO DISASTER MANAGEMENT

This unit provides students with an overview of disasters and the focus on the phases of disaster management: prevention, preparedness, management and recovery.

Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

■ JSB057 HAZARD ANALYSIS AND RISK ASSESSMENT FOR DISASTER MANAGEMENT

This unit requires students to analyse and rate potential disaster situations as part of the overall planning process. The students will conduct a hazard analysis concerning potential disasters and provide for this arrangement in their disaster plan.

Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

■ JSB058 COUNTER DISASTER PLANNING

The students will be required to develop/revise a counter disaster plan after being exposed to the cycle of disaster planning.

Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

■ JSB059 DISASTER RESPONSE MANAGEMENT

During this unit students will develop an awareness of the problems that exist even after the disaster situation has passed and the trauma suffered by the community as a collection and by the individual.

Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week

■ JSB061 PROCESS THEORY AND APPLICATION

Detailed study and application of the intelligence process (cycle); study of intelligence support to operational staff and organisations; strategic, operational and tactical concepts of intelligence and security; threat and risk assessment relative to protective security - personnel, materials and infrastructure; industrial and commercial espionage and sabotage.

Courses: JS31, JS33, LW41
Credit Points: 12 Contact Hours: 3 per week Incompatible with: JSB111

■ JSB062 PROTECTIVE SECURITY - THEORY AND APPLICATION

Deals with protective security in its broadest sense; it examines the threat to security in the public, private and national arenas. The nature of espionage, subversion, sabotage, theft and hostage situations are also examined. The basic areas of protective security are personnel, material, physical and information security. Students also
conducted risk/threat assessments and cover other areas such as inspections, audits, surveys and reviews; policy, procedures and controls; management aspects; legislation; case studies and models of security.

Courses: JS31, JS33, LW41 Prerequisite: JSB061
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: JSB213

- **JSB063 INTELLIGENCE RESEARCH – ISSUES, PROCEDURES AND PRACTICE**
  
  Addresses major intelligence issues, intelligence and related security procedures and professional practices. The concept of intelligence in this unit is 'that which confers an advantage' in any professional context. Students apply process methodology: in examining specific societal issues; in recognising different intelligence 'research' procedures for specific issues; and in practical analysis of selected issues such as terrorism, illegal drugs, fauna smuggling, organised crime (operating in, or having the potential to operate in, Australia), corporate crime, community crime, environmental matters, illegal immigration, national defence and foreign intelligence activities.

Courses: JS31, JS33, LW41 Prerequisite: JSB061
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: JSB313

- **JSB064 PROTECTIVE SECURITY – ISSUES AND 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; unacapa, scan and other analysis tools are studied.

Courses: JS31, JS33, LW41 Prerequisite: JSB061, JSB062
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: JSB311

- **JSB065 INTELLIGENCE AND NATIONAL SECURITY**
  
  Examination of the concept of national security and development of a basic understanding of the control, functions, roles and responsibilities at the national level in the Australian context. Comparative studies of overseas intelligence and security systems ensure students develop a broader understanding of national security through consideration 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 50 years. Issues which constitute actual and potential threats to national security in Australia are explored.

Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: JSB221

- **JSB066 MANAGEMENT OF PROTECTIVE SECURITY**
  
  The security function and its performance are considered under a series of topics: formulating a security policy and monitoring its performance; responsibility for security; employment of security staff; training security staff; security of records and reports; conducting surveys and report writing; security of buildings and sites; conference security; security and control of road transport; fire and accident prevention; aids to security; professional bodies; and law and practice.

Courses: JS31, JS33
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: JSB222

- **JSB067 INTELLIGENCE, ORGANISATIONS, PERSONNEL AND OPERATIONS**
  
  Examination of the various types of intelligence and protective security organisations from the perspective of the 'essentials of an intelligence system'. Using defined characteristics of the intelligence professional and the principles of intelligence and security, students evaluate the selection procedures, selection criteria and management for research analysts, administrative staff, counterintelligence and protective security personnel. Technical specialists and generalists for a range of organisational types. Students design systems, establish and 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
Incompatible with: JSB223

- **JSB068 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
Incompatible with: JSB230

- **JSB071 CORRECTIONS AND THE COMMUNITY 1**
  
  The forerunners of the custodial and community correctional systems and their influence are explored in respect to current correctional processes and philosophies. Contemporary conflicting models and their implications are examined.

Courses: JS31, JS33, LW31 Prerequisite: JSB014
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: JSB217

- **JSB072 CORRECTIONS AND THE COMMUNITY 2**
  
  Contemporary formal and informal custodial and community correctional processes and procedures are presented. The interaction of correctional policies and community programs is discussed.

Courses: JS31, JS33, LW41
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: JSB218

- **JSB073 CORRECTIONS AND THE COMMUNITY 3**
  
  The correctional setting and its impact on staff and inmates is examined. Special groups – their unique needs and treatment strategies – are discussed in the context of policies and procedures.

Courses: JS31, JS33, LW41
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: JSB317

- **JSB074 CORRECTIONS AND THE COMMUNITY 4**
  
  Evaluation of alternative models of corrections is un-
undertaken, and controversial issues explored. Fiscal constraints and administrative dilemmas according to international trends are examined and determination made as to the present and future effectiveness of the correctional system.

Courses: JS31, JS33, LW41
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: JSB318

■ JSB075 PENOLOGY 1
A critical expose execute of penal practices, principles and controversies operating in both closed and open penal settings. Examination of the successes and failures of past and present penal systems is invited.

Courses: JS31, JS33
Credit Points: 12  Contact Hours: 3 per week

■ JSB076 PENOLOGY 2
The impact of socialisation factors within penological systems is explored and applied to special groups within a variety of settings.

Courses: JS31, JS33  Prerequisite: JSB075
Credit Points: 12  Contact Hours: 3 per week

■ JSB081 LAW AND PUBLIC POLICY
An introduction to the theory and practice of public policy aimed at the requirements of justice professionals. This subject analyses policy formulation, writing and implementation from the perspectives of the administrators implementing the process and of the community seeking to respond to government initiatives. This subject aims to provide students with tools for dealing in the public sphere and understanding the exercise of state power.

Courses: JS31, JS33, LW41  Prerequisite: JSB014
Credit Points: 12  Contact Hours: 3 per week

■ JSB082 LEGAL RIGHTS AND RESPONSIBILITIES
Society demands certain responsibilities from persons classed as adults. 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.

Course: ED50, JS31, JS33, LW41
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: JS005

■ JSB083 ADMINISTRATIVE LAW & JUSTICE
Mechanisms of state accountability, their practice and philosophy are examined in order to give justice professionals a working knowledge of their operation. Open government, fair decision-making and administrative justice are key concerns within this field. Merits review, judicial review, freedom of information and the ombudsman office are also critiqued and their procedures considered in light of a greater framework of social justice.

Courses: JS31, JS33, LW41
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: JSB316

■ JSB084 JUSTICE AND HUMAN RIGHTS
The political and philosophical constructions known as rights are becoming increasingly important in the Australian justice professions. Both international and domestic documents are analysed in order to develop a cohesive framework of rights in the justice domain. Policy considerations are explored and much of the other material covered in the minor is tied together in the context of human rights policy research.

Courses: ED50, JS31, JS33, LW41
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: JSB314

■ JSB085 LAW AND LEGAL INSTITUTIONS
Provides students with a sound knowledge of relevant legal institutions and procedures, as well as assisting students to develop an ability to analyse and critique both the strengths and weaknesses inherent in our legal system. In so doing, the unit traces the development of law in Australia from its early beginnings to the present, as an outcome of meeting the needs of a changing society.

Course: ED50, JS31, JS33
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: JS001

■ JSB086 LAW OF CIVIL OBLIGATIONS 1
The development of the law of contract; law governing the formation of contracts; application of the principles of contract law; matters affecting the validity of contracts; remedies for breach of contract; role of equity in modifying common law rules of contract; rational and objective methods in analysing socio-legal issues in contracts, and an analysis of overlaps between tort and contract.

Course: ED50, JS31, JS33
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: JS002

■ JSB087 LAW OF CIVIL OBLIGATIONS 2
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; Tortious remedies available within the social context and an analysis of overlaps between Tort and contract.

Course: ED50, JS31, JS33
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: JS003

■ JSB088 CRIMINAL LAW AND 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, and emergence of a victim-centred criminal justice system.

Course: ED50, JS31, JS33  Prerequisite: JSB085
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: JS004

■ JSB091 RESEARCH DESIGN AND METHODOLOGY
This unit introduces a range of theoretical and applied research methodologies and designs used in the social sciences. It considers both quantitative and qualitative approaches to the research process and to the analysis of data, and it encourages a critical approach to the framing of research questions and to testing research hypotheses. Students will be given practice in the use of a number of data analysis tools.

Courses: JS31, JS33
Credit Points: 12  Contact Hours: 3 per week

■ JSB092 APPLIED JUSTICE RESEARCH
This project study unit allows students undertaking the Law Enforcement professional minor to study a topic of personal academic interest which is not otherwise available as a formal subject in the area of policing. This unit differs from other units within the professional minor in that there are a minimum of scheduled lectures and the initiative to choose the topic and to organise the project must come from the students. Students choose a research topic related to contemporary law enforcement issues or activities.

Course: JS31, JS33, LW41
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: JSB312
■ JSB093 INDIGENOUS PEOPLES, RIGHTS AND JUSTICE

British and international systems of law legally sanctioned colonization and defined the status of Australia's indigenous peoples. In Indigenous Peoples, Rights and Justice students will examine the status of indigenous people in Australia. Indigenous protest, symbolic politics, indigenous rights and political reform are topics which will be discussed through comparative analysis of countries where indigenous populations exist, such as Canada and New Zealand.

Courses: JS31, JS33
Credit Points: 12  Contact Hours: 3 per week

■ JSB094 VICTIMOLOGY

This unit explores issues relating to the victim of crime. Central to this study are victim typologies and their relationship to the cause of crime; fear of crime and crime prevention; the impact of crime on victims; victim roles and responsibilities; and victim needs in terms of protection, support and compensation.

Courses: JS31, JS33
Credit Points: 12  Contact Hours: 3 per week

■ JSB095 PRIVACY

Privacy is now a major issue in Australian social life. As governments and law enforcement agencies have sought to construct webs of surveillance to protect their interests, privacy has become a major human right and public policy issue. Importantly, public and private interests that compete with privacy are also examined.

Course: JS31, JS33
Credit Points: 12  Contact Hours: 3 per week

■ JSB096 SOCIAL PSYCHOLOGY AND THE JUSTICE SYSTEM

Examines social behaviour in terms of interpersonal, interpersonal and group dynamics and performance in relation to the justice professions.

Courses: JS31, JS33
Credit Points: 12  Contact Hours: 3 per week

■ JSB097 SOCIAL PSYCHOLOGY OF JUSTICE ORGANISATIONS

This unit explores organisational issues which impact on the separate organisations such as the police, corrective services, the courts, etc. which comprise the justice system. Specific topics will be approached from the perspective of the individual, the groups to which the individual belongs, and the organisation which is made up of these groups. Among the topics studied will be individual behaviour, attitudes and values, group dynamics, communication and leadership, and organisational structure, culture and change.

Courses: JS31, JS33
Credit Points: 12  Contact Hours: 3 per week

■ JSB098 FAMILIES AND THE JUSTICE DOMAIN

'The family': historical contradictions; various family processes; identity formation developmental stages; justice systems: the politics of family policy, welfare, violence, courts; family intersections; doing 'justice' to families.

Courses: JS31, JS33
Credit Points: 12  Contact Hours: 3 per week

■ JSB202 CONTEMPORARY ISSUES IN AUSTRALIAN SOCIETY 2

Contemporary social issues affecting various organisational levels of society: the individual, the marital dyad, the family and society as a whole; issues of abuse, equity and security; role of policy development and implementation from a social justice perspective.

Courses: JS31, JS33 (external mode only)
Prerequisite: JSB101
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 provides students with a clear understanding of the law relating to the gathering of evidence, interrogation and admissibility of evidence in court. Study includes an examination of the general principles of judicial evidence, witnesses, rules of evidence, admissions and confessions. Issues of evidence of current importance, e.g. issues arising out of inquiries such as the 'Operation Trident' inquiry are also explored.

Courses: JS31, JS33 (external mode only)
Prerequisite: JSB204
Credit Points: 12  Contact Hours: 3 per week

■ JSB302 IDEOLOGY, ETHICS & JUSTICE

Examination of the notion and related concepts of ideology and how they shape, constrain and drive theories of justice and social policy. The focus is on integrating ethical reflection with application to various spheres of public policy to do with welfare, economics, law and order and the environment.

Courses: JS31, JS33 (external mode only)
Prerequisite: JSB102
Credit Points: 12  Contact Hours: 3 per week

■ JSB401 APPLIED CRIMINOLOGY

This unit examines key and emerging issues in criminological debate such as the fear of crime, the role of the victim, criminal careers, white collar crime and crime prevention.

Courses: JS40
Credit Points: 12  Contact Hours: 3 per week

■ JSB402 PROFESSIONAL STUDIES 1

This unit is designed to enable students to extend their knowledge, skills and expertise in another area of professional study. Students may choose from one of the four professional areas on offer: Law Enforcement; Intelligence and Security; Corrections and the Community; or Legal and Justice Policy.

Course: JS40
Prerequisite: Completion of a professional minor, or equivalent.
Credit Points: 12  Contact Hours: 3 per week

■ JSB403 PROFESSIONAL STUDIES 2

This unit is designed to enable students to extend studies within an area of professional expertise or to extend their knowledge, skills and expertise in another area of professional study. Students may choose from one of the four professional areas on offer: Law Enforcement; Intelligence and Security; Corrections and the Community; or Legal and Justice Policy.

Course: JS40
Prerequisite: JSB402
Credit Points: 12  Contact Hours: 3 per week

■ JSB404 THESIS

This initial unit will offer students the opportunity to prepare the groundwork for the 15000 word thesis, which is a major part of the Honours program. The thesis must reflect the student's ability to conceptualise, theorise and implement an appropriate research project.

Course: JS40
Prerequisite: JSB091
Credit Points: 12  Contact Hours: 3 per week

■ JSB405 JUSTICE ORGANISATIONS

This unit explores organisational issues which impact on the separate organisations such as the police, corrective services, the courts, etc. which comprise the justice system. Specific topics will be approached from the per-
spective of the individual, the groups to which the individual belongs, and the organisation which is made up of these groups. Among the topics studied will be individual behaviour, attitudes and values; group dynamics, communication and leadership; and organisational structure, culture and change.

Course: JS40
Credit Points: 12
Contact Hours: 3 per week

- **JSB406 THESIS**
  Students are required to submit a research thesis of approximately 15,000 words. It is expected that the thesis will be based upon an empirical study of a particular field related to the justice professions.
  Course: JS40
  Prerequisite: JSB404
  Credit Points: 36
  Contact Hours: 3 per week

- **JSB407 THESIS**
  Part-time students are required to submit a research thesis of approximately 15,000 words. It is expected that the thesis will be based upon an empirical study of a particular field related to the justice professions.
  Course: JS40
  Prerequisite: JSB404
  Credit Points: 12
  Contact Hours: 3 per week

- **JSB408 THESIS**
  Part-time students are required to submit a research thesis of approximately 15,000 words. It is expected that the thesis will be based upon an empirical study of a particular field related to the justice professions.
  Course: JS40
  Prerequisite: JSB404
  Credit Points: 12
  Contact Hours: 3 per week

- **JSN001 THEORIES OF JUSTICE 1**
  Spheres of Justice - epistemologies of justice - models, ideologies, rationality; postmodern justice; justice and the environment; justice and the law; justice and religion; justice and women; comparative justice.
  Course: JS51
  Credit Points: 12
  Contact Hours: 3 per week

- **JSN002 THEORETICAL CRIMINOLOGY**
  This unit traces the development of theories of crime from the Enlightenment to the present day. Special attention is paid to current theoretical debate and developments.
  Course: JS51
  Credit Points: 12
  Contact Hours: 3 per week

- **JSN003 APPLIED CRIMINOLOGY**
  This unit examines key and emerging issues in criminological debate such as the fear of crime, the role of the victim, criminal careers, white-collar crime and crime prevention.
  Course: JS51
  Credit Points: 12
  Contact Hours: 3 per week

- **JSN004 ISSUES IN CRIMINAL JUSTICE**
  This unit examines the issue of domestic violence from an interdisciplinary perspective with an emphasis on the criminal justice system response. It will cover topics such as spousal abuse; abuse by relatives; dating violence; abuse in Aboriginal & NESB communities. It will look at the criminal law and the protection orders in Queensland and in other jurisdictions.
  Course: JS51
  Credit Points: 12
  Contact Hours: 3 per week

- **JSN005 THEORIES OF JUSTICE 2**
  This unit extends and develops ideas and theories introduced in Theories of Justice 1. It will allow clear and coherent distinctions to be made about the relative usefulness of competing claims for legitimacy by various justice theorists. The unit focuses upon the interface between public/social policy and the law's claim to be an instrument of social transformation. It will consider the ways in which ideas of justice, the law and social policy are grounded in theoretical and ideological positions, as well as being reflective of particular ontogenetic stages of moral reasoning.
  Course: JS51
  Prerequisite: JSN001
  Credit Points: 12
  Contact Hours: 3 per week

- **JSN006 INDEPENDENT STUDY 1**
  This unit is designed to enable students to pursue particular aspects of their coursework or of professional interest in more depth. It is an opportunity for students to refine and develop research skills. Students are required to complete a piece of research under the guidance of an academic supervisor.
  Course: JS51
  Credit Points: 12
  Contact Hours: 3 per week

- **JSN007 INDEPENDENT STUDY 2**
  This unit is a continuation of the unit JSN006 – Independent Study 1 and offers students the opportunity to extend further aspects of their coursework or of professional interest in more depth, as well as to continue the process of refining and developing research skills.
  Course: JS51
  Prerequisite: JSN006
  Credit Points: 12
  Contact Hours: 3 per week

- **JSN008 INDIGENOUS PEOPLES, RIGHTS AND JUSTICE**
  British and international systems of law legally sanctioned colonisation and defined the status of Australia's indigenous peoples. In Indigenous Peoples, Rights and Justice students will examine the status of indigenous people in Australian society. Indigenous protest, symbolic politics, indigenous rights and political reform are topics which will be discussed through comparative analysis of countries where indigenous populations exist, such as Canada and New Zealand.
  Course: JS51
  Credit Points: 12
  Contact Hours: 3 per week

- **JSN009 SEXED JUSTICE**
  This unit examines the sexed nature of justice in Australian society. Topics to be investigated include pornography and prostitution, rape, domestic violence, homosexuality and AIDS. Analysis of these topics will be both theoretical and practical, and students will be encouraged to use a variety of sources (policy, parliamentary debates, legislation, judicial decisions and precedents) to examine in depth the phenomenon and validity of sexed justice.
  Course: JS51
  Credit Points: 12
  Contact Hours: 3 per week

- **JSN010 COUNTER DISASTER PLANNING**
  Students will be required to develop/revise a counter disaster plan after being exposed to the cycle of disaster planning.
  Course: JS51
  Credit Points: 12
  Contact Hours: 3 per week

- **JSN011 AUTOMATED TOOLS FOR RESEARCH**
  This course provides students with an opportunity to use automated tools in support of intelligence and security, and related research. The intelligence analyst works within a range of government and corporate bodies. The products of the analyst are used to provide advantages for planning, policy-making, strategic decision-making and a range of operational practices.
  Course: JS51
  Credit Points: 12
  Contact Hours: 3 per week

- **JSN012 THE LAW, MORALITY AND THE MEDIA**
  Intelligence and security activities provide an advantage to public and private sector organisations in pursuance...
of their missions and goals. The ultimate goal for these support activities can fall within combinations of ethical, unethical, legal and illegal practice. Intelligence and security activities are studied in relation to public and private morality, the rights of individuals, their 'need to know' and their 'right to know'. It examines relationships and responsibilities of intelligence and security professionals and organisations.

Course: JS51
Credit Points: 12  Contact Hours: 3 per week

- **JSNO13 LAW, JUSTICE AND LITERATURE**
  Exploring the social and personal domains into which legal and justice systems intrude, jurisprudential thought is today more frequently referring to experiential modes of knowing. Law and justice are seen in a different light when taken out of their discourses and challenged by different perspectives. This subject examines experience gathered through literature and analysed through critical theory, different strands of philosophy and jurisprudence in order to tell us more about our law, our state and ourselves.

Course: JS51
Credit Points: 12  Contact Hours: 3 per week

- **JSPO01 LAW AND GOVERNMENT 1**
  This unit aims to introduce students to the institution of government, bureaucracy and the law. With legal processes under increasing scrutiny and social change occurring at a far greater pace than in the past, it is no longer sufficient or possible to ‘know what the law is’. Instead, students will acquire an understanding of the relationship between law and society as well as legal problem-solving skills to equip them to adapt as change occurs.

Course: JS41
Credit Points: 12  Contact Hours: 3 per week

- **JSPO02 PRINCIPLES OF CRIMINAL LAW 1**
  This subject exposes students to fundamental principles of criminal law as well as the social and political forces that shape those laws. It focuses on crimes of violence including sexual assault, child abuse, elder abuse and domestic violence. It also looks at criminal defences and property offences.

Course: JS41
Credit Points: 12  Contact Hours: 3 per week

- **JSPO03 LAW AND GOVERNMENT 2**
  This unit complements Law and Government 1. It critically examines the role of the courts, the resolution of disputes and the criminal justice system.

Course: JS41  Prerequisite: JSPO01
Credit Points: 12  Contact Hours: 3 per week

- **JSPO04 PRINCIPLES OF CRIMINAL LAW 2**
  This subject exposes students to fundamental principles of criminal law as well as the social and political forces that shape those laws in the areas of crimes of morality; drug, traffic and public order offences; war crimes and hate crimes; state corruption and whistleblowers; white collar crime, proceeds of crime and victims of crime. It also looks at the due process aspects of criminal procedure.

Course: JS41  Prerequisite: JSPO02
Credit Points: 12  Contact Hours: 3 per week

- **JSPO05 JUSTICE ORGANISATIONS**
  This unit explores organisational issues which impact on the separate organisations such as the police, corrective services, the courts, etc. which comprise the justice system. Specific topics will be approached from the perspective of the individual, the groups to which the individual belongs, and the organisation which is made up of these groups. Among the topics studied will be individual behaviour, attitudes and values; group dynamics, communication and leadership; and organisational structure, culture and change.

Course: JS41
Credit Points: 12  Contact Hours: 3 per week

- **JSPO06 RESEARCH DESIGN AND METHODOLOGY**
  This unit introduces a range of theoretical and applied research methodologies and designs used in the social sciences. It considers both quantitative and qualitative approaches to the research process and to the analysis of data, and it encourages a critical approach to the framing of research questions and to testing research hypotheses. Students will be given practice in the use of a number of data analysis tools.

Course: JS41
Credit Points: 12  Contact Hours: 3 per week

- **JSPO11 INDIGENOUS PEOPLES, RIGHTS AND JUSTICE**
  This unit examines the sexed nature of justice in Australian society. Topics to be investigated include pornography and prostitution, rape, domestic violence, homosexuality and AIDS. Analysis of these topics will be both theoretical and practical, and students will be encouraged to use a variety of sources (policy, parliamentary debates, legislation, judicial decisions and precedents) to examine in depth the phenomenon and validity of sexual justice.

Course: JS41
Credit Points: 12  Contact Hours: 3 per week

- **JSPO12 SEXED JUSTICE**
  This unit examines the sexed nature of justice in Australian society. Topics to be investigated include pornography and prostitution, rape, domestic violence, homosexuality and AIDS. Analysis of these topics will be both theoretical and practical, and students will be encouraged to use a variety of sources (policy, parliamentary debates, legislation, judicial decisions and precedents) to examine in depth the phenomenon and validity of sexual justice.

Course: JS41
Credit Points: 12  Contact Hours: 3 per week

- **JSPO13 COUNTER DISASTER PLANNING**
  The students will be required to develop/revise a counter disaster plan after being exposed to the cycle of disaster planning.

Course: JS41
Credit Points: 12  Contact Hours: 3 per week

- **JSPO14 AUTOMATED TOOLS FOR RESEARCH**
  This course provides students with an opportunity to use automated tools in support of intelligence and security, and related research. The intelligence analyst works within a range of government and corporate bodies. The products of the analyst are used to provide advantages for planning, policy-making, strategic decision-making and a range of operational practices.

Course: JS41
Credit Points: 12  Contact Hours: 3 per week

- **JSPO15 THE LAW, MORALITY AND THE MEDIA**
  Intelligence and security activities provide an advantage to public and private sector organisations in pursuance of their missions and goals. The ultimate goal for these support activities can fall within combinations of ethical, unethical, legal and illegal practice. Intelligence and security activities are studied in relation to public and private morality, the rights of individuals, their 'need to know' and their 'right to know'. It examines relation-
ships and responsibilities of intelligence and security professionals and organisations.

Course: JS31
Credit Points: 12 Contact Hours: 3 per week

■ JSP016 LAW, JUSTICE AND LITERATURE
Exploring the social and personal domains into which legal and justice systems intrude, juridical thought is today more frequently referring to experiential modes of knowing. Law and justice are seen in a different light when taken out of their discourses and challenged by different perspectives. This subject examines experience gathered through literature and analysed through critical theory, different strands of philosophy and jurisprudence in order to tell us more about our law, our state and ourselves.

Course: JS31
Credit Points: 12 Contact Hours: 3 per week

■ JSP052 POLICE PROCEDURE AND 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: JS41
Credit Points: 12 Contact Hours: 3 per week

■ JSP053 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 gain an understanding of the historical development, social perceptions and consequences and the perceived extent of organised crime. Students also consider the strategies employed to combat organised crime including the extent of investigation and/or Commissions of Inquiry documented to date.

Courses: JS41
Credit Points: 12 Contact Hours: 3 per week

■ JSP054 ISSUES IN POLICING
This unit endeavour to expose students to the multifarious nature of policing and the impact that societal developments have on policing and vice versa.

Courses: JS41
Credit Points: 12 Contact Hours: 3 per week

■ JSP055 APPLIED JUSTICE RESEARCH
This project study unit allows students undertaking the Law Enforcement professional minor to study a topic of personal academic interest which is not otherwise available as a formal subject in the area of policing. This unit differs from other units within the professional minor in that there are a minimum of scheduled lectures and the initiative to choose the topic and to organise the project must come from the students. Students choose a research topic related to contemporary law enforcement issues or activities.

Course: JS41
Credit Points: 12 Contact Hours: 3 per week

■ JSP061 PROCESS THEORY AND APPLICATION
Detailed study and application of the intelligence process (cycle); study of intelligence support to operational staff 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: JS41
Credit Points: 12 Contact Hours: 3 per week

■ JSP062 PROTECTIVE SECURITY - THEORY AND APPLICATION
Deals with protective security in its broadest sense; it examines the threat to security in the public, private and national arenas. The nature of espionage, subversion, sabotage, theft and hostage situations are also examined. The basic areas of protective security are personnel, material, physical and information security. Students also conduct risk/threat assessments and cover other areas such as inspections, audits, surveys and reviews; policy, procedures and controls; management aspects; legislation; case studies and models of security.

Courses: JS41
Credit Points: 12 Contact Hours: 3 per week

■ JSP063 INTELLIGENCE RESEARCH - ISSUES, PROCEDURES AND PRACTICE
Addresses major intelligence issues, intelligence and related security procedures and professional practices. The concept of intelligence in this unit is 'that which confers an advantage' in any professional context. Students apply process methodology: in examining specific societal issues; in recognising different intelligence research procedures for specific issues; and in practical analysis of selected issues, such as terrorism, illegal drugs, fauna smuggling, organised crime (operating in, or having the potential to operate in, Australia), corporate crime, community crime, environmental matters, illegal immigration, national defence and foreign intelligence activities.

Courses: JS41
Credit Points: 12 Contact Hours: 3 per week

■ JSP064 PROTECTIVE SECURITY - ISSUES AND 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; amacapa, scan and other analysis tools are studied.

Courses: JS41
Credit Points: 12 Contact Hours: 3 per week

■ JSP071 CORRECTIONS AND THE COMMUNITY 1
The forerunners of the custodial and community correctional systems and their influence are explored in respect to current correctional processes and philosophies. Contemporary conflicting models and their implications are examined.

Courses: JS41
Credit Points: 12 Contact Hours: 3 per week

■ JSP072 CORRECTIONS AND THE COMMUNITY 2
Contemporary formal and informal custodial and community corrections processes and procedures are presented. The interaction of correctional policies and community programs is discussed.

Courses: JS41
Credit Points: 12 Contact Hours: 3 per week

■ JSP073 CORRECTIONS AND THE COMMUNITY 3
The correctional setting and its impact on staff and inmates are examined. Special groups - their unique needs and treatment strategies - are discussed in the context of policies and procedures.
■ **JSP074 CORRECTIONS AND THE COMMUNITY 4**
Evaluation of alternative models of corrections is undertaken, and controversial issues explored. Fiscal constraints and administrative dilemmas according to international trends are examined and determination made as to the present and future effectiveness of the correctional system.

Courses: JS41
Credit Points: 12 Contact Hours: 3 per week

■ **JSP081 LAW AND PUBLIC POLICY**
An introduction to the theory and practice of public policy aimed at the requirements of justice professionals. This subject analyses policy formation, writing and implementation from the perspectives of the administrator undertaking the process and that of the community seeking to respond to government initiatives. This subject aims to provide students with tools for dealing in the public sphere and understanding the exercise of state power.

Courses: JS41
Credit Points: 12 Contact Hours: 3 per week

■ **JSP082 LEGAL RIGHTS AND 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: JS41
Credit Points: 12 Contact Hours: 3 per week

■ **JSP083 ADMINISTRATIVE LAW & JUSTICE**
Mechanisms of state accountability, their practice and philosophy are examined in order to give justice professionals a working knowledge of their operation. Open government, fair decision-making and administrative justice are key concerns within this field. Merits review, judicial review, freedom of information and the ombuds office are all critiqued and their procedures considered in light of a greater framework of social justice.

Courses: JS41
Credit Points: 12 Contact Hours: 3 per week

■ **JSP084 JUSTICE AND HUMAN RIGHTS**
The political and philosophical constructions known as rights are becoming increasingly important in the Australian justice professions. Both international and domestic documents are analysed in order to develop a cohesive framework of rights in the justice domain. Policy considerations are explored and much of the other material covered in the minor is tied together in the context of human rights policy research.

Courses: JS41
Credit Points: 12 Contact Hours: 3 per week

■ **LAB320 STUDIES IN LANGUAGE**
The language basis in current approaches to the teaching of English; nature and function of language; dynamics involved in interactive situations; appropriateness of language forms used in various social contexts; educational implications of linguistic diversity within the community; recognition of the developmental features of adolescent language.

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

■ **LAB321 WRITING WORKSHOP**
The student, as writer, uses all the language modes in social contexts (either genuine or simulated) to lead to writing in a range of situations. Engagement in these writing situations is designed to bring about personal understanding of the following: the nature of the writing process; the influence of audience and purpose on the final written product; the range of genres (or forms) falling within the writing activity.

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

■ **LAB323 TEACHING ADOLESCENT LITERATURE**
The scope and nature of young adult literature; strategies for evaluation and selection; recent research into adolescents' reading needs, interests and responses; using young adult books in the curriculum.

Course: ED50
Prerequisite: JSP100
Credit Points: 12 Contact Hours: 3 per week

■ **LAB325 ENGLISH CURRICULUM STUDIES 1**
The nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

Courses: ED50, ED54
Prerequisites: Normally the completion of 48 credit points in each relevant discipline area.

Credit Points: 12 Contact Hours: 3 per week

■ **LAB326 ENGLISH CURRICULUM STUDIES 2**
Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Courses: ED50, ED54
Prerequisite: LAB325
Credit Points: 12 Contact Hours: 3 per week

■ **LAB327 FILM & MEDIA CURRICULUM STUDIES 1**
The nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

Courses: ED50, ED54
Prerequisites: Normally the completion of 48 credit points in each relevant discipline area.

Credit Points: 12 Contact Hours: 3 per week

■ **LAB328 FILM & MEDIA CURRICULUM STUDIES 2**
Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Courses: ED50, ED54
Prerequisite: LAB327
Credit Points: 12 Contact Hours: 3 per week
LAB329 LOTE CURRICULUM STUDIES 1
The nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
Course: ED50, ED54
Prerequisites: 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
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, ED54
Prerequisite: LAB329
Credit Points: 12 Contact Hours: 3 per week

LAB331 LANGUAGE PROGRAMMING & ASSESSMENT
Development of an understanding and ability to design programs for promoting and monitoring individual language development through the study of: a structure and process for programming; objectives as a framework for programming and assessment; language resources for classroom use; classroom program development; and monitoring effectiveness.
Courses: ED50, ED51
Prerequisite: LAB338
Credit Points: 12 Contact Hours: 3 per week

LAB332 CHILDREN'S LITERATURE IN THE PRIMARY CURRICULUM
Explorations of the role of children's literature in the primary school; criteria for selecting children's literature; exploration of the various literary genres; leading the use of literature as an integrating device in the development of programs in the primary school.
Course: ED51
Credit Points: 12 Contact Hours: 3 per week

LAB333 LANGUAGE IN KEY LEARNINGS
The relationship between language and learning: the role of language across the curriculum; language in critical literacy and assessment.
Course: ED51
Credit Points: 12 Contact Hours: 3 per week

LAB334 PRIMARY LOTE CURRICULUM STUDIES
This unit introduces concepts and skills in LOTE curriculum and methodology and prepares appropriately qualified students to teach French, German, Indonesian or Japanese in the upper primary school.
Course: ED51
Credit Points: 12 Contact Hours: 3 per week

LAB336 LINGUISTICS IN TEACHING
This unit complements LAB335 by providing a systematic study of linguistics, and in particular Systemic Functional Linguistics, in a range of language learning settings at home and at school.
Course: ED51
Prerequisite: LAB335
Credit Points: 12 Contact Hours: 3 per week

LAB337 WORKSHOP FOR WRITERS
Develops an understanding and ability to compose a range of texts for presentation in spoken, written, dramatic or audiovisual presentation. Students are involved in: the exploration of relevant personal and social issues; the composition and critical analysis of a range of texts; and reflection upon the language features and processes appropriate for composing and presenting effective texts.
Course: ED51
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

LAB339 ADULT LITERACY AND SECOND LANGUAGE LEARNERS
Explores the special literacy needs of second language learners and investigates teaching approaches which recognize these needs and develop cross-cultural awareness and communication strategies. Topics include a comparison of first and second language literacy; the relationship between second language tracity and literacy; issues in cross-cultural communication; the literacy impact for non-English speaking background learners of current policy initiatives and workplace practices; needs analysis in second language literacy course design.
Course: ED54
Credit Points: 12 Contact Hours: 3 per week

LAB340 LANGUAGE, TECHNOLOGY & EDUCATION
Foundational perspectives on language, technology and communication in educational contexts; language as functional system and social semiotic; educational implications of the interconnections among language, technology, discourse and power; the student as reader and writer of academic prose; introduction to the language and technology of instruction.
Course: ED50
Credit Points: 12 Contact Hours: 3 per week

LAB341 LANGUAGE, TECHNOLOGY AND EDUCATION
Foundation unit concerned with language, literacies and technology in educational and worldwide contexts. Contemporary views of language and technological literacies as social activities are explored. Educational implications of the interconnections between technology, language discourse and power are applied to educational setting. The uses of language discourse and power are applied to educational settings. The use of language and technology in instruction is introduced. Unit is offered by the Schools of Language, Literacy and Education and Maths, Science and Technology Education.
Course: ED50
Credit Points: 12 Contact Hours: 3 per week

LAB342 LANGUAGE AND MATHEMATICS CURRICULUM 1
This unit consists of two half units on language and mathematics education. In the language section, students will explore the theory related to reading and viewing a variety of texts, and will build strategies and resources appropriate for the primary classroom. The mathematics section will provide frameworks for teaching mathematics and techniques for the strands of number (whole number, fractions, decimals and operations) and working mathematically (problem solving).
Course: ED51
Credit Points: 12 Contact Hours: 3 per week

LAB343 LANGUAGE AND MATHEMATICS CURRICULUM 2
This unit complements Language and Mathematics Curriculum 1 and consists again of two half units in language and mathematics education. The language com-
ponent of this unit explores the theory, strategies and resources for writing, speaking and listening in a range of genres in a variety of social settings. The mathematics section focuses on particular techniques for teaching the strands of space (shape, size and position), measurement (length, area, etc.) and chance and data (statistics, graphs and probability).

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

- LAB344 LANGUAGE AND LITERACY FOUNDATIONS
  This unit will introduce students to the nature of development of language and literacy in the contexts of the community, the university and the school. Topics will include: the nature and function of language; theories of language and literacy acquisition; intergenerational and situational literacies; the registers of school language; the nature and scope of text types used in the classroom, the university and the community; the social and personal implications of the development and attainment of literacy proficiency, including academic literacy.
  Course: ED51, ED52  
Credit Points: 12  
Contact Hours: 3 per week

- LAB345 LOTE/SECOND LANGUAGE FOUNDATIONS
  This unit will focus on first and second language development; cross-cultural communication; Australia’s immigrant and indigenous language communities; the needs of second language/second dialect learners, and procedures necessary for the maintenance or development of bilingualism and bidialectism in school age populations.
  Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

- LAB410 LANGUAGE CURRICULUM ISSUES
  A critical examination of the issues underpinning language education today and an action research project into classroom innovation or a detailed student study of language development.
  Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

- LAB411 ADVANCED STUDIES IN FILM AND MEDIA CURRICULUM
  This unit will examine the classroom implications of new policies and curriculum changes in Media Education. These include the relation of the QDE 1-10 Media Education Guidelines to other curriculum areas such as Arts, English, Social Science and Technology Education and the programming implications of such Film and Media Curriculum issues as audience effects, representation, media ownership and institutions, multimedia technologies and critical literacies.
  Course: ED50  
Credit Points: 12  
Contact Hours: 3 per week

- LAB412 ADVANCED STUDIES IN ENGLISH, ESL CURRICULUM
  This unit will focus in more depth on selected issues related to the teaching of English and English as a Second Language in the secondary school. Topics will include: literature and popular culture in the classroom; materials development for non-native speakers of English; language, multiculturalism and ideology; school to work transition programs; contemporary issues in language education, linguistics and cultural studies.
  Course: ED50  
Credit Points: 12  
Contact Hours: 3 per week

- LAB413 PROGRAMMING AND ASSESSMENT IN LANGUAGE AND MATHEMATICS
  The focus of this unit is on designing programs/units to promote and monitor individual language and mathematics development. This unit will bring perspectives from critical theory to the linked processes of program design and assessment in primary language and mathematics. In particular, the unit will examine the effects of technological change and current reporting practices on unit development, pedagogy and assessment. This includes developing an understanding of the principles and processes involved in planning the effective use of a range of language and maths resources for use in classrooms. A range of techniques and instruments for monitoring development will be explored. These will be related to reporting techniques such as the Student Performance Standards.
  Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

- LAB414 ADVANCED TOPICS IN LANGUAGE EDUCATION
  This unit will provide students with the opportunity of exploring in more detail literature and language-related curriculum issues in the primary school. Topics will include literature and popular culture in the classroom; language and gender; language, multiculturalism and ideology; the student as linguistic ethnographer.
  Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

- LAB440 RECENT DEVELOPMENTS IN THE TEACHING OF WRITING
  Development of writing in the light of the language in use model, recent research, and classroom practice. It is designed for the P-12 teacher. Students are expected to develop their own folio of writing, an understanding of current approaches to writing curriculum, and writing programs for their classrooms.
  Course: ED26  
Credit Points: 12  
Contact Hours: 3 per week

- LAB441 CHILDREN’S LITERATURE
  Evaluative criteria in children’s literature; genres; teaching strategies for promoting the use of children's literature; reader response theories.
  Course: ED26, ED51, ED52  
Prerequisites: Language arts and literature studies at Diploma of Teaching level  
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 current views about reading in order to identify key concepts of the theory; implications for classroom practice are drawn; identifies factors which influence readers and texts; the role of these play in the understanding of the meanings made; develops learning situations based on these understandings.
  Course: ED26  
Prerequisites: Studies in the teaching of reading at Diploma of Teaching level  
Credit Points: 12  
Contact Hours: 3 per week

- 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.
  Courses: ED26, ED51, ED52  
Prerequisites: Studies in the teaching of reading at Diploma of Teaching level  
Credit Points: 12  
Contact Hours: 3 per week

- LAN608 SECOND LANGUAGE ACQUISITION
  Research into second language acquisition is providing
new insights into the complex processes involved in natural and instructed language development. This unit extends participants’ knowledge of research into, and theories of, second language acquisition, and explores pedagogical implications and the relevance of research and theories to the enhancement of second language acquisition and learning. Courses: ED14, ED77 Credit Points: 12

**LAN609 ISSUES IN LANGUAGE AND LITERACY TEACHING**

This unit provides an understanding of the historical, theoretical, conceptual and research bases of program development and classroom instruction in English language and literacy. Courses: ED11, ED13 Credit Points: 12

**LAN611 ADULT AND WORKPLACE LITERACY AND NUMERACY**

An exploration of how the field of adult literacy and numeracy has evolved; the changing nature and roles of literacies and numeracies in contemporary societies; how literacy and numeracy practices are embedded in particular settings, e.g., workplaces, and how cultural, political and economic factors impinge on adult literacy and numeracy learning in different contexts. Courses: ED13, ED11, ED77 Credit Points: 12

**LAN612 PRINCIPLES OF SECOND LANGUAGE METHODOLOGY**

The range of approaches to second language learning and the theories of language and learning which underpin them. Theories of language and learning and their implications for TESOL; the social context of learning and its impact on methodological decision-making; current approaches and methods in TESOL; the role of teachers and learners in the TESOL classroom. Courses: ED14, ED77 Credit Points: 12

**LAN613 SECOND LANGUAGE CURRICULUM DESIGN OPTIONS**

The factors which influence teachers in the development of language programs. Includes analysis of the following areas: learner profiles and needs; aims and objectives; processes and criteria for selecting methodology; content selection and sequencing; choice and evaluation of materials and resources. Courses: ED14, ED77 Credit Points: 12

**LAN614 RESEARCH METHODS IN SECOND LANGUAGE EDUCATION**

This unit will introduce students to methods and techniques which are used by classroom teachers and language educators to underpin small and large scale research projects and to report research findings in journals and other publications. Courses: ED14, ED77 Credit Points: 12

**LAN615 DIRECTED READING IN SECOND LANGUAGE EDUCATION**

This unit provides an opportunity for teachers and others involved in TESOL to review current research articles to gain an overview of developments in TESOL / Applied Linguistics and to explore one or two personal interest areas in greater depth. Courses: ED14, ED77 Credit Points: 12

**LAN616 LANGUAGE ASSESSMENT AND PROGRAM EVALUATION IN TESOL**

Theories and practices in program evaluation, language testing and proficiency assessment. It examines and evaluates standardized tests and instruments which are used to assess the English language proficiency of speakers for whom English is a second language. Courses: ED14, ED77 Credit Points: 12

**LAN617 PERSONALISED LANGUAGE DEVELOPMENT**

Language learning is a lifelong task. This unit allows teachers to take a program of language development aimed at improving their level of proficiency and enhancing their cultural awareness. Students wishing to take this unit should discuss options with the Coordinator. Courses: ED14, ED77 Credit Points: 12

**LAN618 TECHNOLOGY AND SECOND LANGUAGE LEARNING**

The twentieth century has seen a rapid change in the technology available to language teachers. An exploration of the creative teaching potential of this technology in areas such as computer-aided language learning (CALL), interactive multimedia (including CD-rom and video disc) and the use of linear video, word processing and audio materials. The unit will also explore access to and pedagogical uses of electronic communication such as e-mail, list servers and bulletin boards. Courses: ED14, ED77 Credit Points: 12

**LAN619 DISCOURSE ANALYSIS**

When we use language to enact our everyday lives, to teach and to learn, we use texts to do so. This unit provides a means for analysing and understanding how texts make meaning linguistically. Students will engage in analysis and discussion of text level meaning via genre, register and cohesion; clause level meaning via Transitivity; Mood and Theme/Theme; group level meaning making via nominal, verbal and prepositional groups, and the significant linguistic features of written as contrasted with spoken language. Courses: ED14, ED77 Credit Points: 12

**LAN620 LANGUAGE AND CULTURE**

The relationship between language and culture: that is, how language is a social phenomenon, the use of which varies according to context. This close relationship is particularly relevant in crosscultural settings such as the ESL classroom. Courses: ED14, ED77 Credit Points: 12

**LAN621 TEXTUAL AND CULTURAL STUDIES FOR ENGLISH EDUCATION**

A critical study of recent literary and cultural theories, curricular and teaching materials leads students to consider how curricula and pedagogy, teachers and learners have been variously constituted according to theoretical discourses of textuality and culture. Courses: ED13, ED11 Credit Points: 12

**LAN622 FUNCTIONAL GRAMMAR AND DISCOURSE**

An introduction to functional grammar and discourse semantics. These provide tools for analyses of how texts make meaning — whether spoken or written, whether for pedagogical or research purposes. Courses: 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
Current theory and practice in LOTE teaching/learning in the primary school with particular emphasis on the Queensland context.
Course: ED37
Credit Points: 12
Contact Hours: 3 per week

LOTE CURRICULUM STUDIES 1
Introduction to the design and development of curriculum, materials and resources to meet the general and specific needs of learners who are non-native English speakers and those who require higher English language proficiency levels for study purposes.
Course: ED37
Credit Points: 12
Contact Hours: 3 per week

LOTE CURRICULUM STUDIES 2
Continuation of LAP403. Development of practical theory of teaching based on an understanding of the LOTE context in Queensland; development of language programs and teaching resources which are responsive to the diverse needs of learners.
Course: ED37
Credit Points: 12
Contact Hours: 3 per week

LOTE CURRICULUM STUDIES 3
Continuation of LAP403. Development of practical theory of teaching based on an understanding of the LOTE context in Queensland; development of language programs and teaching resources which are responsive to the diverse needs of learners.
Course: ED37
Credit Points: 12
Contact Hours: 3 per week

INTRODUCTION TO THE FILM AND MEDIA CURRICULUM
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

FILM AND MEDIA CURRICULUM STUDIES 1
Introduction to the design and development of curriculum, materials and resources to meet the general and specific needs of learners who are non-native English speakers and those who require higher English language proficiency levels for study purposes.
Course: ED37
Credit Points: 12
Contact Hours: 3 per week

FILM AND MEDIA CURRICULUM STUDIES 2
Continuation of LAP405. Content, processes and materials appropriate to the planning and implementation of Media Studies programs; methods of assessment; current professional issues in media teaching.
Course: ED37
Credit Points: 12
Contact Hours: 3 per week

ENGLISH AS A SECOND LANGUAGE CURRICULUM STUDIES 1
Introduction to the design and development of curriculum, materials and resources to meet the general and specific needs of learners who are non-native English speakers and those who require higher English language proficiency levels for study purposes.
Course: ED37
Credit Points: 12
Contact Hours: 3 per week

ENGLISH AS A SECOND LANGUAGE CURRICULUM STUDIES 2
Continuation of LAP405. Content, processes and materials appropriate to the planning and implementation of curriculum, materials and resources to meet the general and specific needs of learners who are non-native English speakers and those who require higher English language proficiency levels for study purposes.
Course: ED37
Credit Points: 12
Contact Hours: 3 per week

PRINCIPLES OF SECOND LANGUAGE EDUCATION
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

FILM AND MEDIA CURRICULUM STUDIES 3
Continuation of LAP406. Content, processes and materials appropriate to the planning and implementation of Media Studies programs; methods of assessment; current professional issues in media teaching.
Course: ED37
Credit Points: 12
Contact Hours: 3 per week

ENGLISH AS A SECOND LANGUAGE CURRICULUM STUDIES 3
Continuation of LAP407. Content, processes and materials appropriate to the planning and implementation of curriculum, materials and resources to meet the general and specific needs of learners who are non-native English speakers and those who require higher English language proficiency levels for study purposes.
Course: ED37
Credit Points: 12
Contact Hours: 3 per week

ENGLISH AS A SECOND LANGUAGE CURRICULUM STUDIES 4
Continuation of LAP408. Content, processes and materials appropriate to the planning and implementation of curriculum, materials and resources to meet the general and specific needs of learners who are non-native English speakers and those who require higher English language proficiency levels for study purposes.
Course: ED37
Credit Points: 12
Contact Hours: 3 per week

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 (three weeks).
Course: ED25
Credit Points: 12
Contact Hours: 3 per week

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

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: 12

- LAP507 AUSTRALIAN LITERATURE FOR YOUNG PEOPLE

Course: ED25 Credit Points: 12 Contact Hours: 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; videodisc; teleconferencing; computer conferencing; electronic mail; planning an instructional program.
Course: ED25 Credit Points: 12 Contact Hours: 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.
Courses: ED25, ED51, ED52 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 three-day study school or six two-hour evening sessions.
Course: ED25 Credit Points: 12

- LAP515 RESOURCE SERVICES FOR SPECIAL NEEDS

Resource services designed for students with special needs relating to physical or intellectual impairments, socio-economic or cultural circumstances; the theory and practice of mainstreaming; the inclusive School Resource Centre.
Course: ED25 Prerequisite: LAP502 Credit Points: 12

- LAP516 SPECIAL SEMINAR

Study of a specific aspect of teacher-librarianship, the unit to be determined by the University according to need and 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, ED51, ED52 Credit Points: 12 Contact Hours: 3 per week

- LAP518 VISUAL LITERACY & RESOURCE DESIGN

Visual literacy; learning styles; interpretation; design and evaluation of visually-based resources.
Course: ED25 Credit Points: 12

- LEB304 CHILDREN WITH SOCIAL & EMOTIONAL DIFFICULTIES

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. One of four subjects which offer enhanced background in the inclusion of children with disabilities and learning difficulties.
Course: ED51, ED52 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 inclusion of children with disabilities and learning difficulties.
Course: ED51, ED52 Credit Points: 12

- LEB331 TEACHING CHILDREN WITH LOW INCIDENCE DISABILITIES

Introduction to a wide range of low incidence exceptionalities (e.g. sensory impairments, developmental delay and health impairments such as Epilepsy, Asthma and Hepatitis, etc.); methods of managing associated disabling conditions; implementation and evaluation of programming; support and referral services.
Courses: ED50, ED51, ED52, ED54, ED37 Credit Points: 12 Contact Hours: 3 per week

- LEB332 TEACHING EXCEPTIONAL STUDENTS

Integrates a basic understanding and application of learning theory as it applies to exceptional populations. Focuses on 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, e.g. hearing impaired, visually impaired or physically handicapped; (d) behaviourally or emotionally disturbed students.
Courses: ED50, ED51, ED52, ED54, ED37 Credit Points: 12 Contact Hours: 3 per week

- LEB333 ADULT LEARNING AND DEVELOPMENT

The psychological foundations of human learning and development with special emphasis on adults. Contemporary theories and research issues such as cognition and learning, the effect of motivation on learning, understanding group dynamics, self/identity development, and creating effective learning environments will be explored.
Course: ED54 Credit Points: 12 Contact Hours: 3 per week
LEB334 ACQUISITION AND ADAPTABLE OF WORKPLACE KNOWLEDGE AND SKILLS
Explores the underlying theoretical constructs which may enhance the acquisition of knowledge and skills. In accord with the National Training Reform Agenda, issues such as multi-skilling, contextualised learning, intervention to accelerate performance, and transfer of knowledge and skill are addressed.

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

LEB335 HUMAN DEVELOPMENT & EDUCATION
Life span development for students interested in early childhood, primary or secondary. Theoretical perspectives on human development, exceptional development, and the concept of inclusive education.

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

LEB336 PSYCHOLOGY OF LEARNING & TEACHING

Courses: ED50, ED51, ED52, ED53
Credit Points: 12 Contact Hours: 3 per week

LEB337 GIFTED LEARNERS
This unit provides a framework for understanding and evaluating the needs of gifted learners. It emphasises identification, learning and teaching styles, sound emotional issues, research findings and resources associated with gifted learners. Provision is also made for some practicum work with gifted learners.

Courses: ED37, ED50, ED51, ED52, ED54
Credit Points: 12 Contact Hours: 3 per week

LEB338 THE INDIVIDUAL IN ADULT AND WORKPLACE EDUCATION
Tailoring instruction to the needs and strengths of individuals and acquiring confidence in planning, organising and implementing learning experiences. The focus ranges from setting up initial meetings to creating responsive positive learning environments and evaluating outcomes in terms of individual learners.

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

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; emotional intelligence; 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
Teachers as researchers; contemporary approaches to exploring classroom interaction and teaching/learning processes; teacher communication and expectancy effects; promoting cooperative learning; learning and teaching styles; teachers' concepts of teaching and reflective processes.

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

LEB430 CREATIVITY IN PROBLEM SOLVING
Creativity is an often advocated, loosely discussed, presumed phenomenon much sought after as an educational objective both in general and as curriculum specific. This unit familiarises students with the history of this concept's emergence, its definitional problems, current theories and models, and aims to ensure that their presentation promotes the concept as an aspect of problem solving in personal development and pedagogical applications.

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

LEB431 INTERACTIVE TEACHING STRATEGIES
Interactive Teaching Strategies offer alternatives to whole-class or lecture methods of presentation, and can be used with any age level and in any content area (K-12, TAFE, UNI). They increase confidence, enthusiasm, and enjoyment of learning; involve less separation due to race, gender, ethnicity, or status; make learning relevant to individual experience, and invite the use of higher order thinking skills. This is a practical, hands-on subject, structured according to principles of adult learning, a workshop format with contract-based assessment.

Course: ED26, ED51
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 communication and counselling skills, building an empathic relationship; structuring the counselling process; application of some counselling theories to the educational contexts; practical sessions using educationally based role plays to demonstrate effective use of the skills learned. Compulsory study school for external students. Incompatible with Studies in Counselling or equivalent at Diploma of Teaching level.

Courses: ED26, ED37, ED50, ED51, ED52, ED54, ED61
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, Gestalt, Behaviour, Rational-Emotive, and Reality Therapy. Skills and techniques associated with each major theory are presented and related to educationally based problems and concerns. The effects and outcomes of counselling interventions.

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

LEB443 HUMAN SEXUALITY & LEARNING
Key topics in sexual behaviour and learning such as heterosexual and homosexual sexuality across the life span, contraception, abortion, STDs, child sexual abuse, sexual assault, pornography. Implications for school, community, and health-care workers and educators, with emphasis on the former. Compulsory two-day study school for external students.

Courses: ED26, ED50, ED51, ED52, ED54, NS40, NS48
Credit Points: 12 Contact Hours: 3 per week
LEB444 HUMAN SEXUALITY AND DEVELOPMENT
Medical, legal, and developmental issues in human sexual behaviour related to sexuality and disability
lessness, infertility and its options, pregnancy and birthing, sexuality and aging, sexual dysfunction, transsexuality, and HIV/AIDS. Implications for school, community and health-care workers and educators, with emphasis on the latter. Compulsory two-day study school for external students.
Course: ED26, ED50, ED51, ED52, ED54, NS40, NS48
Prerequisite/Corequisite: LEB443
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 focusing on lurid details of the street drug scene, aims at developing an awareness that supportive elements contributing to an overall drug education strategy need to be found in every part of the curriculum. While a range of strategies is encountered, some may not even mention drugs while others may help young people handle specific situations.
Course: ED26
Credit Points: 12
Contact Hours: 3 per week

LEB446 PSYCHOEDUCATIONAL ASSESSMENT
Assessment techniques and strategies in the educational context; assessment of intelligence, academic skills, aptitude, personality; reliability, validity, test construction and standardisation procedures; the process of administering assessment instruments in schools; interpretation of test results and assessment data; using assessment data in programming and placement in educational institutions.
Course: ED26
Credit Points: 12
Contact Hours: 3 per week

LEB448 WORKING IN TEAMS
Teachers, administrators, students, parents and other professionals in education, health, welfare, and law often work together in different team situations. Individual and group processes that lead to effective team building and teamwork within schools or between agencies are studied, along with practical applications relevant to professionals taking this unit.
Course: ED26
Credit Points: 12
Contact Hours: 3 per week

LEB480 RESEARCH METHODS IN EDUCATION
Development of an awareness and understanding of the research process for a historical, sociocultural, ethical and theoretical perspective; the validity, applicability and suitability of various research strategies for specific educational endeavours; comprehension and evaluation of research findings drawn from a variety of perspectives, paradigms and methodologies; development of skills to conduct research appropriate to answer questions.
Courses: ED23, ED24, ED26, ED37, ED50, ED51, ED52, ED54
Credit Points: 12
Contact Hours: 3 per week

LEN602 ADVANCED EDUCATIONAL COUNSELLING
The major theoretical approaches to counselling are applied to problems and concerns arising in the educational context. Theories outlined include Psychoanalytic, Adlerian, Existential, Person-Centred, Gestalt, Transactional Analysis, Behaviour, Rational-Emotive, and Reality. Skills and techniques associated with each major theory will be presented and related to educationally based problems and concerns. The effects and outcomes of counselling inventions will be investigated and ethical issues will be addressed.
Courses: ED13, ED11, ED61
Prerequisites: LEB441
Credit Points: 12
Incompatible with: LEB442

LEN603 EDUCATIONAL COUNSELLING PROFESSIONAL PRACTICE
Professional practices of educational counsellors working in the P-12 context; intervention, prevention, affective, and developmental programs discussed; adolescent issues and career counselling outlined; consultation: models, theories and practices; self-management skills highlighted: time management, program evaluation, accountability and decision-making discussed.
Courses: ED13, ED11, ED61
Credit Points: 12

LEN604 PSYCHOEDUCATIONAL ASSESSMENT
Assessment techniques and strategies; assessment of intelligence, academic skills, aptitude, personality; reliability, validity, test construction and standardisation procedures; the process of administering assessment instruments; interpretation of test results and assessment data; using assessment data in programming and placement.
Courses: ED13, ED11
Credit Points: 12

LEN605 LEARNERS WITH SPECIAL NEEDS: PROGRAMMING FOR INCLUSIVE EDUCATION
Special educational needs of children in early childhood, school (P-12) and post-secondary settings arising from physical, cognitive, behavioural and socio-cultural differences; developmental screening; diagnosing student functioning in cognitive, social-emotional, self-help and motor skills areas; programming and curriculum decision making for children with special needs; techniques of informative and summative assessment appropriate to student learning needs; strategies for inclusive education; roles and models of support and advisory personnel including in-service strategies.
Courses: ED13, ED11
Credit Points: 12

LEN606 REMEDIATING OF LEARNING DIFFICULTIES
In-depth review of research of the impact of learning disabilities/difficulties and developmental delay on the learning of literacy from years 1-12 and in post-secondary education; studies in language and its use in learning; assessment and monitoring techniques and approaches to literacy acquisition by students with learning difficulties/difficulties. Draws on developments in areas such as sociolinguistics, psycholinguistics, metacognition and process approaches to literacy and learning within an inclusive education framework.
Courses: ED13, ED11
Credit Points: 12

LEN607 CAREER EDUCATION AND CAREER GUIDANCE
Focus on career planning as a lifelong process, emphasising that education and guidance programs focus on skill development for repeated decision-making throughout the lifespan; the background and influence of career development theory; the complementary relationship between career education and career guidance. Educator and counsellor skills necessary to enable students to effectively assist career development are included.
Courses: ED13, ED11
Credit Points: 12

LEN608 FOUNDATIONS OF ADULT LEARNING AND DEVELOPMENT
Provides students with an opportunity to develop an understanding of the complex nature of the adult learning and development process. This is achieved by ex-
posing students to contemporary theories and strategies in adult learning and development and extending their knowledge to the adult and workplace environment. Key concepts such as the motivation, self-directed learning and knowledge construction are addressed. Special emphasis is placed on transferring the theory to practice.

Courses: ED13, ED11
Credit Points: 12

- LEP413 HUMAN DEVELOPMENT & LEARNING
An analysis of human development through the life span; exploration of how students learn; factors influencing effective learning and teaching.

Courses: ED35, ED36, ED37
Credit Points: 12  Contact Hours: 3 per week

- 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 respite/support teacher’s role in assisting students with special learning needs and collaborating with teachers and administrators.

Courses: ED28, ED61
Credit Points: 12  Contact Hours: 3 per week

- LEP524 DEVELOPING RELATIONSHIPS & GROUPS
Overview of concepts relating to a model of interpersonal relationships; study of some human relationships concepts such as verbal and non-verbal interpersonal communication, power, influence, authority/control, trust and mistrust, confrontation and constructive resolution of conflict; interviewing and consulting skills; self-concept issues; collaborative teaching and team building; student and teacher stress; assertion-related theory and skills; resource teachers as change agents for inclusive education.

Courses: ED28, ED61
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; application of the content is strongly based on an adjunct model of service delivery.

Courses: ED28, ED61
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 psychology, metacognition and process approaches to literacy; adjacent model of service delivery.

Course: ED28
Credit Points: 12  Contact Hours: 3 per week

- LPN300 RESEARCH DISSERTATION
A research dissertation of approximately 20,000 words. It is expected that the research dissertation relates to one of the core unit areas covered in the Graduate Diploma in Legal Practice and have an applied law orientation. Unit may be undertaken in various loads.

Credit Points:
LPN300 = 24 credit points per semester
LPN301 = 48 credit points per semester
LPN302 = second 24 credit points per semester
LPN303 = 12 credit points per semester
LPN304 = second 12 credit points per semester

- LPN301 RESEARCH DISSERTATION
A research dissertation of approximately 20,000 words. It is expected that the research dissertation relates to one of the core unit areas covered in the Graduate Diploma in Legal Practice and have an applied law orientation. Unit may be undertaken in various loads.

Credit Points:
LPN300 = 24 credit points per semester
LPN301 = 48 credit points per semester
LPN302 = second 24 credit points per semester
LPN303 = 12 credit points per semester
LPN304 = second 12 credit points per semester

- LPN302 RESEARCH DISSERTATION
A research dissertation of approximately 20,000 words. It is expected that the research dissertation relates to one of the core unit areas covered in the Graduate Diploma in Legal Practice and have an applied law orientation. Unit may be undertaken in various loads.

Credit Points:
LPN300 = 24 credit points per semester
LPN301 = 48 credit points per semester
LPN302 = second 24 credit points per semester
LPN303 = 12 credit points per semester
LPN304 = second 12 credit points per semester

- LPN303 RESEARCH DISSERTATION
A research dissertation of approximately 20,000 words. It is expected that the research dissertation relates to one of the core unit areas covered in the Graduate Diploma in Legal Practice and have an applied law orientation. Unit may be undertaken in various loads.

Credit Points:
LPN300 = 24 credit points per semester
LPN301 = 48 credit points per semester
LPN302 = second 24 credit points per semester
LPN303 = 12 credit points per semester
LPN304 = second 12 credit points per semester

- LPN304 RESEARCH DISSERTATION
A research dissertation of approximately 20,000 words. It is expected that the research dissertation relates to one of the core unit areas covered in the Graduate Diploma in Legal Practice and have an applied law orientation. Unit may be undertaken in various loads.

Credit Points:
LPN300 = 24 credit points per semester
LPN301 = 48 credit points per semester
LPN302 = second 24 credit points per semester
LPN303 = 12 credit points per semester
LPN304 = second 12 credit points per semester

- LPPO01 LEGAL PRACTICE
Course: LP41
Credit Points: 9

- LSA 123 GENERAL BIOLOGY
This unit provides an overview of taxonomies; the structure and function of eukaryotic and prokaryotic cells; the study of mammalian cells, protozoa, fungi, algae, viruses, helminths and bacteria.

Course: SC15
Credit Points: 8  Contact Hours: 5 per week

- LSA221 BIOLOGICAL CHEMISTRY
This unit covers theoretical and practical biological chemistry through the topics: biological molecules; enzymology; function and role of co-enzymes; metabolism; electron transport chain and ATP synthesis; role of pH and biological buffers and regulation of metabolism.
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<td>LSA 222 LABORATORY INSTRUMENTATION</td>
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<td>LSA 223 MICROBIOLOGY</td>
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<td>LSA 225 HUMAN ANATOMY &amp; PHYSIOLOGY</td>
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<td>LSB001 INTRODUCTORY BIOLOGY</td>
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<td>LSB118 INTRODUCTION TO LIFE SCIENCE</td>
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anatomy and physiology for nursing students. Topics covered are: the cell, tissues; systems of the body and their functions, surface anatomy and body topography.

Courses: NS40, NS48
Credit Points: 12 Contact Hours: 5 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.
Course: NS40 Prerequisite: LSB281
Credit Points: 8 Contact Hours: 3 per week

Incompatible with:
PNB116 or PNB758 or PNB340 and PNB540 and PNB640 or PNB350 and PNB650

■ LSB221 INTRODUCTION TO PATHOLOGY

Application of scientific methods to the study of disease processes. Correct understanding and use of pathological terms and concepts.
Course: PH38 Prerequisite: LSB141
Credit Points: 8 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
Prerequisites: LSB101 or Senior Biology
Credit Points: 12 Contact Hours: 5 per week

■ LSB228 ANIMAL AND PLANT STRUCTURE AND FUNCTION

Emphasis on how functioning organisms reflect the integration of major biochemical processes. Initially, the structures of body systems are described from the functional viewpoint. Gas exchange, circulatory, reproductive and supportive systems are studied, then aspects of energy flow (photosynthesis/respiration) are considered. Finally, the regulation of organism function via biophysical processes and feedbacks, and hormonal systems, is outlined.
Courses: ED50, SC30
Prerequisites: LSB118 or LSB122
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 macroscopic anatomy of the nervous, digestive, lymphatic, integumentary, respiratory, renal, haemopoietic, endocrine and reproductive systems.
Course: OP42 Prerequisite: LSB130
Credit Points: 8 Contact Hours: 3 per week

■ LSB231 PHYSIOLOGY

The basic concepts of physiology and pharmacology. 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: ED50, HM42, ME46
Credit Points: 12 Contact Hours: 6 per week

■ LSB238 CELL & MOLECULAR BIOLOGY 1

Introduction at the cell level to essential physiological and metabolic requirements fundamental to life processes. Topics include: the morphology, chemical and biochemical composition of microbial, plant and animal cells; the relationship between metabolism and energy status of cells; biomembrane function and the organisation of genetic material in cells.
Courses: ED50, LS36, SC30
Prerequisites: CHB142, LSB118
Corequisite: CHB242
Credit Points: 12 Contact Hours: 5 per week

Incompatible with: LSB222

■ LSB241 ANATOMY 2

A course of lectures and practical exercises involving a basic, yet comprehensive, study of the anatomy and physiology of the various body systems.
Course: PH38 Prerequisite: LSB141
Credit Points: 10 Contact Hours: 4 per week

■ LSB250 HUMAN PHYSIOLOGY

Topics examined include: basic mechanisms - cells, fluids, electrolytes; energy metabolism; nutrients; transport mechanisms; blood; communication and control; excitable tissues; control systems - nervous and endocrine; maintenance systems - gastrointestinal; cardiovascular; respiratory; renal; integrated mechanisms - sexual development; pregnancy; parturition; lactation; control of growth; food intake; organic metabolism; body temperature; O2 consumption and volume; blood pressure and blood flow; respiration; response to tissue damage; adaptation to stress. This unit includes a practical program of two hours per week.
Course: LS36 Prerequisite: LSB150
Credit Points: 12 Contact Hours: 6 per week

■ LSB260 QUANTITATIVE METHODS IN LIFE SCIENCE 1

Topics include: weighing procedures, pH measurement, ion selective electrodes, spectrophotometers, autotitulators, automatic pipettes and dispensers and volumetric ware; calibration of instruments, correct usage, maintenance and elementary trouble shooting; correct experimental procedure, quality control and statistical analysis.
Course:LS36
Credit Points: 12 Contact Hours: 5 per week

■ LSB261 SYSTEMATIC ANATOMY

An extension of LSB151. A unit dealing with the microscopic and macroscopic anatomy of the nervous, digestive, lymphatic, integumentary, respiratory, renal, endocrine, muscular and reproductive systems and the basic macroscopic anatomy of the lower limb.
Course: PU45 Prerequisite: LSB161
Credit Points: 8 Contact Hours: 3 per week

■ LSB282 BIOSCIENCE 2

This unit covers the introduction to diseases, infections and treatments: the body defence systems and control of infection and considers in depth the respiratory and cardiovascular systems and diseases which affect these systems.
Courses: NS40, NS48 Prerequisite: LSB182
Credit Points: 12 Contact Hours: 5 per week

■ LSB300 MICROBIOLOGY 1

An introductory core unit in microbiology dealing with aspects of microbial diversity, ecology, classification and taxonomy, structure and function, nutrition and metabolism, growth and reproduction, genetics, control and host-microbe interactions.
Course: LS36 Prerequisite: LSB238, CHB242
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
Together with LSB402, this unit provides the foundation in animal biology that is essential for later specialista in population studies and aquaculture. It deals with topics such as: prion biology, development and functions of protein, carbohydrates, lipids and nucleic acids, basic enzymology, mechanisms of cellular energy production and the role of ATP, the metabolism of carbohydrates, lipids and amino acids and the fundamentals of protein biosynthesis and molecular biology.
Course: PU49
Credit Points: 12 Contact Hours: 5 per week

■ LSB305 BIOCHEMISTRY
The structures and functions of proteins, carbohydrates, lipids and nucleic acids, basic enzymology, mechanisms of cellular energy production and the role of ATP; the metabolism of carbohydrates, lipids and amino acids and the fundamentals of protein biosynthesis and molecular biology.
Course: PU49
Credit Points: 12 Contact Hours: 5 per week

■ LSB308 BIOCHEMISTRY I
The structure and function of organic macromolecules: the basic biochemistry of amino acids, peptides and proteins, carbohydrates and nucleic acids; basic enzymology; energy production in cells; high energy molecules, electron transport and oxidative phosphorylation; thermodynamics and bioenergetics.
Courses: ED30, LS36, SC30
Prerequisites: CHB242, LSB238
Credit Points: 12 Contact Hours: 5 per week

■ LSB318 BIOCHEMICAL METHODOLOGY
The subject covers the methodology of modern biochemical measurement and separation techniques, with practical exercises in the various procedures and the use of laboratory instruments. Topics include pH and buffers, centrifugation, spectrophotometry and fluorometry, various forms of chromatography including column, thin layer, affinity and HPLC procedures, electrophoresis and associated staining and identification techniques, ligand binding assays and applications of radioisotopes.
Course: SC30
Prerequisites: LSB238, CHB242
Corequisite: LSB308
Credit Points: 12 Contact Hours: 5 per week

■ LSB320 QUANTITATIVE METHODS IN LIFE SCIENCE 2
Topics include: immunocassay, electrophoresis and isoelectric focussing; chromatography including gel filtration, affinity chromatography, ion exchange and aspects of high performance liquid chromatography; and enzymic analysis. Emphasis is placed on correct experimental procedures, hypothesis testing and the statistical interpretation of data, and quality control.
Course: LS36
Prerequisites: LSB260
Credit Points: 8 Contact Hours: 4 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: 5 per week

■ LSB328 MICROBIOLOGY 1
An introductory core unit in microbiology dealing with aspects of microbial diversity, ecology, classification and taxonomy, structure and function, nutrition and metabolism, growth and reproduction, genetics, control and host-microbe interactions.
Course: SC30
Prerequisites: CHB242, LSB238
Credit Points: 12 Contact Hours: 5 per week

■ LSB331 ADVANCED ANATOMY
CROSS EXAMINATION OF THE LUMBAR REGION
Anatomy of the lower limb; anatomical knowledge fundamental to the understanding of the functional and applied aspects of podiatric anatomy; major topics: osteology, myology, arthrology, angiology and neurology.
Course: PU45
Corequisites: LSB261, PNB302
Credit Points: 8 Contact Hours: 6 per week

■ LSB338 CELL & MOLECULAR BIOLOGY 2
A continuation and expansion of topics begun in LSB338 , with an emphasis on integrated approaches to understanding life processes. Areas covered include specialised aspects of cell membranes, cell communication and recognition, specialised cell structures in bacteria, plants and animals, cell specialisation and differentiation of cell types, cell motility, cell cycle regulation and cancer.
Course: SC30
Prerequisites: LSB238
Corequisite: LSB308
Credit Points: 12 Contact Hours: 5 per week

■ LSB343 IMAGING ANATOMY 1
A unit dealing with the regional anatomy of the head, neck, upper limb, lower limb, and vertical column and the anatomy of the structures of the above regions which are visualised by medical imaging modalities.
Courses: PH38, PH90
Prerequisite: LSB241
Credit Points: 8 Contact Hours: 4 per week

■ LSB348 GENETICS
An introductory unit in basic genetics. Topics include: the molecular basis of genetics, Mendelian genetics, nuclear and cytoplasmic inheritance, genotype-phenotype interactions, quantitative and behavioral genetics, and basic evolutionary theory.
Courses: ED30, SC30, LS36
Prerequisite: LSB118 or LSB122
Credit Points: 12 Contact Hours: 5 per week

■ LSB350 GENERAL & SYSTEMATIC PATHOLOGY
Principles of the study of disease and dealing with the causes and nature of circulation disorders, degenerative processes, metabolic disorders, disturbances of development and growth, inflammation, infections and infestations, regeneration and repair and neoplasia. Includes the application of general pathology to the study of diseases of the organ systems.
Course: LS36
Prerequisite: LSB150
Credit Points: 8 Contact Hours: 2 per week

■ LSB352 POPULATION ECOLOGY
A broad theoretical background in the major concepts of plant and animal ecology. Topics include: ecology of single populations, life history and demography, interactions within and between populations, population regulation, management, behavioural ecology, energetics and biogeography.
Course: SC30
Prerequisite: LSB118 or LSB122
Corequisite: LSB362
Credit Points: 12 Contact Hours: 5 per week

■ LSB358 PHYSIOLOGY 1
A course of lectures and practicals on functional organisation of the human body including detailed studies of: excitable tissues, neural integration, muscle, sensory and motor systems; the gastrointestinal system, digestion, secretion, adsorption and metabolism; temperature regulation and the endocrine system.
Course: SC30
Prerequisite: LSB238
Credit Points: 12 Contact Hours: 5 per week

■ LSB361 FUNDAMENTALS OF MEDICINE
The theoretical basis for an understanding of the proc-
ess 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.

- **LSB362 EXPERIMENTAL DESIGN**
  Emphasises practical considerations of field and laboratory-based experimentation in life sciences, and provides experience in problem assessment, definition, formulation of testable hypotheses and experimental design.
  
  **Course:** PU41
  **Prerequisite:** LSB271
  **Credit Points:** 12
  **Contact Hours:** 3 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.
  
  **Course:** OP41, PU44
  **Prerequisites:** LSB150 or LSB130
  **Corequisite:** 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 2**
  An extension of the core unit in microbiology dealing with further aspects of microbial diversity, ecology, classification and taxonomy, action of and resistance to antimicrobial chemicals, host-microbe-environment relationships, foodborne pathogens and spoilers, practical applications of immunology, and examples of the industrial importance of microbial biotechnology.
  
  **Course:** LS36
  **Prerequisite:** LSB300
  **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

- **LSB405 MICROBIOLOGY**
  Introduction to different classes of microorganisms; basic characteristics of bacteria and bacterial nutrition; water microbiology; food preservation; food spoilage; foodborne disease; food hygiene; microbial fermentation of foods.
  
  **Course:** PU40
  **Prerequisite:** CHB259
  **Corequisite:** CHB2001
  **Credit Points:** 12
  **Contact Hours:** 5 per week

- **LSB408 BIOCHEMISTRY 2**
  Topics include: aspects of carbohydrate metabolism in mammals; the chemistry and metabolism of lipids and amino acids; the chemistry and function of porphyrins; metabolic integration.
  
  **Courses:** ED30, SC30
  **Prerequisite:** LSB308
  **Credit Points:** 12
  **Contact Hours:** 5 per week

- **LSB419 BIOCHEMISTRY 2**
  Topics include: aspects of carbohydrate metabolism in mammals; the chemistry and metabolism of lipids and amino acids; the chemistry and function of porphyrins; metabolic integration.
  
  **Course:** LS36
  **Prerequisite:** LSB308
  **Credit Points:** 8
  **Contact Hours:** 5 per week

- **LSB421 IMAGING PATHOLOGY**
  The appearances of pathology on medical images with particular emphasis on the radiographic image.
  
  **Course:** PH38, PH90
  **Prerequisite:** LSB321
  **Credit Points:** 4
  **Contact Hours:** 2 per week

- **LSB428 MICROBIOLOGY 2**
  An extension of the core unit in microbiology dealing with further aspects of microbial diversity, ecology, classification and taxonomy, action of and resistance to antimicrobial chemicals, host-microbe-environment relationships, foodborne pathogens and spoilers, practical applications of immunology, and examples of the industrial importance of microbial biotechnology.
  
  **Course:** SC30
  **Prerequisites:** LSB328
  **Credit Points:** 12
  **Contact Hours:** 5 per week

- **LSB430 IMMUNOLOGY 1**
  The mechanisms of the immune process including the nature of antigen, antibodies, antigen-antibody reactions, antibody formation, control of the humoral and cell-mediated immune responses, hypersensitivity and allergy, immunisation of humans against infections.
  
  **Course:** LS36
  **Prerequisites:** LSB250, LSB300
  **Credit Points:** 8
  **Contact Hours:** 4 per week

- **LSB431 MICROBIOLOGY 2**
  Continuation of LSB301. Topics covered include: microbial growth and measurement; laboratory and field analysis; microbial control methods; food hygiene; water quality; principles of disease and epidemiology.
  
  **Courses:** PU42, PU44
  **Prerequisite:** LSB301
  **Credit Points:** 8
  **Contact Hours:** 3 per week

- **LSB437 MOLECULAR BIOLOGY**
  An introductory unit of lectures and practical/tutorial classes introducing the structure and biochemistry of the nucleic acids and methodologies for their analysis. Topics include: genome organisation and replication in prokaryotes, plasmids, bacteria and eukaryotes; the enzymes involved in replication of DNA and RNA; nucleic acid isolation and purification; and the mechanisms of transcription and translation of the genetic code in vivo.
  
  **Course:** LS36
  **Prerequisite:** LSB308
  **Credit Points:** 8
  **Contact Hours:** 4 per week

- **LSB438 IMMUNOLOGY 2**
  The mechanisms of the immune process including the nature of antigen, antibodies, antigen-antibody reactions, antibody formation, control of the humoral and cell-mediated immune responses, hypersensitivity and allergy, immunisation of humans against infections.
  
  **Course:** SC30
  **Prerequisites:** LSB328, LSB358
  **Credit Points:** 12
  **Contact Hours:** 5 per week

- **LSB443 ANATOMY IMAGING 2**
  A unit dealing with the regional anatomy of the thorax and abdomen regions and the anatomy of the structures of the above regions which are visualised by medical imaging modalities.
Courses: PH38, PH90  Prerequisites: LSB241  
Credit Points: 8  Contact Hours: 4 per week

LSB448 PLANT BIOLOGY
Plant biology: morphology, anatomy reproduction, taxonomy and identification in the plant kingdom; includes a small practical project; emphasis on species of economic value; a basis for further study in plant tissue culture, physiology and ecology.  
Courses: ED50, SC30  Prerequisite: LSB122 or LSB228  
Credit Points: 12  Contact Hours: 5 per week

LSB450 HAEMATOLOGY 1
This is the introductory unit in haematology. Topics discussed include: blood collection; preparation, staining and examination of a blood film; haematology profile using manual and automated procedures; ESR; reticulocyte count; Heinz body detection; quality control procedures; overview of abnormal erythrocyte and leucocyte abnormalities; screening tests for haemostasis.  
Course: LS36  Prerequisites: LSB250, LSB308, LSB350  
Credit Points: 8  Contact Hours: 4 per week

LSB451 HUMAN PHYSIOLOGY
A course of lectures and practicals. The lectures are the same as LSB240 and LSB340. Presented as a one-semester program.  
Courses: OP42, PU45  Prerequisites: LSB351 or LSB261  
Credit Points: 12  Contact Hours: 7 per week

LSB452 MARINE STUDIES
Marine ecosystems, their importance to all life along the coastal areas and to people’s livelihood; management and conservation of the sea; appreciation of its infinite value to humanity’s changing lifestyle.  
Course: ED50  Prerequisite: LSB122  
Credit Points: 12  Contact Hours: 5 per week

LSB458 PHYSIOLOGY 2
A companion unit to LSB358 comprising lectures and practicals on blood, haemostasis, cardiac function, the vascular system and maintenance of blood pressure, circulatory and respiratory adjustments to physiological stress, pulmonary and tissue respiration, blood gas carriage, excretion, water and electrolyte balance.  
Courses: SC30  Prerequisite: LSB328  
Credit Points: 12  Contact Hours: 5 per week

LSB460 HISTOPATHOLOGY 1
An introductory subject presenting methods of preparing tissue samples for observation by various forms of light and electron microscopy. Topics include: laboratory safety; fixation, processing and embedding of samples; decalcification; microtomy; general principles of staining, routine staining methods; use of microwaves; immunohistochemistry and microscopy techniques.  
Course: LS36  Prerequisites: CHB242, LSB150  
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 introductory subject of lectures and practical/tutorial sessions introducing the structure and biochemistry of the nucleic acids and methodologies for their analysis. Lecture topics include genome organisation and replication in bacteriophages, plasmids, bacteria and eukaryotes; the enzymes involved in the replication of DNA and RNA; nucleic acid isolation, purification and analysis; and the mechanisms of transcription and translation of the genetic code in vivo.  
Course: SC30  Prerequisites: LSB308, LSB338  
Corequisite: 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

LSB478 ANIMAL PHYSIOLOGY
An introduction to comparative animal physiology. Emphasis is on the physiological ecology of whole animals, their functioning and survival in natural environments.  
Courses: ED50, SC30  Prerequisite: LSB122 or LSB228  
Credit Points: 12  Contact Hours: 5 per week

LSB480 PROFESSIONAL PRACTICE
This unit introduces students to the workplace, i.e. a pathology laboratory. The student undertakes a two-four week work experience program in a city or country pathology laboratory during the summer vacation between semesters 4 and 5 of the full-time course and between semesters 8 and 12 of the part-time course.  
Course: LS36  
Corequisites: LSB400, LSB410, LSB430, LSB450, LSB460

LSB488 PLANT PHYSIOLOGY 1
Whole plant physiology and the functional systems of plants. An important unit for students continuing their studies in the plant biotechnology and ecology areas.  
Courses: ED50, SC30  Prerequisite: LSB222 or LSB228  
Credit Points: 12  Contact Hours: 5 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

LSB498 ECOLOGICAL METHODS
The theory and practice of methods to determine and measure important ecological parameters and characteristics. These methods are essential tools for the study of biological populations and communities. Content includes estimation of population size, determination of dispersion patterns, detecting competition, and vegetation classification and mapping.  
Course: SC30  
Prerequisites: LSB352, LSB362  
Credit Points: 12  Contact Hours: 5 per week

LSB500 MICROBIOLOGY 5
Course: LS36  Prerequisite: LSB400  
Credit Points: 16  Contact Hours: 7 per week

LSB502 PROJECTS 1
Develops the student’s capacity for managing their own work. Projects emphasise specific investigatory skills in reviewing, collating, interpreting and presenting data;
contribution to a seminar is usually required. Projects, supervised by staff members, are graded individually. The Head of School coordinates assessment, and may request external assessment. Projects are to be selected by Week 12 of the fourth semester of the course. There are a number of compulsory field trips. This unit leads into LSB602.

Course: SC30  Prerequisite: LSB362  Credit Points: 12  Contact Hours: 5 per week

■ LSB508 BIOCHEMISTRY 5
The catabolic and anabolic pathways for the major macromolecules in mammalian systems; non-mammalian metabolism; concepts in bioenergetics and thermodynamics in the context of cellular metabolism; integration of metabolism including production of mixed conjugates of biological significance such as amino-sugars and lipopolysaccharides, hormone action and regulation.

Course: SC30  Prerequisite: LSB408  Credit Points: 12  Contact Hours: 5 per week

■ LSB520 CLINICAL BIOCHEMISTRY 5
Introduces the study of chemical aspects of human life in health and illness and discusses the application of chemical laboratory methods to diagnosis, control of treatment and prevention of disease. Topics include: kidney, pancreas, liver and gastric functions, the metabolism of lipids, carbohydrates and proteins.

Courses: LS36, SC30  Prerequisites: LSB408, LSB310, LSB340  Credit Points: 8  Contact Hours: 4 per week

■ LSB522 POPULATION MANAGEMENT
The principles of biological population management; natural populations and three forms of management; pest control, harvesting and conservation. Field trips and computer simulations are used to investigate management methods.

Course: SC30  Prerequisite: LSB352  Credit Points: 12  Contact Hours: 5 per week

■ LSB527 ANALYTICAL BIOCHEMISTRY
A companion to unit LSB508 extending the material of LSB318 into biochemistry analysis. Topics include: enzyme-based analyses; advanced analysis using isotopes; immunoassays and the major biomolecules.

Course: SC30  Prerequisites: LSB318, LSB408  Corequisite: LSB508  Credit Points: 12  Contact Hours: 5 per week

■ LSB528 MICROBIAL PHYSIOLOGY & METABOLISM
The composition, organisation, structure and activity of the microbial cell: bacteria, yeasts and moulds. Topics include: light microscopy and staining methods; cell structure; enrichment, isolation and growth of cultures; the kinetics of growth; biosynthesis of cellular materials; regulation of metabolism; microbial genetics; sporogenesis and germination.

Course: SC30  Prerequisite: LSB428  Credit Points: 12  Contact Hours: 5 per week

■ LSB530 IMMUNOLOGY 5
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 LSB348 Genetics. Topics include: the genetic structure of populations and processes of evolutionary change; natural selection, inbreeding and co-adaptation; species and speciation theory; ecological genetics and the genetics of behaviour. Students may be required to undertake semester-long project topics on practical or theoretical problems.

Course: SC30  Prerequisite: LSB432  Credit Points: 12  Contact Hours: 3 per week

■ LSB537 GENETIC ENGINEERING
The development of concepts and skills in the recombinant DNA technologies used in genetic engineering. Topics include: the enzymes, vectors and host cells for gene isolation and cloning; strategies and procedures for cellular transformation and gene library construction; nucleic acid hybridization techniques; methods for the screening for recombinant clones using radioactive and non-radioactively labelled gene probes.

Courses: LS70, LS85, SC30, SC60  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 cyto genetics, protoplast isolation and the unusual carbohydrate metabolism of plants in tissue culture.

Course: SC30  Prerequisite: LSB442  Credit Points: 12  Contact Hours: 5 per week

■ LSB550 HAEMATOLOGY 5
The first of two units in which the student is introduced to the diseases of the blood: cause, laboratory investigation, prognosis, principles of treatment and laboratory monitoring of treatment. The blood disorders discussed include: anaemias of defective haem and porphyrin synthesis, anaemias caused by abnormalities in globin biosynthesis, macrocytic anaemias, hypoproliferative anaemias, anaemia of chronic renal failure, liver disease, haemolytic anaemias.

Course: LS36  Prerequisites: LSB310, LSB408, LSB450  Credit Points: 8  Contact Hours: 4 per week

■ LSB552 AQUACULTURE 1
Methods and techniques associated with the commercial production of aquatic animal species in hatcheries and on aquafarms. Topics include: water quality measurement and management; intensive production of food organisms; induction of maturation and spawning; nursing and rearing larval and fry; feeding; diagnosis and treatment of health problems; handling and husbandry.

Course: SC30  Prerequisite: LSB302  Credit Points: 12  Contact Hours: 5 per week

■ LSB558 APPLIED PHYSIOLOGY
An extension of prior knowledge of physiological processes which occur in a specific range of cardiovascular, renal and neurological functions; basic nutritional concepts and factors affecting nutrient requirements.

Courses: PU62, SC30, SC60  Prerequisite: LSB458  Credit Points: 12  Contact Hours: 5 per week

■ LSB560 HISTOPATHOLOGY 5
A detailed study of techniques used in routine histopathology including methods for immunohistochemistry and transmission electron microscopy. Emphasis is placed on the application and relevance of methods to particular diagnostic areas.

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.
Course: ED50, SC30
Credit Points: 12  Contact Hours: 5 per week

■ **LSB578 VIROLOGY**
Lectures and practical classes designed to introduce students to the basic concepts of virology. A range of viruses and virus diseases are examined and topics include: virus morphology and composition, taxonomy and classification, replication, purification, diagnosis and assay, transmission and control.
Course: SC30  Prerequisite: LSB428
Credit Points: 12  Contact Hours: 5 per week

■ **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: 5 per week

■ **LSB602 PROJECTS 2**
This elective unit may be undertaken by students who have taken LSB984 and who have the Strand Co-ordinator’s permission to continue project work. The student either continues a project undertaken in LSB502 or becomes involved in 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  Prerequisite: LSB502
Credit Points: 12  Contact Hours: 5 per week

■ **LSB607 BIOCHEMICAL SEPARATIONS**
An advanced course of lectures and a comprehensive project designed to integrate a number of specialist biochemical procedures including centrifugation, liquid chromatography, electrophoresis, spectrophotometry and peptide mapping. Students participate in group projects where they are required to design and execute their own experimental protocols for the purification and analysis of selected proteins.
Course: SC30, LS70  Prerequisites: LSB308, LSB318
Credit Points: 12  Contact Hours: 5 per week

■ **LSB608 BIOCHEMISTRY 6**
Advanced studies in protein biochemistry, including structure, analysis and evolution of proteins, sequencing, synthesis, structure predictions; applications in the areas of enzymology and active site chemistry: macromolecular assemblies such as muscle.
Course: SC30  Prerequisites: LSB418, LSB308
Credit Points: 12  Contact Hours: 5 per week

■ **LSB612 AQUACULTURE 2**
The theoretical and applied aspects of warm-water aquaculture. Topics include: design and operation of production facilities; water quality requirements and management; biology of commercially important species; reproduction and its control; nutrition, feeding and growth; diseases and their control; production improvement: polyculture: case studies.
Course: SC30  Prerequisite: LSB372
Credit Points: 12  Contact Hours: 5 per week

■ **LSB620 CLINICAL BIOCHEMISTRY 6**
Study of clinical biochemistry with emphasis on enzymes, electrolytes, blood gases, drugs, vitamins, functions of the thyroid and adrenal gland, auto-analyses, quality control and steroid metabolism.
Courses: LS36, SC30  Prerequisite: LSB520
Credit Points: 8  Contact Hours: 4 per week

■ **LSB622 CASE STUDIES**
Application of skills and techniques to a current research problem in biology. Skills in problem appraisal, experimental design and data handling and processing are developed, with field work.
Course: SC30  Prerequisite: LSB412
Credit Points: 12  Contact Hours: 5 per week

■ **LSB628 APPLIED MICROBIOLOGY**
Aspects of the microbiology of foods, water and agriculture. Topics include: sampling plans, food-borne infections, food hygiene, food standards and the law, food ecology and its relationship to food spoilage and preservation, industrial fermentations, NATA requirements for laboratory registration and methods of microbiological examination of foods, plant, soil, and water microbiology.
Course: SC30  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, e.g. 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, LS80, LS85, SC30  Prerequisite: LSB537
Credit Points: 12  Contact Hours: 5 per week

■ **LSB648 MICROBIAL TECHNOLOGY**
An advanced course of lectures and practical sessions dealing with the industrial use of microorganisms. Topics include: screening and strain development; large scale fermentation; product recovery; biochemical engineering; microbial fermentation of food products; primary
and secondary metabolites of industrial importance; single cell protein; microbial transformations; biodeterioration and biocatalysis.

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 leukocyte disorders, paediatric and veterinary haematology.

Course: LS36  
Prerequisite: LSB550  
Credit Points: 8  
Contact Hours: 4 per week

- LSB652 BIOLOGICAL RESOURCES  
Aspects of ecosystem management related to naturally occurring materials and their supply to the human economy. Limitations on specific exploitation of natural genetic (species), soil and energy resources are identified and linked with relevant aspects of land tenure, administration and law; threats to biological resources due to pollutants. Strategies leading to sustained yield and conservation are contrasted with those resulting in resource degradation.

Course: SC30  
Credit Points: 12  
Contact Hours: 5 per week

- LSB658 CLINICAL PHYSIOLOGY  
The physiological basis and pathogenesis; clinical features and treatment of the major disorders of the cardiovascular, respiratory, haematological, renal, gastrointestinal, nervous and endocrine systems.

Course: SC30  
Prerequisites: LSB358, LSB458  
Credit Points: 12  
Contact Hours: 5 per week

- LSB660 HISTOPATHOLOGY 6  
Reviews recent advances in diagnostic histopathology and introduces advanced and specialised methods including scanning electron microscopy and X-ray microanalysis. Techniques for diagnostic cytology concentrating on specimen preparation and the microscopic detection of cancerous and other abnormal cells in human tissues and body fluids.

Course: LS36  
Prerequisite: LSB560  
Credit Points: 8  
Contact Hours: 4 per week

- LSB722 RESEARCH STRATEGIES  
A series of seminars presented by staff of the Faculties of Health and Science and other research scientists on their area of expertise. A series of tutorials and lectures on such topics as library searches, oral communications, written communications and ethics. A written assignment in the areas of microbiology, biochemistry and biotechnology. A seminar presented by the student covering the background literature relevant to the student's research project.

Course: SC60  
Credit Points: 16

- LSB723 READINGS IN LIFE SCIENCE 1  
The preparation of a literature review of direct and associated relevance to the Honours research project under the guidance of the supervisor(s). Includes an in-depth computer search, the presentation of a written paper demonstrating a considerable knowledge, understanding and appreciation of the literature as well as a critical appraisal of future research requirements.

Course: SC60  
Credit Points: 16

- LSB725 PROJECT  
All students undertaking Honours in biotechnology, biochemistry or microbiology are required to select and undertake, in consultation with a supervisor, a suitable project.

Course: SC60  
Credit Points: 10

- LSB734 ANALYTICAL ELECTRON MICROSCOPY  
An advanced course in electron microscopy with emphasis on the applications of labelling and analytical techniques. Methods covered include immunocytochemistry, in situ hybridisation, energy and wavelength dispersive X-ray analysis, electron energy loss spectroscopy and image analysis. Specialised preparation methods necessary for use of these techniques in SEM, TEM and STEM instruments are discussed, together with their advantages and limitations. Applications are drawn from the biological, materials and forensic science areas.

Course: SC60  
Credit Points: 12  
Contact Hours: 5 per week

- LSB801 ADVANCED PLANT PHYSIOLOGY & BIOCHEMISTRY  
Plant physiology and biochemistry of current research interest are covered, expanding upon material in the third-year Plant Biochemistry unit. Students select from a reading list and present seminars.

Course: LS60  
Credit Points: 12  
Contact Hours: 5 per week

- LSB802 IMMUNOLOGY 5  
This unit builds on the basic understanding provided in LSB430 and LSB438 and provides an understanding of the genetic control of antibody diversity, the function of antibody and complement at a molecular level, cell interactions in the immune response and immunological process in resistance and recovery from infection. Students are also required to demonstrate basic information retrieval skills in areas of immunology and to perform a range of computer-based immunology tasks.

Courses: SC60, LS70  
Prerequisites: LSB430, LSB438  
Credit Points: 12  
Contact Hours: 5 per week

- LSB804 ADVANCED POPULATION BIOLOGY  
An extended treatment of major questions in population biology. Students are expected to develop a detailed understanding of population processes and aspects of evolutionary theory at both the individual and population level. The unit includes theoretical core material, group tutorials and individual programs designed around student needs. Students are required to present a review paper and a formal seminar on an assigned topic.

Course: SC60  
Credit Points: 12  
Contact Hours: 5 per week

- LSB825 PROJECT  
The preparation of a paper reporting the methods and results of investigations in the Honours Research Projects. The paper also includes an introduction, analysis and discussion of the project in a style and length deemed to be appropriate by the Head of School. Students should relate this project work to published work already undertaken in the field.

Course: SC60  
Credit Points: 12  
Contact Hours: 1 per week

- LSN009 READINGS IN LIFE SCIENCE 4  
A review of literature in an area determined in consultation with the supervisor. The area can be associated with the research project topic and can be broadly or narrowly focused but should not include any significant material covered in LSN013. The review should cover the background to the area as well as recent advances and identify deficiencies and possible future research directions. The review should be a critical analysis of the area. Reviews should normally be approximately 5 000 words.

Courses: 1F49, SC60  
Credit Points: 12  
Contact Hours: 1 per week
LSN10 READINGS IN LIFE SCIENCE 5
Courses: IF49, SC80
Credit Points: 12 Contact Hours: 1 per week

LSN011 RESEARCH SEMINARS IN LIFE SCIENCE 1
A 30-minute public seminar to include a presentation and question period addressing the background to the proposed research topic in the postgraduate degree and outlining the proposed directions of the research program. The seminar should normally be presented within 12 months (full-time) or 24 months (part-time) of commencement of the postgraduate program.
Courses: IF49, SC80 Credit Points: 6

LSN012 RESEARCH SEMINARS IN LIFE SCIENCE 2
A 30-minute public seminar to include a presentation and question period outlining the progress made in the postgraduate research program as well as the proposed research to complete the project.
Courses: IF49, SC80 Credit Points: 6 Contact Hours: 1 per week

LSN013 READINGS IN LIFE SCIENCE 3
A comprehensive and critical review of the background and current literature directly related to the research project topic. The review should identify major and minor deficiencies in the research literature and identify possible directions for future research. The review should be approximately 10,000 words and at least one draft should be presented to the supervisor prior to final submission.
Courses: IF49, SC80 Credit Points: 24

LSN023 RESEARCH SEMINARS IN LIFE SCIENCE 3
A 60-minute public seminar to include a presentation and question period outlining the results of the postgraduate research program as well as possible future research directions in this area.
Courses: IF49, SC80 Credit Points: 12

LSN102 CELLULAR BASIS OF DISEASE
Courses: LS70, LS80 Prerequisites: 24 credit points in LS85 Credit Points: 12 Contact Hours: 3 per week

LSN110 MOLECULAR BASIS OF DISEASE
The aetiology, diagnosis and treatment of various diseases; study of molecular structures, biochemical reactions, integration and control of metabolism. Topics include: gene structure and function, proteins; structure and molecular dysfunction, and enzymes; properties and alterations in diseases; metabolic integration and hormone action, hormones and organ disease, disorders of carbohydrate and lipid metabolism and chemotherapy.
Courses: LS70, LS80 Prerequisites: 24 credit points in LS85 Credit Points: 12 Contact Hours: 3 per week

LSN150 ETHICS AND LIFE SCIENCE
A course which looks at the ethical implications of contemporary issues including: methods of epidemiological and research strategies, gene therapy, informed consent, abortion, ethics committees, organ transplantation and supply including foetal tissue.
Courses: LS80 Credit Points: 12 Contact Hours: 3 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

LSN510 CLINICAL BIOCHEMISTRY 1
The use of clinical biochemistry in the diagnosis of diseases. Disorders of fluid and electrolyte balance systems, disorders of the gastrointestinal, pancreatic and hepatobiliary systems, and disorders of the cardiovascular system and hypertension are studied, concentrating on diagnosis and the interpretation of biochemical results. In addition, aspects of instrumentation and laboratory methods are reviewed.
Course: LS80 Prerequisite: 96 credit points in LS85 Credit Points: 12 Contact Hours: 3 per week

LSN511 HEMATOLOGY 1
Haematologic diseases; their aetiology, laboratory investigation, pathogenesis, principles of treatment and laboratory monitoring. The study program includes seminars, oral presentations and assignments selected from: haemopoietic kinetics, haemolytic disease, haemostasis and the haematologic implications of systemic disease. Assessment is by formal examination, assignments and seminar participation.
Course: LS80 Prerequisite: 96 credit points in LS85 Credit Points: 12 Contact Hours: 3 per week

LSN512 HISTOPATHOLOGY 1
Recent advances and modern methods in diagnostic histopathology. Topics include: immunohistochemistry, enzyme histochemistry and transmission electron microscopy methods.
Course: LS80 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 micro-organisms associated with human infection. Recent trends and developments in diagnostic microbiology are studied. A critical approach to the assessment of laboratory practices and interpretation of data is developed.
Courses: LS80, LS85 Prerequisites: 96 credit points in LS85 Credit Points: 12 Contact Hours: 3 per week

LSN517 IMMUNOLOGY 1
Information retrieval systems and scientific writing. Five essay topics are selected following discussion with students, supervisor/employer.
Courses: LS80, LS85 Credit Points: 12 Contact Hours: 3 per week

LSN518 DIAGNOSTIC CYTOLOGY 1
Review of recent advances and modern methods in diagnostic cytology. The major topics are in gynaecological cytology.
Courses: LS80, LS85 Credit Points: 12 Contact Hours: 3 per week

LSN610 CLINICAL BIOCHEMISTRY 2
Clinical biochemistry in the diagnosis of diseases. Endocrinology, disorders of the muscular and skeletal systems, disorders of special groups, nutrition and drugs, neurochemistry and neural disorders, cancer-associated biochemical abnormalities, and seriously ill patient are studied, concentrating on diagnosis and the interpretation of results.
Courses: LS80, LS85 Prerequisite: LSN510 Credit Points: 12 Contact Hours: 3 per week
LSN611 HAEMATOLOGY 2
Topics include: age-related changes to the haemopoietic system, perinatal haematology, paediatric haematology and haemostasis in the elderly, nutrition anemias, 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 LSN611 may be necessary.
Courses: LSN610, LSN615 Prequisite: 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. Specialized techniques including aspiration cytology, scanning electron microscopy and analytical electron microscope methods.
Courses: LSN610, LSN615 Prequisite: LSN512
Credit Points: 12 Contact Hours: 3 per week

LSN618 MICROBIOLOGY 2
Areas of bacteriology, virology, mycology and parasitology. Topics are chosen to increase the knowledge and understanding of micro-organisms associated with human infection. Recent trends and developments in diagnostic microbiology are studied. A critical approach to the assessment of laboratory practices and interpretation of data is developed.
Courses: LSN610, LSN615 Prequisite: LSN518
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.
Courses: LSN610, LSN615 Prequisite: LSN517
Credit Points: 12 Contact Hours: 3 per week

LSN619 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.
Courses: LSN610, LSN615 Prequisite: LSN518
Credit Points: 12 Contact Hours: 3 per week

LSN710 PROJECT
A supervised project in an area selected by the student. The project area may be novel, developmental or directed at an investigation of the introduction of a new system into the laboratory. Other areas which are considered appropriate include epidemiological analyses, laboratory safety, laboratory design or the efficacy of laboratory service. Each student submits a written project report in a style to present the data.
Course: LSN710 Prequisite: LSN710 = 48, LSN711 & LSN712 = 24
Credit Points: 12 Contact Hours: 5 per week

LSP127 BUSINESS ASPECTS OF BIOTECHNOLOGY
Commercial perspectives of a biotechnology company; funding for commercial research; research patents and intellectual property; GMAC/recombinant DNA guidelines and regulations; overview of Australian biotechnology companies; site visits to one or two biotechnology companies.
Course: LSN70 Credit Points: 12 Contact Hours: 5 per week

LSP735 HUMAN MOLECULAR BIOLOGY
A course of specialist lectures and research assignments for postgraduate students relating to the organisation and regulation of expression of information stored in the human genome. Additional subject areas include the molecular basis of genetic disorders, cancer, oncogenes and infectious disease; and clinical applications of nucleic acid diagnostic procedures, e.g. linkage analysis, DNA profiling, genetic screening.
Courses: LSN70, LSN80, SC60 Prequisite: LSN637
Credit Points: 12 Contact Hours: 5 per week

LSP737 PLANT & ANIMAL MOLECULAR BIOLOGY
Techniques and applications of molecular biology for the genetic manipulation of plants and animals.
Courses: LSN70, SC60 Prequisite: LSN637
Credit Points: 12 Contact Hours: 5 per week

LSP739 CLINICAL MOLECULAR BIOLOGY
The theory behind the use of restriction endonucleases; radioisotopes and nucleic acid hybridisation procedures and their applications in the Polymerase Chain Reaction; linkage analysis, DNA profiling and genetic screening using oligonucleotides and gene probes.
Courses: LSN85, SC60 Prequisite: LSP8437
Credit Points: 12 Contact Hours: 5 per week

LSX310 INTRODUCTION TO BIOCULTURE
Techniques of algal culture and plant tissue culture. Topi­

LSX311 COMPUTER APPLICATIONS IN BIOLOGY
Microcomputers and applications software such as wordprocessing, databases, spreadsheets and computer graphics for report presentation. This unit is not oriented towards any specific computer language.
Courses: SC10, SC12 Credit Points: 8 Contact Hours: 3 per week

LSX312 ANIMAL & PLANT TECHNIQUES
Care and maintenance of animal and plant resources, both micro- and macroscopic. Animal handling, maintenance of glasshouse resources, culture collections and sterile techniques, preparation of specimens for permanent collections and their maintenance.
Courses: SC10, SC12 Credit Points: 12 Contact Hours: 4 per week

LSX313 TAXONOMY
Investigation and identification of local flora and fauna; use and construction of keys. The concepts of systematic, classification, taxonomy and nomenclatural procedure. Short lectures and tutorials associated with the practical exercises.
Courses: SC10, SC12 Credit Points: 8 Contact Hours: 3 per week

LSX315 PLANT PHYSIOLOGY
An introduction to the important aspects of whole-plant physiology, including nutrition, water relations, photosynthesis, translocation and stress physiology.
Course: SC10 Prequisite: LSX110
Credit Points: 8 Contact Hours: 3 per week

LSX320 CLINICAL BIOCHEMICAL TECHNIQUES 3
A study of the basic chemical procedures used in bio­

LSX330 PLANT PHYSIOLOGY
An introduction to the important aspects of whole-plant physiology, including nutrition, water relations, photosynthesis, translocation and stress physiology.
Course: SC10 Prequisite: LSX110
Credit Points: 8 Contact Hours: 3 per week

LSX320 CLINICAL BIOCHEMICAL TECHNIQUES 3
A study of the basic chemical procedures used in bio­

LSX330 PLANT PHYSIOLOGY
An introduction to the important aspects of whole-plant physiology, including nutrition, water relations, photosynthesis, translocation and stress physiology.
Course: SC10 Prequisite: LSX110
Credit Points: 8 Contact Hours: 3 per week

LSX320 CLINICAL BIOCHEMICAL TECHNIQUES 3
A study of the basic chemical procedures used in bio­

LSX330 PLANT PHYSIOLOGY
An introduction to the important aspects of whole-plant physiology, including nutrition, water relations, photosynthesis, translocation and stress physiology.
Course: SC10 Prequisite: LSX110
Credit Points: 8 Contact Hours: 3 per week

LSX320 CLINICAL BIOCHEMICAL TECHNIQUES 3
A study of the basic chemical procedures used in bio­

LSX330 PLANT PHYSIOLOGY
An introduction to the important aspects of whole-plant physiology, including nutrition, water relations, photosynthesis, translocation and stress physiology.
Course: SC10 Prequisite: LSX110
Credit Points: 8 Contact Hours: 3 per week

LSX320 CLINICAL BIOCHEMICAL TECHNIQUES 3
A study of the basic chemical procedures used in bio­

LSX330 PLANT PHYSIOLOGY
An introduction to the important aspects of whole-plant physiology, including nutrition, water relations, photosynthesis, translocation and stress physiology.
Course: SC10 Prequisite: LSX110
Credit Points: 8 Contact Hours: 3 per week

LSX320 CLINICAL BIOCHEMICAL TECHNIQUES 3
A study of the basic chemical procedures used in bio­

LSX330 PLANT PHYSIOLOGY
An introduction to the important aspects of whole-plant physiology, including nutrition, water relations, photosynthesis, translocation and stress physiology.
Course: SC10 Prequisite: LSX110
Credit Points: 8 Contact Hours: 3 per week

LSX320 CLINICAL BIOCHEMICAL TECHNIQUES 3
A study of the basic chemical procedures used in bio­

LSX330 PLANT PHYSIOLOGY
An introduction to the important aspects of whole-plant physiology, including nutrition, water relations, photosynthesis, translocation and stress physiology.
Course: SC10 Prequisite: LSX110
Credit Points: 8 Contact Hours: 3 per week

LSX320 CLINICAL BIOCHEMICAL TECHNIQUES 3
A study of the basic chemical procedures used in bio­

LSX330 PLANT PHYSIOLOGY
An introduction to the important aspects of whole-plant physiology, including nutrition, water relations, photosynthesis, translocation and stress physiology.
Course: SC10 Prequisite: LSX110
Credit Points: 8 Contact Hours: 3 per week

LSX320 CLINICAL BIOCHEMICAL TECHNIQUES 3
A study of the basic chemical procedures used in bio­
accuracy. Topics include: tests of renal, pancreatic and hepatic functions; the estimation of serum proteins, lipids and carbohydrates.

Courses: LS12, LS15, SC10
Prerequisites: LSX221, LSX222, LSX225
Credit Points: 8  Contact Hours: 4 per week

- LSX321 CLINICAL MICROBIOLOGICAL TECHNIQUES 3
  The techniques used in isolation and identification of bacteria important in human and animal infections; the use of computerised data bases to assist in bacterial identification; tests for the sensitivity of bacteria to antibiotics; preparation, sterilisation, quality control and use of bacteriological media.
  Courses: LS12, LS15  Prerequisite: LSX223
  Credit Points: 8  Contact Hours: 4 per week

- LSX322 HAEMATOLOGICAL TECHNIQUES 3
  Lectures and practical work in haematological techniques. Topics include: the counting of blood cells; the preparation, staining and examination of blood films; the determination of the red cell indices; supravital staining techniques and the erythrocyte sedimentation rate and origin and maturation of blood cells.
  Courses: LS12, LS15
  Prerequisites: LSX122, LSX221, LSX225
  Credit Points: 8  Contact Hours: 4 per week

- LSX323 HISTOLOGICAL TECHNIQUES 3
  Preparing tissue samples for examination by the various forms of light microscopy. Topics include: fixation, tissue processing, microtomy and an introduction to staining and light microscope techniques.
  Courses: LS12, LS15
  Prerequisites: LSX122, LSX221, LSX225
  Credit Points: 8  Contact Hours: 4 per week

- LSX324 IMMUNOLOGICAL TECHNIQUES 3
  Introduction to immunology with particular emphasis on the principle and performance of immunological techniques including blood grouping. Topics include: antigens, antibodies and the immune system.
  Courses: LS12, LS15
  Prerequisites: LSX125, LSX225
  Credit Points: 8  Contact Hours: 4 per week

- LSX325 CYTOLOGICAL TECHNIQUES 3
  Lectures and associated practical sessions in cytoligical methods and normal gynaecological cytology. Basis for clinical cytology offered in LSX425.
  Courses: LS12, 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.
  Courses: LS12, LS15
  Credit Points: 12  Contact Hours: 5 per week

- LSX332 PHYSIOLOGY & PHARMACOLOGY
  A study of the anatomy and physiology of the main systems, with emphasis on the major pathological disturbances. Also an introduction to the pharmacology of drugs used in anaesthesia.
  Courses: LS12, LS15  Prerequisite: LSX225
  Credit Points: 12  Contact Hours: 5 per week

- LSX333 ELECTRONICS & COMPUTING
  An understanding of the basic principles of electronics, enabling an understanding of the complex equipment used for the dispensing of anaesthesia; the basic hardware and software of computers; word processing, databases and spreadsheets.
  Courses: LS12, LS15  Prerequisite: LSX225
  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.
  Courses: LS12, LS15
  Credit Points: 12  Contact Hours: 5 per week

- LSX410 ENVIRONMENTAL BIOLOGY
  Ecosystems and energy flow. Productivity, decomposition and nutrient cycling. Niche, species packing, diversity, colonisation and community structure. Short compulsory field trips.
  Courses: SC10, SC12
  Credit Points: 8  Contact Hours: 3 per week

- LSX411 POPULATION BIOLOGY
  Population biology: structure and dynamics, evolution and differentiation; the relationships between the genetics, energetics and dynamics of populations leading to particular life-history strategies. Field excursions are compulsory.
  Courses: SC10, SC12  Corequisite: LSX412
  Credit Points: 8  Contact Hours: 3 per week

- LSX412 FIELD TECHNIQUES
  Activities include surveying, soil and climate 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.
  Courses: SC10, SC12
  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.
  Courses: SC10, SC12
  Prerequisites: LSX110, LSX111
  Credit Points: 8  Contact Hours: 3 per week

- LSX414 ANIMAL PHYSIOLOGY
  The general physiological processes which sustain life; animal-environment interactions.
  Course: SC10
  Credit Points: 8  Contact Hours: 3 per week

- LSX415 PLANT CELL & TISSUE CULTURE
  Topics include: techniques, equipment and media used in plant tissue culture, the role of plant growth regulators, and micropropagation. The significance of organogenesis, somatic embryogenesis and genetic variability in plant tissue culture is discussed. Appropriate laboratory exercises.
  Course: SC10  Prerequisite: LSX315
  Credit Points: 8  Contact Hours: 3 per week

- LSX420 CLINICAL BIOCHEMICAL TECHNIQUES 4
  A study of more complex techniques used in clinical biochemical laboratories, including enzyme assays, estimations of electrolytes, blood gases, drugs, vitamins and hormones. Auto-analytical techniques and quality control are also treated.
  Courses: LS12, LS15  Prerequisite: LSX320
  Credit Points: 8  Contact Hours: 4 per week

- LSX421 CLINICAL MICROBIOLOGICAL TECHNIQUES 4
  Basic microbiological techniques in the following dis-
Bciplines: virology, mycology and parasitology (enteric parasites). The practical periods are used to reinforce the theoretical aspects of the unit.
Courses: LS12, LS15  
Prerequisite: LSX223  
Credit Points: 8  
Contact Hours: 4 per week

LSX422 HAEMATOLOGICAL TECHNIQUES 4
An extension of LSX322. The student is introduced to the common blood disorders. A brief outline of their aetiology and laboratory investigations is given. The main emphasis is of use of basic haematological techniques and some specialised laboratory procedures used in the investigation of commonly encountered blood diseases. The basic theory of haemostasis and the screening tests used in the investigation of the bleeding disorders are discussed.
Courses: LS12, LS15  
Prerequisite: LSX322  
Credit Points: 8  
Contact Hours: 4 per week

LSX423 HISTOLOGICAL TECHNIQUES 4
Specialised methods for identifying tissue components. Topics include: electron microscopy, histochemistry, immunohistochemistry. Emphasis is placed on the practical application of these methods in histopathology.
Courses: LS12, LS15  
Prerequisite: LSX323  
Credit Points: 8  
Contact Hours: 4 per week

LSX424 TRANSFUSION TECHNIQUES 4
The basic knowledge of immunology gained in LSX324 is applied to the study of human blood group systems. Topics include: principles of immunohematology, ABO blood group, Rhesus blood group systems, compatibility testing, antibody identification, transfusion reactions, antenatal testing, quality control, intravenous fluids, blood products.
Courses: LS12, LS15  
Prerequisite: LSX324  
Credit Points: 8  
Contact Hours: 4 per week

LSX425 CYTOLOGICAL TECHNIQUES 4
Specialised preparative methods for non-gynaecological cytology and demonstrating the evaluation of specimens commonly encountered in routine diagnostic cytology.
Courses: LS12, LS15  
Prerequisite: LSX325  
Credit Points: 8  
Contact Hours: 4 per week

LSX431 CARDIAC CARE & RESUSCITATION
In the operating room and intensive care units, the cardiac status of patients is monitored by several devices. Students are introduced to these devices as well as to the resuscitation equipment and special equipment used in lung and cardiac surgery.
Courses: LS12, LS15  
Prerequisite: LSX332  
Credit Points: 12  
Contact Hours: 5 per week

LSX432 CARE OF RESPIRATORY AIRWAYS & INTENSIVE CARE
The care and maintenance of equipment used for the respiratory Airways and in intensive care; acid-base balance, blood gases, and the equipment needed for the monitoring of those parameters.
Courses: LS12, LS15  
Prerequisite: LSX332  
Credit Points: 12  
Contact Hours: 5 per week

LSX433 ANAESTHESIA FOR SPECIALISED SURGERY
Surgical interventions requiring anaesthesia; the techniques used and their effects on the vital parameters of patients in these special circumstances.
Courses: LS12, LS15  
Prerequisite: LSX332  
Credit Points: 12  
Contact Hours: 5 per week

LSX434 PROFESSIONAL PRACTICE
The practical skills needed for the proper delivery of anaesthetics. This is essentially a practical unit, which can only be taken towards the end of the course. The aim is for students to become proficient and confident in assisting with the delivery of anaesthesia.
Courses: LS12, LS15  
Prerequisite: LSX334  
Credit Points: 12  
Contact Hours: 5 per week

LWB130 INTRODUCTION TO STUDY IN LAW
This unit provides an intensive introductory framework for the study of law at QUT. It outlines fundamental aspects of law and the legal system. It also provides an introduction to the learning environment at QUT including different learning styles, the objectives and structure of the course, the skills and knowledge required and the learning environment in which they are acquired; an orientation or guidance map at the point of entry to the LLB learning environment.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, LX31, LX32, LX33  
Credit Points: Nil

LWB131 LAW IN CONTEXT
The varied contexts of law; involves input on some of the sources of law and traditional doctrinal approaches supplemented by contextual material describing other ways of seeing law from a number of perspectives including ideological, historical, political, social, economic and comparative.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, LX31, LX32, LX33  
Credit Points: 24  
Contact Hours: 3 per week  
Incompatible with: LWB101

LWB132 CONTRACTS
Contract law: definition of the Law of Contract, outline of remedies; formation of contracts; equitable estoppel; express and implied terms; factors vitiating contracts; capacity to contract; privity of contract; discharge of contract; breach of contract.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, LX32, LX33  
Credit Points: 24  
Contact Hours: 3 per week  
Incompatible with: LWB102

LWB133 TORTS
At its most general level this branch of the law is concerned with the question of compensation to be given by a person causing a loss to a person suffering a loss. Areas of everyday conflict which may be resolved by principles of tort liability include damage sustained as a result of a motor-vehicle collision, work related accidents, and injury to a person's reputation from publication of defamatory material. The rules are examined to ascertain whether they satisfy the critical test: functional adequacy in terms of contemporary values.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, LX32, LX33  
Credit Points: 24  
Contact Hours: 4 per week  
Incompatible with: LWB103

LWB134 RESEARCH & LEGAL REASONING
Legal reasoning involves the application of rules or standards of law to the resolution of legal problems, which typically arise in disputes, or potential disputes, between parties. Topics include: how to find the existing rules or standards of law and apply them to the solution of straightforward legal problems; and how to try to anticipate the way in which courts will decide the more complex or controversial matters.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, LX31, LX32, LX33  
Credit Points: 12  
Contact Hours: 3 per week  
Incompatible with: LWB104
**LWB135 LEGISLATION**
Legislation (Acts of Parliament and delegated legislation) is the source of a very high and increasing proportion of law within the Australian system. An ability to understand the legislative process and the ability to read and interpret legislation provide some of the essential building blocks and background to the study and practice of statute based areas of the law. Such areas constitute the majority of later year units.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, LX31, LX32, LX33
**Credit Points:** 12  **Contact Hours:** 3 per week  **Incompatible with:** LWB101

**LWB231 INTRODUCTION TO PUBLIC LAW**
The basic institutions of government the executive, the Parliament and the judiciary; the general principles to which legislative power is subject, and the principles by which executive decision-making is kept open and accountable.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, LX31, LX32, LX33  
**Credit Points:** 12  **Contact Hours:** 3 per week  **Incompatible with:** LWB203 and LWB311

**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, including the Torrens system.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, LX31, LX33  
**Credit Points:** 24  **Contact Hours:** 3 per week  **Incompatible with:** LWB201

**LWB234 EQUITY AND TRUSTS**
The major principles of equity including: fiduciaries, unconscionable dealings and the principal equitable remedies; trusts and trusteeship.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, LX31, LX33  
**Credit Points:** 24  **Contact Hours:** 3 per week  **Incompatible with:** LWB301

**LWB235 AUSTRALIAN FEDERAL CONSTITUTIONAL LAW**
The constitutional arrangements effected by the Commonwealth Constitution: the structure and institutions of government; the division of power between Commonwealth and states; and relations between the different levels of government; emphasis to Commonwealth legislative powers, executive and judicial powers.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, LX31, LX33  
**Credit Points:** 24  **Contact Hours:** 3 per week  **Incompatible with:** LWB231

**LWB302 FAMILY LAW**
The manner in which the law treats the special social relationships which exist among members of a family and transforms them into legal rights and duties. The family as a legal phenomenon; annulment of marriages; dissolution of marriages; consequences of separation and divorce, such as maintenance, adjustment of interests in property and custody.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33  
**Credit Points:** 12  **Contact Hours:** 3 per week

**LWB306 LOCAL GOVERNMENT AND PLANNING LAW**
The sources of legal authority for the government of cities, towns and shires; laws relating to town planning and subdivision, including the principles applicable to the rezoning of land; uses of land; control of developments by local governments; rights to object to development; control exercised over subdivision of land by local government; rights of appeal from local government decisions; structure, purpose and procedure of the Planning and Environment Court; other legislation related to the town planning process, such as heritage legislation and contaminated land legislation.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33  
**Credit Points:** 8  **Contact Hours:** 2 per week

**LWB307 INSOLVENCY LAW**
The insolvency of individuals and the Bankruptcy Act 1966 (Cth); winding up of companies, provisions of arrangement of official management and procedures other than winding up which may be open to an insolvent company; law relating to receivership and agents of and mortgages in possession; relevant provisions of the Corporations Law.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33  
**Prerequisites:** LWB132 & LWB234  
**Credit Points:** 12  **Contact Hours:** 3 per week

**LWB308 INDUSTRIAL LAW**
Rights and duties of employees and employers; unfair dismissal entitlements 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; enterprise bargaining; industrial action.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX32, LX33  
**Credit Points:** 8  **Contact Hours:** 2 per week

**LWB309 SUCCESSION**
Intestate and testate succession; definitions; joint and mutual wills; formal requirements for execution of valid will; alteration, revocation and revival of wills; administration of assets; duties, powers, rights and liabilities of personal representatives; family maintenance provisions: power of court to vary a will.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33  
**Credit Points:** 8  **Contact Hours:** 2 per week

**LWB312 LAND CONTRACTS**
The principles involved in the construction of contracts for the sale of land, with special emphasis on the current standard REIQ Contract in use in Queensland. Statutory requirements as they affect such contracts, including those relating to building units and group titles conveying.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33  
**Credit Points:** 8  **Contact Hours:** 2 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 Queensland Anti-Discrimination Act; the Anti-Discrimination Commission and procedures.

**Courses:** IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33  
**Prerequisites:** LWB132, LWB233, LWB234  
**Credit Points:** 12  **Contact Hours:** 3 per week

**LWB315 JESSUP INTERNATIONAL LAW MOOT**
The Philip C. Jessup International Law Moot, run under
LW31, LW33, LX31, LX32, LX33
Credit
Courses: IF31, IF33, IF34, IF36, IF37, IF38,

Government policy and legislation; rights of citizenship;

The legal theories of industrialized society; historical

Incompatible with: LWB401
Credit Points: 8
Contact Hours: 2 per week

LWB331 ADMINISTRATIVE LAW
The law relating to judicial review of executive decision
making and control of government officials and public
authorities, especially where the exercise of power af­
fected the rights and interests of individuals.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40,
LW31, LW33, LX31, LX32, LX33
Prerequisite: LWB231
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: LWB311

LWB332 PROPERTY 2
Fundamental concepts of personal property law; the con­
cept of negotiability; transfers of personal property; pro­	ection of personal property interests; agency; bailment.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40,
LW31, LW33, LX31, LX32, LX33
Prerequisite: LWB233
Corequisite: LWB233
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: LWB303

LWB333 THEORIES OF LAW
The legal theories of industrialised society: historical
contexts; underlying values and assumptions; economic,
political and social objectives; the practical con­
sequences of application to legal and social problems.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40,
LW31, LW33, LX31, LX32, LX33
Prerequisite: LWB131
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: LWB305

LWB334 CORPORATE LAW
The basic legal principles relating to registered com­
panies: the principle of the veil of incorporation, internal
functioning of a registered company including the memo­
randum and articles of association; dealings with third
parties; legal rules relating to share capital, dividends
and loan capital; introduction to obligations of company
officers and shareholder rights.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40,
LW31, LW33, LX31, LX32, LX33
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: LWB401

LWB351 ABORIGINAL AND ISLANDER LEGAL ISSUES
Government policy and legislation; rights of citizenship;
two laws, one land; Aboriginal land tenure; Mabo: the
Native Title Act (Cth); international law and indigenous
people; cultural heritage; intellectual property rights;
ATSIC Act (Cth); social justice package.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40,
LW31, LW33, LX31, LX32, LX33
Credit Points: 8
Contact Hours: 2 per week

LWB353 ADVANCED ADMINISTRATIVE LAW
Extends and builds upon an understanding of the funda­
ment principles of judicial review and legal control of
government established in the core unit LWB311. Pro­
vides students with a forum to consider a range of issues
which impinge upon government accountability; and also
with an understanding of issues which affect the rights of
citizens in their relations with the government.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40,
LW31, LW33, LX31, LX32, LX33
Prerequisites: LWB231, LWB311
Credit Points: 8
Contact Hours: 2 per week

LWB354 ADVANCED CIVIL PROCEDURE
This elective unit builds on civil procedure providing
advanced litigation skills focusing on interlocutory and
summary procedures. Content includes case flow manage­
ment, commercial causes, discovery, inspection, in­
terrogatories, drafting, briefs and advices, default and
summary judgment, time constraints, injunctions, inter­
locutory applications, interim preservation orders, costs
and management of litigation.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40,
LW31, LW33, LX31, LX32, LX33
Prerequisite: LWB431
Credit Points: 8
Contact Hours: 2 per week

LWB359 ADVANCED TAXATION LAW
An examination of the taxation of business entities (par­
tnerships, trusts and companies). Some taxation plans
issues together with the tax avoidance provisions will also
be canvassed.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40,
LW31, LW33, LX32, LX33
Prerequisite: LWB364
Credit Points: 8
Contact Hours: 2 per week

LWB361 DRAFTING
Drafting of deeds, contract conditions, leases and mort­
gage clauses in a plain English format. Stamp duties on
instruments.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40,
LW31, LX31, LX32, LX33
Prerequisites: LWB233
Prior Assumed: LWB312, LWB492
Credit Points: 8
Contact Hours: 2 per week
Incompatible with: LWB414

LWB363 INSURANCE LAW
Risk management, in particular insurance, will play an
increasingly significant role in modern commercial life.
Insurance however is not limited to the commercial
sphere but spans a wide variety of subject matter, in­
cluding compulsory schemes such as third party motor
vehicle insurance and workers’ compensation. From a
vocational perspective the study of insurance law is
important, being encountered by property, commercial
and litigation lawyers. From an educational perspective,
the unit offers an appreciation of how the common law
has been modified by the legislature to balance the in­
terests of the insurer and the insured.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40,
LW31, LW33, LX31, LX32, LX33
Credit Points: 8
Contact Hours: 2 per week
Incompatible with: LWB414

LWB364 INTRODUCTION TO TAXATION LAW
The principles relating to the distinction between income
and capital, the concept of deductions; introductory capi­
tal gains tax, the tax avoidance provisions and liability of
tax advisers.
Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40,
LW31, LX31, LX32, LX33
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: LWB403
LWB366 LAW OF COMMERCIAL ENTITIES

The legal principles pertaining to a number of different structures found in commercial life. A brief consideration of corporations; more detailed examination of partnerships, unit trusts, joint ventures, the definition of these structures; relationship with third parties; relationship of members inter se.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33
Credit Points: 8  Contact Hours: 2 per week

LWB367 LAW OF CORPORATE GOVERNANCE

This unit is offered as a ‘specialised’ unit providing an examination of the two organs which govern a company: the board of directors and the company in general meeting. The unit will examine in some detail particular aspects of the law applicable to these bodies, for example some of the duties affecting directors; topical issues such as directors’ interests in contracts would be relevant; the role of waiver of breaches and improprieties; members’ rights and protection; relevant aspects of meeting law.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33
Credit Points: 12  Contact Hours: 3 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, the law of armed conflict.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33
Credit Points: 12  Contact Hours: 3 per week

LWB407 CONFLICT OF LAWS

The body of law governing the resolution of private legal problems with a significant foreign element: jurisdiction of domestic courts to determine matters having a foreign element; enforcement of foreign judgments in the domestic jurisdiction: choice of law for the resolution of the dispute, both generally and in relation to family law, contract, tort, property and succession.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33
Prerequisite: LWB313
Credit Points: 12  Contact Hours: 3 per week

LWB410 RESTRICTIVE TRADE PRACTICES

An overview of the anti-competitive practices which are proscribed by Part IV of the Trade Practices Act 1974 (Cth). It will also deal with the remedies available for contraventions of Part IV and the possibility of obtaining authorisation and/or where appropriate notification from the Australian Competition and Consumer Commission.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33
Credit Points: 8  Contact Hours: 2 per week

LWB412 RESEARCH & WRITING PROJECT

An arranged and supervised piece of research into some area of legal knowledge, and the writing of a paper of between 10,000 and 15,000 words on the results of the research and conclusions drawn therefrom. The paper becomes the property of the Faculty of Law and may be included 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, IF40, LW31, LW33, LW41, LX31, LX32, LX33
Credit Points: 8  Contact Hours: 2 per week

LWB431 CIVIL PROCEDURE

The structures and processes of litigation conducted in the Supreme and Federal Courts; examination of jurisdiction, limitation of actions, motor vehicle insurance, client care, originating process, appearance, service, parties, joinder, pleadings, evidence, subpoenas, settlement, trial, appeal costs and execution.

Courses: IF31, IF33, IF34, IF36, IF38, IF40, LW31, LW33, LW41, LX31, LX32, LX33
Credit Points: 12  Contact Hours: 3 per week  Incompatible with: LWB404

LWB432 EVIDENCE

The rules and principles that relate to the presentation of facts to a court of law.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, LX31, LX32, LX33
Credit Points: 12  Contact Hours: 3 per week  Incompatible with: LWB402

LWB433 PROFESSIONAL RESPONSIBILITY

The ethical principles upon which the practice of all professions is based; the principles which underpin the discipline of law and the workings of the legal profession; the history, nature, organisation and operation of the legal profession; including codes of conduct, trust accounts and professional legal ethics.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LW41, LX31, LX32, LX33
Credit Points: 12  Contact Hours: 3 per week  Incompatible with: LWB402

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, IF39, IF40, LW31, LW33, LW41, LX31, LX32, LX33
Prerequisite: LWB314
Credit Points: 12  Contact Hours: 3 per week  Incompatible with: LWB415

LWB452 ASIAN LEGAL SYSTEMS

Basic knowledge of Asian legal systems; a general overview of the region; specific countries, e.g. China, Japan and Malaysia; practical areas of the law are studied and comparisons drawn with Australian law.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF39, IF40, LW31, LW33, LW41, LX31, LX32, LX33
Credit Points: 8  Contact Hours: 2 per week

LWB454 BANKING & FINANCE LAW

An introduction to the Australian banking system, including: terms of contracts between banker and customer; Clearance System; rights of recovery and liabilities of paying and collecting banks; current legal topics of interest in the banking industry. An introduction to negotiable instruments; principle of negotiability; liability of parties to a negotiable instrument and the consequences of fraud.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF39, IF40, LW31, LW33, LW41, LX31, LX32, LX33
Credit Points: 8  Contact Hours: 2 per week
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- LWB456 LEGAL CLINIC (ORGANISED PROGRAM)

Students are provided with the opportunity to see law in action through being involved in the delivery of legal services to members of the community under the umbrella of the Legal Aid Office (Queensland). Students' work in the Legal Aid Office is supplemented with a weekly seminar program which deals with such topics as legal interviewing, family and criminal law practice, professionalism and legal writing.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33
Credit Points: 8 Contact Hours: 8 per week

- LWB458 CONSUMER PROTECTION

The course will deal with the Trade Practices Act 1974, and will be divided into two broad parts, the first dealing with Part V and the second with the product liability provisions found in Part V and Part VA. Misleading or deceptive conduct, the general principles of product liability and implied conditions and warranties.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33
Credit Points: 8 Contact Hours: 2 per week

- LWB461 PRIVATE LAW REMEDIES

Students develop an overall perspective on and deeper understanding of the subject of remedies. The unit is designed to give students a knowledge of the principles underlying the availability of various private law remedies, and to introduce students to an understanding of the circumstances which may give rise to a claim for restitution. It also develops a knowledge and understanding of the choice and range of private law remedies and defences and the capacity to make sound judgments in electing which remedies to pursue against a background of heterogeneous fact situations.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33
Prerequisites: LWB132 or LWB302
Credit Points: 8 Contact Hours: 2 per week

- LWB482 COMPUTERS & THE LAW

The role of computers in legal practice: the body of law that has arisen in relation to computers and computer applications.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33
Credit Points: 8 Contact Hours: 2 per week

- LWB483 MEDICO-LEGAL ISSUES

The constitutional framework supporting the regulation of health care; the relationship between the individual and the health care provider in terms of consent to treatment and negligence; the impact of the criminal law: abortion, removal from life support systems; mental illness and fitness to plead; medical records and evidence: ownership and confidentiality of records, expert evidence; the role of the coroner, complaints against hospitals and health care workers.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33
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 (e.g. property, administrative control, law and policy, planning, management); access to the environment; planning to prevent environmental degradation and pollution; protecting the environment; managing the environment; conservation; ecologically sustainable development; enforcement of environmental law; the role of the Commonwealth.

Courses: IF31, IF33, IF34, IF36, IF37, IF38, IF40, LW31, LW33, LX31, LX32, LX33
Credit Points: 8 Contact Hours: 2 per week

- LWB486 INTELLECTUAL PROPERTY LAW

The most significant of the legislative enactments creating or protecting intellectual property in Australia, including those governing copyright, designs, patents and trade marks; application of the common law, particularly confidential information and passing off.

Courses: IF31, IF33, IF34, IF36, IF38, IF40, LW31, LW33, LX31, LX32, LX33
Credit Points: 8 Contact Hours: 2 per week

- LWB487 MARITIME LAW

Carriage of goods by sea: charters parties; 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, IF38, IF40, LW31, LW33, LX31, LX32, LX33
Credit Points: 8 Contact Hours: 2 per week

- LWB492 SECURITIES

The unit examines security interests including securities given by third parties over real and personal property. Those securities examined include Torrens title mortgages, guarantees, bills of sale over personal assets and motor vehicles, possessory liens and subcontractors' charges. The consumer credit legislation and Trade Practices Act 1974 as they affect the validity and operation of securities will also be considered.

Courses: IF31, IF33, IF34, IF36, IF38, IF40, LW31, LW33, LX31, LX32, LX33
Prerequisites: LWB132, LWB233
Credit Points: 12 Contact Hours: 3 per week

- LWN003 ADVANCED FAMILY LAW

A detailed examination of the law and underlying principles of selected areas of Family Law including: jurisdiction; financial aspects of marriage and divorce; children; marital and non-marital relationships. Where appropriate, comparisons with other countries are used and the impact of treaties is considered.

Courses: LW50, LW51
Credit Points: 24 Contact Hours: 2 per week

- LWN008 COMMERCIAL LEASES

The principles governing standard clauses of a modern Australian commercial lease in the light of recent case law and Queensland statutory provisions affecting such interests. Topics include: negotiation of leases, subject matter of leases, construction of leases, covenants for repair, user, assignment, quiet possession, options to renew and purchase, insurance, the phenomenon of default, remedies of lessor and lessee, guarantees of leases and retail shop leases generally.

Courses: LW50, LW51
Credit Points: 24 Contact Hours: 2 per week

- LWN017 RESTITUTION

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The law of restitution is concerned with those cases where a plaintiff obtains a money remedy and/or recovers property from a defendant who has been unjustly enriched by the receipt of money or other benefits at the expense of the plaintiff. The theoretical basis and scope of restitutionary claims and defences to them and their relationship with those claims founded on the traditional common law obligations, torts and contract and the law of property are considered.

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week
LWN018 SELECT PROBLEMS OF TRUSTS
Aspects of the principles of equity in the context of express, resulting and constructive trusts including the creation of trusts, the nature of equitable proprietary interests, proprietary remedies for the recovery of property in equity including equitable charges and liens and various aspects of tracing in equity, particularly in the context of bankruptcy and insolvency. Some aspects of resulting trusts are considered in relation to illegality and in relation to determining the ownership of property. Various aspects of constructive trusts are also considered, including the nature of the constructive trust, the acquisition of property by a fiduciary, the acquisition of property on death, the acquisition of land under an oral agreement or trust, unconscionable conduct in the context of undue influence, unconscientious dealing, estoppel and in the context of determining the equitable ownership of property.

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
Topics include: overview of the legal framework of the Australian banking and finance industry; 'money' and 'legal tender'; foreign exchange transactions; banker and customer and incidents of that relationship; bank accounts and dealings in relation to such accounts; bills of exchange, promissory notes and cheques; collecting bank and paying bank; the clearing system.

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

LWN022 BANKING & FINANCE LAW 2
Topics include: banking instruments including documentary and standby credits, performance bonds and bank guarantees; electronic banking; the role of bankers as financiers and specific financing methods such as bill line facilities and foreign currency loans; securities for finance including company securities; default and insolvency and its impact on bankers.

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

LWN024 SELECT PROBLEMS OF TRIBUNALS & ENQUIRIES
Investigation of problems that occur in the law relating to the activities of tribunals and enquiries; concentrates on Royal Commissions and related forms of enquiries, as well as statutory tribunals exercising quasi-judicial functions. Topics include: the power to require information; the privilege against self-incrimination; Crown privilege and duties of secrecy; do the rules of procedural fairness apply?; can an enquiry commit a contempt of court?; enquiries and the rules of parliamentary privilege; the power of the courts to review the activities of enquiries; enquiries that investigate a mixture of federal and state matters; the laws of privacy and confidentiality. Legislative attempts to overhaul judicial review of inquiries.

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

LWN025 RESEARCH PROJECT 1A
A supervised research project over one semester approved by the Postgraduate Studies Committee. Students may undertake up to 48 credit points of Research Projects only with the approval of the Director of Postgraduate Studies.

Courses: LW50, LW51
Credit Points: 12

LWN026 RESEARCH PROJECT 2A
A supervised research project over the whole year approved by the Postgraduate Studies Committee. Students may undertake up to 48 credit points of Research Projects only with the approval of the Director of Postgraduate Studies.

Courses: LW50, LW51
Credit Points: 24

LWN028 ADVANCED SECURITIES
Competing claims to fixtures on land; the nature of a charge and a mortgage; security over bank accounts; recent problems with Bills of Sale legislation; the mortgagee's power of sale; guarantees and indemnities; fixed and floating securities; some problems arising from receiverships and mortgages in possession; securities and the Trade Practices Act; bank guarantees and unconditional performance bonds; the demise of the scienter temporis principle; remoteness 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

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 (i.e. 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, i.e. neighbourhood, family, commercial; the advantages and disadvantages of mediation; power imbalance; when mediation is not appropriate; ethical and professional issues relating to mediation.

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

LWN031 FOREIGN INVESTMENT LAW & PRACTICE
The law and policy regime for Australian foreign investment at Commonwealth and state levels; theoretical and practical aspects of foreign investment regulation; workshops and seminars covering Commonwealth and state legislation, situations commonly arising in practice, and topics related to foreign investment (e.g. native title, government contracts, etc.).

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

LWN032 CREDIT FOR UQ SUBJECT 1
Under the course rules, a coursework student may, with the prior approval in writing of the Deans of the Faculties of Law of QUT and the University of Queensland, undertake any combination of whole year and one semester units offered in the LLM degree by Coursework at the University of Queensland which are equivalent to no more than 48 credit points. This unit code represents a one-semester unit taken pursuant to that course rule at the University of Queensland.

Courses: LW50, LW51
Credit Points: 12

LWN033 CREDIT FOR UQ SUBJECT 2
See LWN032.

Courses: LW50, LW51
Credit Points: 12

LWN034 CREDIT FOR 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; medical records and expert evidence; ownership and confidentiality of records; the role of the coroner; complaints against health-care workers.

Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LW0036 SELECT ISSUES IN INTELLECTUAL PROPERTY LAW

The application of intellectual property law to common commercial arrangements; develops an awareness of emerging issues in intellectual property including application to computers, performers' rights and moral rights; examines the remedies, procedures and processes in this field.

Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LW0037 STAMP DUTY & COMMERCIAL TRANSACTIONS

Whilst stamp duty remains a tax on instruments, amendments to the Stamp Act have had the result that it is essentially a transactional impost. On completion, students have a sound understanding of the scope of the Act and of the circumstances in which commercial transactions attract a liability to duty. Topics include: territorial nexus; stamp duty administration; transactions concerning companies; transactions concerning trusts; partnership transactions; planning and structuring issues; anti-avoidance provisions.

Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LW0038 CAPITAL GAINS TAX & COMMERCIAL TRANSACTIONS

The capital gains tax provisions contained in Part IIIA of the Income Tax Assessment Act have the potential to apply to innumerable acts, transactions and events. Topics in this unit include: the relationship between Part IIIA and the 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; trust and capital gains tax; planning and structuring issues; tax avoidance and capital gains tax.

Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LW0041 ECONOMIC ANALYSIS OF THE LAW

A consideration of the manner in which, and the extent to which, the principles and methodologies of economics can be applied in the analysis of statutes and the common law, in evaluating proposals for the reform of the law, and in explaining, justifying or criticising particular rules of law. Particular focus is placed on the analysis of various contemporary issues in the law of torts and the law of contract. A previous course in economics is recommended.

Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LW0043 LAW OF COMPANY TAKEOVERS

Consideration of Chapter 6 of the Corporation Law which regulates acquisition of shares which affect a change in a company's control. Both practical perspectives and conceptual analysis are emphasised.

Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LW0044 INSTITUTIONAL INVESTORS

An advanced corporate banking financial institution course. Institutional investors are financial institutions like premium funds, insurance companies, mutual funds, savings and trust departments of banks, trust companies, securities firms, all of which invest on behalf of the public. The way they make investments is governed by statute and by common law as well as by contract. Institutional investors now are investors in the global financial and capital markets. The unit entails three parts. The first part deals with a description of institutional investors in Australia, Asia, North America and Europe. The second part canvasses the common and statutory law regulating and governing institutional investors as well as contract law. The third part deals with special topics such as conflict of interest, exclusive self-dealing and the investors role in corporate covenants, especially in proxy battles, mergers and takeovers as well as social investments and the breach of the prudent man rule.

Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LW0045 LAW RELATING TO PUBLIC & OFFICIAL CORRUPTION

Concept of public duty; response of the general law; anti-corruption models; investigation and prosecution of official corruption from the perspective of the Criminal Law.

Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LW0046 ADVANCED PLANNING LAW

A detailed study of town planning law with special emphasis on the following: relevant Queensland legislation and in particular the Local Government Planning & Environment Act 1990 and the impact of the planning, environmental and development assessment. The implementation, structure and operation of town planning schemes, Strategic Plans and their legal effect. The role and jurisdiction of the Planning & Environment Court, its Rules of Court, rights of appeal therefrom and the power of costs. Applications for town planning consent, rezoning and subdivision of land and relevant considerations in connection therewith. The rights and obligations of objectors, objective 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

■ LW0047 LEGAL EDUCATION

This unit involves an introduction to the main schools of thought on legal education. A review of legal education from an historical and sociopolitical perspective together with examination of the implications on legal education of new schools of contemporary thought such as feminist legal theory. Analysis of the learning process considering student approaches to learning, adult learning theory and 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

■ LW0048 ADVANCED LEGAL RESEARCH

The concepts, techniques, aims and methods of legal research and other research relevant to an interdiscipli-
CIVIL PROCEDURE deals at length with the presentation and defence of responsibility for environmental protection; conservation of source materials, including the respective roles of researcher and supervisor; structuring research material in support of a thesis, the diagnosis and remedy of structural problems. It also deals with the conventions of presentation, assessment of research in terms of the differing criteria including the respective roles of researcher and supervisor; structuring research material in support of a thesis, the diagnosis and remedy of structural problems. Different research objectives will be considered for attention, for example research in government or for law reform.

Courses: LW50, LW51
Credit Points: 12  Contact Hours: 2 per week

■ LW5049 INTERNATIONAL ENVIRONMENTAL LAW
The development of international environmental law; state responsibility for environmental protection; conservation of biological diversity; climate change; protection of the atmosphere; protection of wildlife and habitats; hazardous wastes and toxic chemicals; conservation of the world heritage; international trade and the environment; international dispute resolution; enforceability of international legal regimes.

Courses: LW50, LW51
Credit Points: 12  Contact Hours: 2 per week

■ LW5050 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, and mergers. These substantive prohibitions are intended to regulate competition in markets. The early part of the course focuses on basic concepts such as markets, competition, and market power. 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 Australian Competition and Consumer Commission, the Tribunal and the courts.

Courses: LW50, LW51
Credit Points: 12  Contact Hours: 2 per week

■ LW5051 CONSUMER PROTECTION & PRODUCT LIABILITY
This unit is divided into two main parts. The first part considers the statutory and common law actions which are available to protect consumers from misleading or deceptive conduct and unfair marketing practices. Emphasis is given to the role played by the Trade Practices Act in relation to conveyancing and land transactions, banking transactions and advertising. Unconscionable conduct is also considered. The second part of the unit is concerned with statutory and common law actions available when loss or damage is suffered as a result of defective products. Remedies and defences are considered throughout the course.

Courses: LW50, LW51
Credit Points: 12  Contact Hours: 2 per week

■ LW5052 LITIGATION - CIVIL PROCEDURE
Focus upon topics of current interest or difficulty in civil procedure. Supreme and Federal Court rules and practice directions are considered in the light of the theories of civil procedure and tactics involved in dispute resolution. Some principles of negotiation and alternative dispute resolution are also addressed. Participants will acquire an appreciation of the dynamics of the adversarial process and an understanding of selected principles of interlocutory disputes in the light of the tactics involved in an action as a whole. Offers an opportunity for students to deepen and broaden their legal education in a way related directly to professional practice.

Courses: LW50, LW51
Credit Points: 12  Contact Hours: 2 per week

■ LW5053 RESEARCH PROJECT 1B
See LW5025.

Courses: LW50, LW51
Prerequisite: LW5025
Credit Points: 12  Contact Hours: 2 per week

■ LW5054 CONTEMPORARY COMMERCIAL LEGAL ISSUES
The law and practice of contemporary commercial legal issues; topics covered include governmental trade practices liability, Queensland native title law and practice, third party securities (corporate and personal), Australian foreign investment regulation, topical legal problems in property valuation, paradigm shifts in Australian law and their impact on commercial practice, crown immunity and corporatisation, and client-based research in commercial practice.

Courses: LW50, LW51
Credit Points: 12  Contact Hours: 2 per week

■ LW5055 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.

Courses: LW50, LW51
Credit Points: 12  Contact Hours: 2 per week

■ LW5056 RESEARCH PROJECT 1C
See LW5025.

Courses: LW50, LW51
Prerequisites: LW5025, LW5053
Credit Points: 12  Contact Hours: 2 per week

■ LW5057 RESEARCH PROJECT 1D
See LW5025.

Courses: LW50, LW51
Prerequisites: LW5025, LW5053, LW5056
Credit Points: 12  Contact Hours: 2 per week

■ LW5058 RESEARCH PROJECT 2B
See LW5026.

Courses: LW50, LW51
Prerequisite: LW5026
Credit Points: 24

■ LW5059 REMEDIES
The theoretical bases of major common law and equitable remedies and the substantive law relating to those remedies; the operation of the law of remedies in Australia and the need for reform of the law of remedies.

Courses: LW50, LW51
Credit Points: 12  Contact Hours: 2 per week

■ LW5060 ENVIRONMENTAL LEGAL SYSTEM
Analysis of the principles and concepts of environmental law in Queensland; understanding of the law in Queensland for the protection and conservation of the environment; examination of the way in which the law accommodates private interests and the public interest. Included are pollution control, environmental impact assessment, environmental management, conservation of the natural and cultural environments.

Courses: IF64, LW50, LW51
Credit Points: 12  Contact Hours: 2 per week

■ LW5061 NATURAL RESOURCES LAW
The principles and concepts of natural resources law in Queensland dealing with the ownership and control of...
natural resources, providing access to these resources, controlling the operational side of the development of these resources, and recognising commercial structures for achieving these operational objectives; an assessment of a number of developed and evolving mechanisms for achieving these objectives such as policy objectives, management plans, incentives and inducements, market instruments and property rights.

Courses: IF64, LW50, LW51
Credit Points: 12 Contact Hours: 2 per week Incompatible with: LWN014, LWN027

- **LWN062 FEDERAL ENVIRONMENTAL LAW**
  History of Commonwealth involvement in environmental management; the Inter-Governmental Agreement of 1992; relevant paragraphs of s. 51 of the Constitution; judicial interpretation of the paragraphs; impact of ss 90, 92 and 109 of the Constitution; federal legislation dealing with offshore development, marine environment protection, environmental impact assessment, national estate, wildlife conservation, Great Barrier Reef, hazardous waste and industrial chemicals, world heritage, ozone protection, ecologically sustainable development, climate changes, 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 include European countries, such as Germany and the United Kingdom, the European Union, and countries in North America and the Asia Pacific region.

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

- **LWN064 THEORIES OF CONTEMPORARY LEGAL CRITIQUE**
The influence upon legal, political and institutional reform of contemporary legal critiques, especially of race, gender, culture/ethnicity and class.

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

- **LWN065 CONSTRUCTION & ENGINEERING LAW**
Standard contracts used in the Australian construction and engineering industries and the legal issues confronting users of these documents; the law of contract and legislation as it applies to the construction and engineering industries at an advanced level; issues of drafting in relation to the relevant standard forms.

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

- **LWN066 ADVANCED INSURANCE LAW**
Detailed examination at an advanced level of the general principles of law applicable to contracts of insurance as well as an examination of the idiosyncratic rules and practices pertaining to specific types of insurance. Topics include: Nature and definition of insurance; insurable interest; third parties' interests; utmost good faith; brokers and agents; formation of contracts, proposals, etc.; contract terms; claims; indemnity and amount recoverable; subrogation; double insurance and contribution; regulation of insurers; marine insurance; workers' compensation; compulsory third party insurance; superannuation/re-insurance contracts.

Courses: LW50, LW51
Credit Points: 24 Contact Hours: 2 per week

- **LWN070 CREDIT FOR UQ SUBJECT 4**
See LWN032.

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week

- **LWN071 CREDIT FOR UQ SUBJECT 5**
See LWN032.

Courses: LW50, LW51
Credit Points: 12

- **LWN072 CREDIT FOR UQ SUBJECT 6**
See LWN034.

Courses: LW50, LW51
Credit Points: 24

- **LWN075 INTERNATIONAL COMMERCIAL TRANSACTIONS**
This unit on international trade law addresses the legal problems that arise in the formation and operation of commercial transactions of an international nature. Its scope is largely confined to the sphere of private law. Topics covered include: sources of, and modern developments in, international trade law; harmonisation and unification of law; international contracts (characteristics, negotiating and drafting, choice of law); international sale of goods (trade terms, standard conditions, uniform law); carriage of goods by sea; payment in a documentary sale, and other financing mechanisms; marketing arrangements (agency, distributorship, subsidiary, joint venture).

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week Incompatible with: LWN023

- **LWN076 INTERNATIONAL COMMERCIAL DISPUTES**
Legal issues regarding the resolution of commercial disputes in international trade. Mainly concerned with disputes in respect of international commercial relationships of a private law nature. Dispute resolution mechanisms (such as litigation, arbitration and alternative dispute resolution) are examined, and their effectiveness evaluated, in the light of the legal and practical realities in the international trade environment. Students are introduced to a range of commercial practices, national regulation, and international uniform rules, model laws and conventions.

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week Incompatible with: LWN023

- **LWN077 LITIGATION - EVIDENCE**
This unit is focused on topics of current interest or difficulty in evidence and advocacy. Rules of admissibility in Queensland and federal courts are considered, as well as issues of trial and appellate advocacy. Participants will acquire an appreciation of the dynamics of the adversarial process, understanding of selected principles of admissibility and knowledge of key forensic skills such as examination and cross-examination of witnesses. This unit offers an opportunity for students to deepen and broaden their legal education in a way related directly to their professional needs.

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week Incompatible with: LWN052 pre 1995

- **LWN078 ADVANCED CRIMINAL EVIDENCE & PROCEDURE**
This unit covers three core areas: (a) the rules of evidence and procedure in Queensland criminal courts as set out under the common law, the Evidence Act 1977 (Qld), the Criminal Code and related legislation; (b) the rules of evidence and procedure in criminal cases in the Federal Court as set out in the Evidence Act 1995 (Cth); and (c) the rules of evidence and procedure in the criminal courts of New South Wales as set out in the Evidence Act 1994 (NSW). Topics in all areas address both empirical rules and contemporary issues which present interest or difficulty.

Courses: LW50, LW51
Credit Points: 12 Contact Hours: 2 per week
■ LWN079 JOINT VENTURES
This unit examines certain major aspects of this subject including the nature and structure of joint ventures, negotiating and financing of joint ventures, foreign investment, taxation implications of joint ventures, government joint ventures, trade practices and intellectual property rights in joint ventures and dispute resolution between joint venture partners.
Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LWN080 SELECT ISSUES IN THE LAW OF OBLIGATIONS
This unit examines the phenomena which have led to the creation and assumption of legal obligations: the historical, socio-economic and political considerations underpinning the traditional categorisations; and the interpersonal relationship, and at times tension, between the traditional categorisations. In so doing the unit highlights those areas of categorisation which have received judicial reconsideration and those areas which may, or may not, in the foreseeable future receive a similar consideration.
Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LWN081 RESTITUTION II
This unit will continue the examination of the theoretical basis of restitutionary claims and defences which were defined in LWN017 Restitution I. Students will comprehensively examine the substantive law relating to certain restitutionary claims and defences as well as considering the scope and operation of the law of restitution in contemporary Australia and its relationship with torts, contract, equity and property. Topics covered include: legal compulsion, necessity, illegality, subrogation, tracing and restitutionary proprietary claims, restitution for wrongs, defences, and conflict of laws.
Courses: LW50, LW51
Prerequisites: LWN017
Credit Points: 12
Contact Hours: 2 per week
Incompatible with: Students who have studied both LWN059 and LWN017 pre-1996 are precluded from undertaking this unit

■ LWN082 INTELLECTUAL PROPERTY: LITIGATION
Topics covered include: the role of intellectual property litigation in protection of intellectual property rights; the overlap between intellectual property rights and consumer protection; jurisdiction of the courts under the Copyright Act, the Patents Act, the Trade Marks Act, the Registered Designs Act, the Circuit Layouts Act and the Plant Varieties Act, and the general law; the role of international conventions and arrangements in intellectual property litigation; parties to intellectual property litigation; appeals from administrative officers under the various Acts and from single judges; the particular requirements of Order 58 of the Federal Court Rules as they apply to intellectual property litigation; groundless threats; pre-emptive remedies; interlocutory remedies and steps; limitation periods; the use of the petty patent system and opposition proceedings as a tactic in patent litigation; cross-claims; trials; final relief; exclusive rights v. anti-competitive conduct.
Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LWN083 ESTATE PLANNING
This unit considers estate planning from three perspectives: estate growth/wealth creation, estate protection from exigencies such as death, disablement and bankruptcy and estate distribution, either inter vivos or on death. Strategies employed and issues to be considered within each of these elements will be covered and the inter-relationship between each element will also be highlighted.
Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LWN084 INTERNATIONAL MARINE POLLUTION LAW
The protection and preservation of the marine environment has developed into an important aspect of marine law. International conventions and agreements, combined with Commonwealth, state and territory legislation has resulted in a complex matrix of laws and practice. The subject is not being given the prominence in law studies that it now merits. The pollution of the sea is a major problem and a study of its legal regimes is beneficial towards addressing it.
Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LWN085 INTERNATIONAL LAW OF THE SEA
International law of the sea has always been of importance to island countries like Australia, but has taken an added importance with Australia's added maritime jurisdiction of the 200 n.m. exclusive economic zone under the United Nations Convention on the Law of the Sea 1982. The focus of this unit will be the development of the law of the sea and a study of the current issues, with particular emphasis on the Australian, Southeast Asian and Pacific Ocean areas.
Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LWN086 SELECTED ISSUES IN PRACTISING LAW
The face of legal practice is changing constantly. Today there are many influences upon the practice of law. This is a time of assessing and re-seeing the needs of the legal profession and of the client. Therefore it is timely and pertinent to consider some of these important and contemporary issues. This unit seeks to address selected and topical aspects of practising law in the wider context as well as day-to-day.
Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LWN087 CONTEMPORARY ISSUES IN TORTS
Advanced level study of contemporary issues in torts enables a detailed consideration of selected matters at a time of great change in this area of law. The practical, theoretical and comparative analysis of the selected issues will extend understanding of this fundamental and significant part of general legal practice and the interpersonal relationship with continguous fields of legal principle.
Courses: HREF="pabs/hkk96/courses/LW50.html">
LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LWN088 GOVERNMENT LAW, POLICY AND PRACTICE
This unit focuses on key aspects of the law and policy-making process surrounding the development of legislation and the operation of government, especially in Queensland. Topics covered include: the roles of key Queensland executive government bodies (e.g. OPC, IAG, Cabinet, Departments, etc.), corporatisation, Crown immunity issues, Queensland's 'fundamental legislative principles' (FLPs), and governmental trade practice liability.
Courses: LW50, LW51
Credit Points: 12
Contact Hours: 2 per week

■ LWN089 CURRENT LEGAL PROBLEMS AFFECTING SPORTS
Sport and the law is a growing area of legal practice. The inter-relationship of the sporting culture, commercialised activities and a wide range of relevant legal ar-
cas provides a unique mix for the study of many overlapping areas of law and social policy. Topics covered include: liability of sports organisations and participants for injury or damage; legislative and common law intrusion onto the sporting field; construction, operation and maintenance of sports facilities; the right to control and sanction sport participants; securing sponsorship and endorsement rights; sports marketing and the exploitation of the intellectual and personal property of teams and athletes; industrial relations and sport; broadcasting of sporting events; sports business and trade practices.

Courses: LWS50, LWS51
Credit Points: 12
Contact Hours: 2 per week

LW100 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: LWS50, LWS51
Credit Points: 12
Contact Hours: 2 per week

LW1001 THESIS
The dissertation should make a notable contribution to professional knowledge and practice which may be in the form of new knowledge or significant original adaptation, application and interpretation of existing knowledge and practice.

Course: LWS50
Credit Points: 48

LW1002 THESIS
See LW1001.
Course: LWS50
Credit Points: 48

LW101 THESIS
See LW1001.
Course: LWS50
Credit Points: 12

LW102 THESIS
See LW1001.
Course: LWS50
Credit Points: 24

LWS001 MEDICINE & THE LAW
The impact of some important fields of law upon the medical profession and upon hospital staff, patients and visitors. Introduction to law and the legal system. The federal and state systems; general principles of the law of tort; principles of negligence; trespass; liability of hospitals; industrial law and industrial relations; workers' compensation; legal aspects of medical practice; medico-legal investigations; medical ethics. A consideration of emerging legal issues surrounding surrogate motherhood and test-tube babies. Relevant Commonwealth and Queensland legislation and regulations and court decisions.

Courses: LS55, 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; life support equipment and the law on euthanasia; abortion; transplantation of organs and tissue; medical records and confidentiality; control of poisons; the Coroners Act (Qld).

Courses: NS40, NS48
Credit Points: 8
Contact Hours: 3 per week

LWS006 HEALTH ETHICS & THE LAW
The legal issues associated with the matter of public health and an appreciation of the legal and ethical implications of the work done by health care professionals in this area. Topics include: introduction to the Australian legal system; tort law and its impact upon the public health system; workplace health and safety legislation; medical records and confidentiality; criminal law and the health care professions; transplantation of organs and tissues; complaints against hospitals and health care professionals.

Courses: HL85, NS48, NS85, PU69, PU85
Credit Points: 12
Contact Hours: 3 per week

LWS101 PUBLIC LAW
This introduction to public law provides students with an understanding of the origins and nature of the parliamentary system of law and government in Australia and the manner in which public authority is organised and exercised. It examines the functions of the central institutions of government the Crown and Executive. The Parliament, the Judiciary and their relationship one with another. The role of state constitutions is dealt with as well as the organisation of government under the Australian Federal Constitution.

Course: IF64
Credit Points: 12
Contact Hours: 3 per week

MAA251 STATISTICS & DATA PROCESSING
A basic unit in statistics, including statistical terminology and organisation of data, elementary probability, binomial and normal distribution, standard statistical methods for analysing data, regression and correlation.

Courses: LS12, LS15, SC12
Credit Points: 8
Contact Hours: 3 per week

MAB003 MATHEMATICS FOR SCIENCE & TECHNOLOGY 1
Algebra: Complex numbers, Cartesian form, Argand diagram; determinants and matrices; solution of linear equations; elementary vector algebra. Differential calculus: functions of a single variable, limits, derivatives of standard functions, higher derivatives, series expansions, applications.

Courses: CE42, EE43, EE44, IF23, IF34, IF53, ME45, ME46, SC30
Credit Points: 6
Contact Hours: 3 per week

MAB004 MATHEMATICS FOR SCIENCE & TECHNOLOGY 2

Courses: CE42, EE43, EE44, IF23, IF34, IF53, ME45, ME46, SC30
Credit Points: 6
Contact Hours: 3 per week

MAB102 BASIC MATHEMATICS
Algebra: factorising polynomials; index and logarithm laws; AP and GP; trigonometric ratios; Pythagorean identities; graphs; sine rule and cosine rule; coordinate geometry; equations of lines and standard conics; introduction to differential calculus; curve sketching; Newton-Raphson method; elementary integration; definite and indefinite integrals; use of tables of integrals; Simpson's rule.

Courses: ED50, IF34, SC30
Credit Points: 12
Contact Hours: 4 per week
Incompatible with: A grade of Sound Achievement or higher in Senior Mathematics B (or equivalent)

MAB103 INTRODUCTORY ENGINEERING MATHEMATICS
Computational mathematics; algebra; circular functions, trigonometric functions; vector algebra; addition of vectors, unit vectors, scalar products; linear algebra: elementary matrix algebra, solution of linear equations; complex numbers: Cartesian form, addition, multiplication, modulus and argument, Argand diagram; differential
calculus: elementary functions, definite and indefinite integration.
Courses: CE31, CE42, EE34, EE44, IF23, IF54, IF56, ME35, ME45, ME46, PS47
Credit Points: 8
Contact Hours: 3 per week

**MAB151 QUANTITATIVE TECHNIQUES**
A basic mathematics unit with emphasis on differential and integral calculus, the interpretation of data and the application of numerical techniques.
Courses: PH38, PH90
Credit Points: 4
Contact Hours: 2 per week

**MAB152 QUANTITATIVE METHODS**
Organisation, analysis and interpretation of data; practical problems in basic calculus techniques; probability distributions; sampling; estimation; testing of hypotheses; regression and correlation.
Courses: PU42, PU44, PU45
Credit Points: 8
Contact Hours: 3 per week

**MAB172 STATISTICAL METHODS**
Organisation and analysis of data; use of computer packages in data analysis; probability and probability distributions; sampling theory; estimation; testing of hypotheses; regression and correlation.
Courses: BS50, IT20
Credit Points: 12
Contact Hours: 3 per week

**MAB173 QUANTITATIVE METHODS**
To enable students to use mathematical reasoning and skills to obtain solutions to financial, economic and general business problems. On completion, students should have an understanding of the types of problems amenable to a mathematical solution; they should be able to develop appropriate mathematical models and appreciate any limitations or assumptions and solutions to these models.
Courses: BS50, IF31
Credit Points: 12
Contact Hours: 3 per week

**MAB177 MATHEMATICS FOR DATA COMMUNICATIONS**
Provides the basic mathematical background required for the study of data communication; coding theory and cryptography.
Course: IT20
Credit Points: 12
Contact Hours: 3 per week

**MAB178 MATHEMATICS FOR TELECOMMUNICATIONS**
Fundamentals of probability and random processes as required for the modelling and mathematical analysis of data communication networks; queueing models and their applications in the study of telecommunication networks.
Course: IT20
Credit Points: 12
Prerequisite: MAB177
Contact Hours: 2 per week

**MAB181 APPLIED MATHEMATICS FOR DESIGNERS I**
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. Symmetric designs.
Course: BN30
Credit Points: 6
Contact Hours: 3 per week

**MAB185 INTRODUCTION TO STATISTICS**
Data and its presentation, qualitative reporting of graphical presentations; distributions: properties and parameters, normal probability plots; sampling: correlated versus independent observations, mean and other statistics, normal case; confidence intervals for means/proportions and differences of means/proportions, pairing, tolerance limits, introduction to quality and SPC, variance; hypothesis testing, tests for means/proportions; basic concepts of experimentation, and ANOVA; introduction to regression.
Courses: CE31, ME35
Credit Points: 8
Contact Hours: 3 per week

**MAB187 ENGINEERING MATHEMATICS 1A**
Courses: CE31, CE42, EE43, EE44, IF23, IF54, IF56, ME35, ME45, ME46, ME47
Credit Points: 8
Contact Hours: 3 per week

**MAB188 ENGINEERING MATHEMATICS 1B**
Courses: CE31, CE42, EE43, EE44, IF23, IF54, IF56, ME35, ME45, ME46, ME47
Credit Points: 8
Prerequisite: MAB187
Contact Hours: 3 per week

**MAB195 QUANTITATIVE METHODS I**
Applications of plane and solid geometry in design, revision of basic geometry; application of trigonometry in design; calculation of heights, distances, areas and volumes; applications of trigonometry to mechanics.
Course: BN30
Credit Points: 6
Contact Hours: 3 per week

**MAB196 QUANTITATIVE METHODS II**
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

**MAB200 MATHEMATICS**
Algebra; trigonometry; complex numbers; matrices and vectors; permutations and combinations; finite differences; exponential, logarithmic and trigonometric functions; calculus; conic sections.
Courses: CH32, ED50, IF34, IT20, SC30
Prerequisite: Sound Achievement in Senior Mathematics B (or equivalent) or MAB102
Credit Points: 12
Contact Hours: 4 per week
Incompatible with: Sound Achievement in Senior Mathematics C, MAB212

**MAB212 MATHEMATICS 1**
Courses: CH32, ED50, IF34, IT20, SC30
Credit Points: 12  Contact Hours: 4 per week
Incompatible with: MAB200, MAB301

■ MAB222 MATHEMATICS 2
Areas, volumes, lengths of curves and surface areas.
Simple improper integrals. Rotation of axes in the plane.
Differentiation of vectors, simple kinematic applications.
Series expansions of functions by Taylor and Maclaurin
series; ratio test; approximations. Complex numbers.
modulus, Argand diagram, exponential form; De Moivre's
theorem; applications. Ordinary differential equations.
First order: variables separable; exact linear.
Second order: linear homogeneous differential equations
with constant coefficients. Partial differentiation;
geometrical interpretation, partial derivatives of higher or­
der. May not be available in 1996.
Courses: ED50, IF34, SC30  Prerequisite: MAB212
Credit Points: 12  Contact Hours: 4 per week
Incompatible with: MAB301, MAB303

■ MAB232 DISCRETE MATHEMATICS
Combinatorics; logic; set theory; axiomatic systems;
modular arithmetic; rings, integral domains, fields; fi­
nite groups; number theory; difference equations. May
not be available in 1996.
Courses: ED50, IF34, IT20, SC30
Corequisite: MAB222
Credit Points: 12  Contact Hours: 4 per week

■ MAB237 STATISTICS
The collection, presentation and features of statistical
data. How to investigate, model and analyse the data and
how to draw valid conclusions. Students study real data
using computer packages where appropriate and are
introduced to estimation, hypothesis testing, regression and
analysis of variance.
Courses: CH32, ED50, IF34, SC30
Credit Points: 12  Contact Hours: 4 per week
Incompatible with: MAB347

■ MAB251 MATHEMATICS 1
Data handling; determinants and matrices; differentia­
tion 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 proba­
bility 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 con­
trol; analysis of variance, introduction to non-paramet­
ic methods.
Course: OP42  Prerequisite: MAB252
Credit Points: 4  Contact Hours: 2 per week

■ MAB272 RESEARCH METHODS
Students in the information management and informa­
tion systems fields should have knowledge of a variety
of techniques associated with collecting and analysing
data, be capable of critical interpretation of survey re­
search and be able to use data reduction techniques them­
selves. In addition to an introduction to descriptive sta­
tics and statistical inference, this unit introduces his­
torical and theoretical approaches and compares ration­
alisation with experimentation.
Course: IT20

Prerequisites: Completion of at least 60 credit points from the Information Management or Information Sys­tems majors in IT20
Credit Points: 12  Contact Hours: 3 per week

■ MAB299 MATHEMATICS FOR
TECHNOLOGISTS
Data handling and basic algebra, geometry and trigo­
nometry. Introduction to statistics, organisation and
analysis of data, probability and probability distribution;
sampling theory; estimation; test of hypothesis; regres­
sion and correlation. Introduction to quantitive opera­
tion research methods applicable in solving economic
and general business problems, including linear pro­
gramming, transportation algorithm and decision trees.
Courses: CN41, CN43  Prerequisite: First year unit
Credit Points: 6  Contact Hours: 3 per week

■ MAB301 CALCULUS & ANALYSIS A
Levels of measurement and their relationship to partic­
ular operations with real numbers, accuracy and preci­
sion; basic algebraic, geometric and trigonometric re­
results; introduction to the concepts of function, limits,
continuity and monotonicity; elements of differential and
integral calculus, associated theorems and analytical and
numerical applications.
Courses: ED50, IF34, IF42, IF44, IF58, MA34, SC30
Prerequisite: At least Sound Achievement in Senior
Mathematics C or MAB200 (which may be studied con­
currently)
Credit Points: 12  Contact Hours: 4 per week
Incompatible with: MAB212, MAB222

■ MAB303 ALGEBRA & ANALYSIS B
Set theory, relations and functions; introduction to dif­
tereference equations; infinite series; complex numbers; lin­
ear equations; matrices and determinants; vector spaces;
eigenvalues and eigenvectors.
Courses: ED50, IF34, IF42, IF44, IF58, MA34, SC30
Credit Points: 12
Corequisite: MAB301

■ MAB304 CALCULUS & VECTOR ALGEBRA
First order and linear second order differential equations,
simple applications; vector algebra; vector products;
Euclidean spaces; vector calculus; space curves, line
integrals; kinematics of a particle.
Courses: ED50, IF34, IF42, IF44, IF58, MA34, SC30
Prerequisite: MAB301
Credit Points: 12  Contact Hours: 4 per week
Incompatible with: MAB212, MAB222

■ MAB321 COMPUTATIONAL
MATHEMATICS 1
Sources of errors; computer arithmetic; computations with
polynomials, standard functions, recurrence rela­
tions and series; computations with data, searching, sort­ing,
sums and means; computations with arrays; use of
calculators, programming languages and graphical/math­
ematical software.
Courses: ED50, IF34, IF42, IF44, IF58, MA34, SC30
Corequisites: MAB301 or MAB212
Credit Points: 12  Contact Hours: 4 per week

■ MAB342 MATHEMATICS OF FINANCE
Interest rates; solution of problems in compound inter­
test; annuities; applications of annuities; capital redemption
policies; valuation of securities; introduction to ba­
sic modelling techniques.
Courses: ED50, IF34, IF58, 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 nor­
of large scale systems of linear equations by

- sums and differences of random variables; q-q plots,
- Green's theorems,
- and probability distributions; binomial,
- and several variables; maxima and minima with constraints,
- Lagrange multipliers; positional astronomy.

Courses: CE42, EE43, IF56, ME45, ME46
Credit Points: 12
Incompatible with: MAB237

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, IF34, IF42, IF44, IF58, IT20, MA34, SC30
Prerequisites: MAB347 or credit in MAB237
Corequisites: MAB301
Credit Points: 12

MAB422 TOPICS IN MATHEMATICS
Topics in geometry, recreational mathematics, and the history of mathematics, including fractals, iterative maps, map projections, Euclidean constructions, tesselations and mathematical puzzles.

Courses: ED59, IF34, IF71, SC30
Prerequisites: MAB222 or MAB301, MAB303
Credit Points: 12

MAB432 MATHEMATICS 3
Laplace transforms; ordinary differential equations of first and higher order; multivariable calculus. May not be available after 1996.

Course: SC30
Prerequisite: MAB222
Credit Points: 12

MAB452 MATHEMATICS 4

Course: SC30
Prerequisite: MAB432
Credit Points: 12

MAB485 ENGINEERING MATHEMATICS 2C
Differential equations, Laplace transform methods; orthogonal functions; solution of systems of linear equations; vector analysis; functions of a complex variable; limits, continuity; exponential, circular, hyperbolic and logarithmic functions; Cauchy-Riemann equations; Fourier transforms.

Courses: EE44, IF23
Prerequisites: MAB187, MAB188
Credit Points: 8

MAB486 ENGINEERING MATHEMATICS 2D
Probability; events and sample spaces; independence; discrete random variables and probability functions; continuous random variables; mean, variance; examples of distributions. Partial differential equations: the simultaneous partial differential equations of Maxwell; the three-dimensional wave equation. Laurent's theorem. Residue theory, application to complex integration.

Courses: EE44, IF23
Prerequisite: MAB485
Credit Points: 8

MAB487 ENGINEERING MATHEMATICS 2A
Solution of large scale systems of linear equations by direct and indirect methods; solution of second order differential equations with constant coefficients; numerical solution of differential equations; polynomial interpolation.

Courses: CE42, EE43, IF56, ME45, ME46
Prerequisites: MAB187, MAB188
Credit Points: 8

MAB488 ENGINEERING MATHEMATICS 2B
Quadrature, determination of eigenvalues and eigenvectors of large scale linear systems, power method, inverse iteration, acceleration techniques; interpolation by cubic splines; Fourier series and harmonic analysis; convergence of infinite series.

Courses: EE43, IF56, ME45, ME46
Prerequisite: MAB187
Credit Points: 8

MAB494 SURVEY MATHEMATICS 1
Spherical trigonometry: definition of sphere, circles on sphere and spherical triangles; conic, antipodal and polar triangles; sine, cosine and half-angle formulæ, Napier's and Delembre's analogies; solution of spherical triangles, spherical excess, area of spherical triangle; relation between plane and spherical trigonometry. Differential calculus; Taylor and Maclaurin series for functions of a single variable; extension to functions of several variables; maxima and minima with constraints, Lagrange multipliers; positional astronomy.

Courses: IF54, PS47
Prerequisite: MAB188
Credit Points: 6

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.

Courses: IF54, PS47
Prerequisite: MAB494
Credit Points: 6

MAB601 MULTIVARIABLE CALCULUS
Differentiation, extrema; double integrals, triple integrals; functions of a complex variable, analyticity, complex integration.

Courses: ED50, IF34, IF42, IF44, IF58, MA34, SC30
Prerequisites: MAB303, MAB304
Credit Points: 12

MAB602 VECTOR FIELD THEORY
Vector analysis; scalar and vector fields; line integrals; surface integrals; differential field operators; the integral properties of fields. Tensor analysis; curvilinear coordinates; application to potential theory; hydrodynamic theory, electromagnetic theory; calculus of variations; functional; Euler's differential equation; problems with subsidiary conditions.

Courses: IF42, IF44, MA34, SC30
Prerequisite: MAB601
Credit Points: 12

MAB612 DIFFERENTIAL EQUATIONS
Mathematical modelling with differential equations; wellposedness of first order differential equations and graphical methods; theory of linear systems and nth order differential equations, solutions for constant coefficients; series; Laplace transforms; boundary value problems; Fourier series; separation of variables method for partial differential equations.

Courses: ED50, IF34, IF42, IF44, IF58, MA34 SC30
Prerequisites: MAB303, MAB304
Credit Points: 12 Contact Hours: 4 per week

MAB618 COMPUTATIONAL MATHEMATICS 2
Linear equations; numerical solution of a single nonlinear equation; interpolation; quadrature; numerical solution of a single first order differential equation.
Courses: IF42, IF44, IF58, IT20, MA34, SC30
Prerequisites: MAB321
Credit Points: 12 Contact Hours: 4 per week

MAB620 INFINITE MATHEMATICS
Logic; axioms, proof, truth-table decidability; set theory; relations; functions; primes and divisibility; Fermat’s and Euler’s theorems; greatest common divisor, Euclid’s algorithm; primitive roots; arithmetic functions; abstract algebra: Boolean algebras, groups, rings, fields; automata; finite state machines.
Courses: ED50, IF58, IT20, MA34, SC30
Prerequisite: MAB303
Credit Points: 12 Contact Hours: 4 per week

MAB630 LINEAR ALGEBRA & ITS APPLICATIONS
Concrete and abstract vector spaces; matrices; linear systems and determinants; inner products and the projection theorem; linear operators on a unitary space; eigenvectors; applications.
Courses: IF34, IF42, IF44, IF58, ED50, IT20, MA34, SC30
Prerequisites: MAB303
Credit Points: 12 Contact Hours: 4 per week

MAB632 MATHEMATICAL MODELLING
Models are taken mainly from the areas of medicine and biology, including cancer research and population growth, and from mechanics applied to sport. Emphasis is on the mathematical modelling and not on the development of new mathematical techniques.
Courses: IF34, IF42, IF44, IF58, ED50, IT20, MA34, SC30
Prerequisites: MAB303
Credit Points: 12 Contact Hours: 4 per week

MAB637 OPERATIONS RESEARCH 1A
Linear programming; replacement, maintenance and reliability; project scheduling techniques; simulation.
Courses: ED50, IF34, IF42, IF44, IF58, IT20, MA34, SC30
Prerequisites: CSB155, MAB303, MAB347
Credit Points: 12 Contact Hours: 4 per week

MAB638 OPERATIONS RESEARCH 1B
Transportation, transhipment and assignment models; sensitivity analysis and duality; inventory models; introduction to queuing theory.
Courses: IF34, IF42, IF58, IT20, MA34, SC30
Prerequisite: MAB637
Credit Points: 12 Contact Hours: 4 per week

MAB641 ACTUARIAL MATHEMATICS
Mathematics of finance; fixed interest securities, pure endowments and life annuities; assurances; policy values; mortality laws, population projections, superannuation, introduction to general insurance.
Courses: IF34, IF58, MA34, SC30
Prerequisites: MAB301, MAB342
Credit Points: 12 Contact Hours: 4 per week

MAB642 METHODS OF MATHEMATICAL ECONOMICS
Comparative static analysis; matrices and economic theory; optimisation theory and its application in economics.
Courses: IF34, IF58, MA34, SC30
Prerequisites: MAB301, MAB303
Credit Points: 12 Contact Hours: 4 per week

MAB647 STATISTICS 2A
Bivariate distributions; conditional distributions; covariance; moment generating functions; joint mgf’s and their uses in iid cases; transformations; sampling distributions; sampling from finite populations; introductory Markov chains; time series and auto correlation; convergence ideas; order statistics.
Courses: BS50, ED50, IF34, IF42, IF44, IF58, MA34, SC30
Prerequisites: MAB348, MAB301
Corequisites: MAB303
Credit Points: 12 Contact Hours: 4 per week

MAB648 STATISTICS 2B
Single and multiple regression analysis, prediction and estimation; use of Minotab package, residual plots; blocking, 2 and 3 factor designs, general theory for 2k designs, additive and interaction models; orthogonal contrasts.
Courses: BS50, ED50, IF34, IF42, IF44, IF58, MA34, SC30
Prerequisite: MAB348
Credit Point: 12 Contact Hours: 3 per week

MAB795 SURVEY MATHEMATICS 3
Courses: IF52, IF54, PS47
Prerequisite: MAB496
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, IF42, IF54, ME45, ME46, PS47
Prerequisites: MAB187, MAB188
Credit Points: 8 Contact Hours: 3.5 per week

MAB894 ENGINEERING MATHEMATICS 4
The simultaneous partial differential equations of Maxwell: the three-dimensional wave equation; vector analysis; mathematical problems involving Maxwell’s equations; complex variable; Cauchy-Kovalevskaya equations; Laurent series.
Courses: EE43, EE44, IF23
Prerequisite: MAB493
Credit Points: 6 Contact Hours: 3 per week

MAB906 TOPICS IN ANALYSIS
Convergence in R; uniform convergence; measure theory: measurable sets and functions; Lebesgue integrals; metric spaces, contraction mapping principle; normed and Banach spaces, dual spaces and linear operators; Hilbert spaces, O N basis, self-adjoint operators.
Courses: IF34, IF44, IF49, IF58, MA34, SC30, SC60, SC80
Prerequisite: MAB601
Credit Points: 12 Contact Hours: 4 per week

MAB907 STATISTICS 3A
Methodology and theory of statistical inference; likelihood and its uses; large sample results, exponential family and its importance; statistical methodology for all linear models; diagnostics and assessing assumptions; introduction to generalised linear models.
Courses: IF34, IF42, IF44, IF58, MA34, SC30
Prerequisites: MAB647, MAB648, MAB303
Credit Points: 12 Contact Hours: 4 per week
MAB908 STATISTICS 3B
Experimental design; response surfaces; optimal design; transformations, diagnostics, influential observations, some EDA, likelihood, deviance. Courses: IF34, IF42, IF44, IF58, MA34, SC30
Prerequisite: MAB648
Credit Points: 12 Contact Hours: 4 per week

MAB911 COMPUTATIONAL MATHEMATICS 3A
Zeros of polynomials; solution of special types of matrix systems by direct methods; matrix and vector norms, eigenvalues and eigenvectors; solutions to systems of linear equations by indirect methods; solution of non-linear equations; ordinary differential equations (ODEs); the eigenvalue problem. Courses: IF42, IF44, IF58, MA34, SC30
Prerequisite: MAB618 Corequisite: MAB630
Credit Points: 12 Contact Hours: 4 per week

MAB912 CONTINUUM MODELLING
Revision of elementary vector analysis; vector field theory; curvilinear coordinates; mathematical models of fluid motion including circulation and vorticity; Bernoulli equation and applications; incompressible potential flow; equations of motion and some exact solutions of the Navier-Stokes equations; introduction to the use of a computational fluid dynamics package, FLUENT. Courses: IF42, IF44, IF58, MA34, SC30
Prerequisite: MAB601, MAB612
Credit Points: 12 Contact Hours: 4 per week

MAB913 COMPUTATIONAL MATHEMATICS 3B
Hilbert spaces: the projection theorem; application to discrete polynomial and trigonometric approximation; Legendre polynomials; Gaussian quadrature; Chebyshev polynomials; Chebyhev approximation. Reduction of a matrix to upper Hessenberg form by similarity transforms, orthogonal reductions, Givens and Householder methods, determination of eigen-systems by the QR algorithm, emphasis on symmetric matrices. Stability analyses for IVPs, types of instability, inherent and induced, partial instability. Partial differential equations (PDEs) Courses: IF42, IF44, IF58, MA34, SC30, SC60, SC80, IF49
Prerequisite: MAB911
Credit Points: 12 Contact Hours: 4 per week

MAB917 OPERATIONS RESEARCH 2A
Algorithms of linear programming; integer and mixed integer programming; non-linear programming; dynamic programming; heuristic methods. Courses: IF34, IF42, IF58, MA34, SC30
Prerequisite: MAB638
Credit Points: 12 Contact Hours: 4 per week

MAB918 OPERATIONS RESEARCH 2B
Simulation; queueing theory; decision analysis; implementation in operations research. Courses: IF34, IF42, IF58, MA34, SC30
Prerequisite: MAB637
Credit Points: 12 Contact Hours: 4 per week

MAB99 TIME SERIES & STATISTICAL FORECASTING
Fundamentals of time series analysis; time series models; non-stationary processes; seasonal ARIMA models; exponential smoothing; transfer function analysis; vector autoregression; combined forecasts; state-space models and the Kalman filter. Courses: IF34, IF42, IF44, IF58, MA34, SC30, SC60, SC80, IF49
Prerequisites: MAB601, MAB647, MAB648
Credit Points: 12 Contact Hours: 4 per week

MAB933 MATHEMATICAL BIOLOGY
Population ecology, using both discrete and continuous models; predator-prey interactions; enzyme kinetics; epidemics and developmental biology. Courses: IF34, IF58, MA34, SC30
Prerequisites: MAB601, MAB612, MAB632
Credit Points: 12 Contact Hours: 4 per week

MAB941 MATHEMATICAL MODELLING IN ECONOMICS
Differential and difference equations in economic dynamics; multi-market equilibrium; equilibrium of dynamic macroeconomic models; stability; optimal control theory. Courses: IF34, IF58, MA34, SC30
Prerequisite: MAB642 Corequisite: MAB601
Credit Points: 12 Contact Hours: 4 per week

MAB942 OPTIMISATION METHODS
Numerically based algorithms for function optimisation and non-linear equation solving; classical methods of optimising non-linear functions with non-linear inequality constraints; global optimisation strategies. Courses: IF34, IF42, IF44, IF58, MA34, SC30, SC80
Prerequisites: MAB601, MAB618
Credit Points: 12 Contact Hours: 4 per week

MAB960 PROJECT WORK
Projects vary in nature and may involve the collection and evaluation of mathematical techniques in some field of interest or the formulation of a problem of interest and the derivation of a solution. Practical community/industry orientated projects are encouraged. Each project is undertaken by a student, or group of students, and is supervised by a member of staff who provides guidance throughout the duration of the project. Courses: IF34, IF58, MA34, SC30
Prerequisites: Successful completion of at least 192 credit points including at least two units from List D of the course requirements
Credit Points: 12 Contact Hours: 4 per week

MAB970 PROBABILITY THEORY & STOCHASTIC PROCESSES
Probability measures, conditional probability; distributions and random variables. Convergence of random variables; strong and weak laws of large numbers; central limit theorems. Markov processes: birth and death queues; epidemics; inference. Point processes: marked point processes; filtered processes; inference, simulation. Branch process. Courses: IF34, IF44, IF58, MA34, SC60, SC30, SC80, IF49
Prerequisite: MAB647
Credit Points: 12 Contact Hours: 4 per week

MAB971 ADVANCED MATHEMATICS OF FINANCE
Background to investment, investment objectives and philosophy; pricing yields and analysis of financial transactions; operations of futures and options markets. Mathematical aspects of pricing derivative securities. Courses: IF34, IF58, MA34, SC30, SC60, SC80
Prerequisite: MAB641
Credit Points: 12 Contact Hours: 4 per week

MAB973 PARTIAL DIFFERENTIAL EQUATIONS
Derivation of first and second order partial differential equations; solution of partial differential equations by characteristics, separation of variables and Laplace and Fourier transforms; a study of Schrodinger's wave equation.
Courses: IF34, IF42, IF44, IF58, MA34, SC30, SC60, SC80

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.

Prerequisites: MAB601 or MAB602, MAB612
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; bifurcations; chaotic systems; analytic and numerical solution of equations describing systems with singular and chaotic behaviour; iterative maps; Mandelbrot and Julia-type fractals.

Courses: IF44, SC60, SC80, IF49
Prerequisites: IF49, MAB601, MAB612, MAB911
Credit Points: 12 Contact Hours: 4 per week

MAB976 RELIABILITY & SURVIVAL ANALYSIS
Failure rates; life distributions and inference; extreme values; fitting tails; flood data; IFR, NBU; system reliability; censored sampling; Cox’s proportional hazards model; competing hazards.

Courses: SC60, SC80, IF49
Prerequisites: MAB647, MAB648
Credit Points: 12 Contact Hours: 4 per week

MAB977 SCHEDULING & NETWORKS
Inventory systems, production planning and scheduling; aggregate planning and master scheduling; requirement planning; LP, LDR and SDR techniques. Scheduling problems, sequencing problems, flow-shop and job shop scheduling problems. Network flows.

Courses: SC60, SC80
Prerequisites: MAB927, MAB928
Credit Points: 12 Contact Hours: 4 per week

MAB978 STATISTICAL SIGNAL PROCESSING & IMAGE ANALYSIS

Courses: IF44, SC60, SC80, IF49
Prerequisite: MAB929
Credit Points: 12 Contact Hours: 4 per week

MAB979 STATISTICAL MODELLING & DATA ANALYSIS
Robust procedures and principles: influence function; robust estimation; simulation studies; M-estimation. Distribution theory of statistics based on ranks. Robust regression. EDA; graphics; model choice, assessment and fitting; distributional families used in data analysis, inference studies and simulations; transformations, including Box-Cox. Outliers.

Courses: SC60, SC80, IF49
Prerequisites: MAB601, MAB907
Credit Points: 12 Contact Hours: 4 per week

MAB980 STOCHASTIC PROCESSES & APPLICATIONS
Gaussian processes; Brownian motion; diffusions; stochastic processes; martingale; random walks; central limit theorems; epidemic models; queueing models; stochastic compartment models; extreme value theory for stochastic processes.

Courses: SC60, SC80, IF49
Prerequisites: MAB970 or (MAB906, MAB929)
Credit Points: 12 Contact Hours: 4 per week

MAB981 APPLIED STATISTICAL INFERENCE
Modern approaches to data analysis and inference; estimating equations and their generalisation; applications of these methods; likelihood techniques, analytical and numerical methods; Bayesian techniques and computational methods; applications. Sample reuse methods (bootstrapping, etc.)

Courses: SC60, SC80, IF49
Prerequisites: MAB630, MAB907, MAB908
Credit Points: 12 Contact Hours: 4 per week

MAB984 ACTUARIAL STATISTICS
Distribution theory: actuarial models and data; financial stochastic models and their use in problem-solving; credibility, utility and risk theory; loss and ruin models; premium analysis.

Courses: SC60, SC80
Prerequisite: MAB907
Credit Points: 12 Contact Hours: 4 per week

MAB985 COMPUTATIONAL MATHEMATICS 4

Courses: SC60, SC80, IF49
Prerequisite: MAB911
Credit Points: 12 Contact Hours: 4 per week

MAB986 MATHEMATICAL MODELLING OF INDUSTRIAL PROCESSES
Solution of the steady/unsteady heat conduction equation with: variable thermal conductivity, different types of boundary conditions, irregular boundaries, moving interfaces, e.g. solidification, non-linear forms, e.g. natural convection, point sources. Derivation and discussion of the viscous fluid flow equations: primitive form of equations, stream function and vorticity transport form, conservative and non-conservative forms, stability, solving the equations numerically, boundary conditions.

Courses: SC60, SC80, IF49
Prerequisites: MAB973, MAB601, MAB913
Corequisite: MAB985
Credit Points: 12 Contact Hours: 4 per week

MAB987 OPTIMISATION OF CONTROLLED PROCESSES
Calculus of variations, Lagrange formulation, Mayer formulation, Bolza formulation, constraints, corner conditions, transversal conditions. Pontryagin’s maximum principle. Relationship of the above to dynamic programming. Practical applications of the above to: design of optimal control strategies, time optimal control, optimal continuous scheduling.

Courses: SC60, SC80, IF49
Prerequisites: MAB601, MAB612
Credit Points: 12 Contact Hours: 4 per week

MAB989 PROJECT
Project and thesis component of Honours course (SC60).
Course: SC60
Corequisite: Approved Honours program
Credit Points: 36
MAN001 READING COURSE 1
Provides the candidate with the appropriate background at an advanced level necessary for the completion of a research program.
Course: SC80 Credit Points: 8

MAN002 READING COURSE 2
See MAN001.
Course: SC80 Credit Points: 12

MAN009 EXPERIMENTAL DESIGN AND STATISTICAL ANALYSIS
The development of further statistical understanding and techniques for researchers in other areas.
Courses: AT22, BN71, BN72, BN73, BS81, BS83, BS84, BS85, BS87, CE74, CN77, CS36, ED11, ED12, ED13, EE75, EE78, HL50, HL52, HL58, HL88, IF49, IS50, IT84, LS85, ME76, NS64, NS85, PH80, PU65, PU69, SC80
Prerequisites: At least one undergraduate statistics unit Credit Points: 12 Contact Hours: 4 per week

MAN012 ADVANCED STUDIES
Advanced studies in quality management concepts and techniques with emphasis on the application of statistics.
Course: SC56
Prerequisites: 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: IF66 Credit Points: 6 Contact Hours: 3 per week

MAN210 DESIGNED EXPERIMENTS FOR QUALITY IMPROVEMENTS
The principles underlying the design of experiments; a practical approach explains the procedures used, with emphasis on the use of robust techniques for industrial experimentation and explanatory studies.
Course: IF66 Credit Points: 6 Contact Hours: 3 per week

MAP111 STATISTICAL METHODS IN QUALITY
Describing variation; boxplot, histogram, estimation of process parameters, misuse of measures. Normal distribution; application to quality phenomena, probability paper, important distributions for describing quality-related phenomena by attribute; hypergeometric, binomial, Poisson, approximations. Sampling distributions; interval estimation for normal and binomial, test of hypothesis, consumer and supplier risks, tests for binomial parameter and process mean, tests for comparing process means, paired data and independent samples.
Course: IF69 Contact Hours: 6

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. Custom technique; variable data, procedures. V mask, decision intervals, application to attribute data. Attribute batch sampling; OC curve, sampling plans (single, double, multiple, sequential), switching rules. Rectifying inspection; Dodge Romig schemes, ITPD. Sampling by variables; procedures, sampling plans, inspection rules.
Course: IF69

MAP222 QUALITY IMPROVEMENT
Flow charts; deployment, layout, top down. Pareto analysis; stratified data, frequency versus cost. Cause and effect diagram; dispersion analysis, process classification. Correlation analysis; scattergram, percentage variation explained, several predictors. Affinity diagrams, etc. Decision making techniques; brainstorming, multi-voting, nominal group technique. Quality improvement teams and quality circles. Quality improvement roadmaps; project identification, improvement plan, strategies. PDCA cycle, seven-step improvement process; team building.
Course: IF69 Credit Points: 12 Contact Hours: 3 per week

MAS090 MATHEMATICS
This intensive unit is aimed at providing an appropriate background for those undertaking tertiary courses in science, business or other areas which require competence in certain mathematical areas. Topics include: algebra, analytical geometry, trigonometry, differential and integral calculus, matrices, statistics. The treatment assumes some initial knowledge of basic algebra, such as manipulation of indices and factorisation, and elementary trigonometry at a level equivalent to Year 10 Advanced Mathematics.
Course: BS81, BS83, BS84, BS85, BS87, CE74, CN77, CS36, ED11, ED12, ED13, EE75, EE78, HL50, HL52, HL58, HL88, IF49, IS50, IT84, LS85, ME76, NS64, NS85, PH80, PU65, PU69, SC80
Prerequisites: At least one undergraduate statistics unit Credit Points: 12 Contact Hours: 4 per week

MDB300 TEACHING IN THE INFORMATION AGE
The impact of information technology on education; the concept of an information society; how what is defined as knowledge is contested and changed by information technology; strategies for learning and teaching using information technology. Practical skills using computer hardware and software communication technology and multimedia are developed with a view to appropriate implementation within the curriculum.
Course: BS81, BS83, BS84, BS85, BS87, CE74, CN77, CS36, ED11, ED12, ED13, EE75, EE78, HL50, HL52, HL58, HL88, IF49, IS50, IT84, LS85, ME76, NS64, NS85, PH80, PU65, PU69, SC80
Prerequisites: At least one undergraduate statistics unit Credit Points: 12 Contact Hours: 4 per week

MDB325 BIOLOGY CURRICULUM STUDIES 1
The nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
Course: BS81, BS83, BS84, BS85, BS87, CE74, CN77, CS36, ED11, ED12, ED13, EE75, EE78, HL50, HL52, HL58, HL88, IF49, IS50, IT84, LS85, ME76, NS64, NS85, PH80, PU65, PU69, SC80
Prerequisites: At least one undergraduate statistics unit Credit Points: 12 Contact Hours: 4 per week

MDB326 BIOLOGY CURRICULUM STUDIES 2
Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.
Course: BS81, BS83, BS84, BS85, BS87, CE74, CN77, CS36, ED11, ED12, ED13, EE75, EE78, HL50, HL52, HL58, HL88, IF49, IS50, IT84, LS85, ME76, NS64, NS85, PH80, PU65, PU69, SC80
Prerequisites: At least one undergraduate statistics unit Credit Points: 12 Contact Hours: 4 per week

MDB327 CHEMISTRY CURRICULUM STUDIES 1
The nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
Course: BS81, BS83, BS84, BS85, BS87, CE74, CN77, CS36, ED11, ED12, ED13, EE75, EE78, HL50, HL52, HL58, HL88, IF49, IS50, IT84, LS85, ME76, NS64, NS85, PH80, PU65, PU69, SC80
Prerequisites: At least one undergraduate statistics unit Credit Points: 12 Contact Hours: 4 per week
■ MDB328 CHEMISTRY CURRICULUM STUDIES 2
Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.
Courses: ED50, ED54
Prerequisite: MDB327
Credit Points: 12
Contact Hours: 3 per week

■ MDB329 COMPUTING CURRICULUM STUDIES 1
The nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
Courses: ED50, ED54, IT20
Prerequisites: Normally the completion of 48 credit points in each relevant discipline area.
Credit Points: 12
Contact Hours: 3 per week

■ MDB330 COMPUTING CURRICULUM STUDIES 2
Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.
Courses: ED50, ED51, ED52, ED54, ED37
Prerequisite: MDB329
Credit Points: 12
Contact Hours: 3 per week

■ MDB331 EARTH SCIENCE CURRICULUM STUDIES 1
The nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
Courses: ED50, ED54
Prerequisites: Normally the completion of 48 credit points in each relevant discipline area.
Credit Points: 12
Contact Hours: 3 per week

■ MDB332 EARTH SCIENCE CURRICULUM STUDIES 2
Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.
Courses: ED50, ED54
Prerequisite: MDB331
Credit Points: 12
Contact Hours: 3 per week

■ MDB333 MATHEMATICS CURRICULUM STUDIES 1
The nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
Courses: ED50, ED54
Prerequisites: Normally the completion of 48 credit points in each relevant discipline area.
Credit Points: 12
Contact Hours: 3 per week

■ MDB334 MATHEMATICS CURRICULUM STUDIES 2
Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.
Courses: ED50, ED54
Prerequisite: MDB333
Credit Points: 12
Contact Hours: 3 per week

■ MDB335 PHYSICS CURRICULUM STUDIES 1
The nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
Courses: ED50, ED54
Prerequisite: Normally the completion of 48 credit points in each relevant discipline area.
Credit Points: 12
Contact Hours: 3 per week

■ MDB336 PHYSICS CURRICULUM STUDIES 2
Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.
Courses: ED50, ED54
Prerequisite: MDB335
Credit Points: 12
Contact Hours: 3 per week

■ MDB337 SCIENCE CURRICULUM STUDIES 1
The nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.
Courses: ED50, ED54
Prerequisites: Normally the completion of 48 credit points in each relevant discipline area.
Credit Points: 12
Contact Hours: 3 per week

■ MDB338 SCIENCE CURRICULUM STUDIES 2
Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.
Courses: ED50, ED54
Prerequisite: MDB337
Credit Points: 12
Contact Hours: 3 per week

■ MDB339 MATHEMATICS EDUCATION
Key concepts and skills in the domains of per cents, rate, ratio, chance and data, pre-algebra and geometry. Focus on developing appropriate teaching episodes within these domains. Special emphasis on the teacher as 'sense-maker'.
Course: ED51
Credit Points: 12
Contact Hours: 3 per week

■ MDB340 MATHEMATICS & TECHNOLOGY EDUCATION
Builds on the understandings developed in MDB302 and MSB339. Exploration of issues concerned with the teaching of measurement and mathematical problem solving; investigation of how information technology can be used to facilitate the development of high-level learning skills in mathematics and other areas in the primary school.
Course: ED51
Prerequisites: MDB302, MDB339
Credit Points: 12
Contact Hours: 3 per week

■ MDB341 SCIENCE EDUCATION
The role of particular psychological, developmental and sociological approaches which play a significant role in science curriculum and development. The process skills and manipulative skills associated with science. Com-
proposition of existing approaches to teaching science. Science development associated with mathematics and language development. Resources for science education. Development and implementation of units of work.
Course: ED51  
Prerequisite: MDB303  
Credit Points: 12  
Contact Hours: 3 per week

■ MDB342 COMPUTERS IN THE SCHOOL CURRICULUM
Designed to provide teachers with a framework for investigating the present and future influence of computers on curriculum development in educational institutions.
Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

■ MDB343 DIAGNOSIS & REMEDIATION IN MATHEMATICS
Overview of numerical and conceptual learning difficulties in mathematics; learning experiences in various areas of mathematics; utility of mathematics in real life situations; examination of mathematics in other curriculum areas; learning experiences in the integration of mathematical topics; use of hand-held calculator and the computer as aids to conceptual development and as practical tools; error analysis and diagnostic inventories; remedial strategies.
Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

■ MDB344 INITIATIVES IN SCIENCE EDUCATION
Exploration of alternative practices in science education particularly through the development of research-based project work for children, the extended excursion or field trip and involvement in community sponsored and/or related science activities and events.
Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

■ MDB345 SOFTWARE DEVELOPMENT FOR EDUCATIONAL CONTEXTS
Algorithmic thinking and its implementation form a major component within the Information Processing and Technology syllabus now implemented in secondary schools. Prospective teachers of courses such as these require a sound foundation in the design and development of software along with the use of modern abstract procedural, data and object handling representations. Software design and development are closely bound to particular problems contexts. This unit is based on the design of educational software because this area is relevant to the students concerned and because there is a clear demand for such software. Students in this unit will employ a range of powerful programming techniques and structures in the development of educational computer software.
Course: ED50  
Prerequisite: CSB860  
Credit Points: 12  
Contact Hours: 3 per week

■ MDB347 EXCURSIONS IN MATHEMATICS
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  
Prerequisites: First three semesters of the course  
Credit Points: 12  
Contact Hours: 3 per week

■ MDB349 MATHEMATICAL REASONING
The concept of thinking and intelligence; the nature of mathematical thinking during the first half of this century; modern ideas on the nature of mathematical thinking; the thinking skills movement and programs designed to foster thinking; analysis of children's thinking in solving mathematical problems; analysis of students' 'everyday cognition' together with their thinking in mathematical situations.
Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

■ MDB375 COMPUTING TOOLS FOR TEACHERS
The use of writing and publishing software, graphics design software, computer managed learning development tools, numerical software tools, personal and project management tools, communications technologies and computer peripherals used in the production of computer generated materials.
Course: ED50  
Credit Points: 12  
Contact Hours: 3 per week

■ MDB377 PROJECT PLANNING & IMPLEMENTATION FOR EDUCATIONAL PURPOSES
The study of computing and its application in educational and other environments is very much associated with planned and sequenced implementation of tasks. A study and understanding of how tasks might be represented, sequenced and implemented is essential if technology is to be used effectively in education. The use of project work as a pedagogical technique is a popular strategy to promote independent learning and student autonomy. This unit provides students with a framework to evaluate this methodology.
Course: ED50  
Prerequisite: MDB375  
Credit Points: 12  
Contact Hours: 3 per week

■ MDB378 EARTH & SPACE
Examination of scientific concepts in important areas of space, time and motion, the origin and history of earth and its environments. Scientific principles and techniques for observing space and earth phenomena are investigated. Strategies for incorporating this knowledge in teaching settings.
Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

■ MDB379 SCIENCE & SURVIVAL
Examination of a range of scientific concepts in the area of matter and energy and how these concepts are applied in a technological context. On a broader horizon, the scientific principles underlying major innovations, disasters and controversial issues are examined. Strategies for incorporating this knowledge in a teaching situation.
Course: ED51  
Credit Points: 12  
Contact Hours: 3 per week

■ MDB380 TECHNOLOGY & LIFE SCIENCE
The interaction of organisms and their physical environment; the human influence in the biosphere; how technology empowers communities to exploit and/or protect biological systems and the integrity of the earth as humanity experiences it today. This unit focuses on the use of instrumentation and technology in the area of science research in the life sciences and investigates how this technology can be adapted to practice in primary classrooms.
Course: ED51
Credit Points: 12  Contact Hours: 3 per week

- MDB381 SCIENCE AND TECHNOLOGY IN THE COMMUNITY AND WORKPLACE

Development of an awareness of how science and technology pervade most aspects of our daily lives in communities and workplaces. The implications of a rapidly changing scientific and technological base of industry; increasing involvement of the public in national and international decision-making; the need for a scientifically literate society. Practical exercises and projects are also undertaken.

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

- MDB382 PROBLEM SOLVING, CRITICAL THINKING AND FUTURING

Reviews state-of-the-art concepts and practices from problem solving, critical thinking, and futuring knowledge bases which have practical applications in the adult education and human resource development field. Participants may enhance their professional effectiveness in performing administrative, instructional, and program development responsibilities through modern practice.

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

- MDB383 USING INFORMATION TECHNOLOGIES IN THE CURRICULUM

Examination and analysis of relevant curriculum documents, e.g. National Technology Statement, Queensland Education Department, Guidelines for the Use of Computers in Learning, curriculum developed as a result of the Wiltshire Report. Content will include models for learning with information technology; models for learning about information technology; and managing information technology resources.

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

- MDB384 SCIENCE EDUCATION

Science curriculum development and implementation will examine the growth of children’s understandings of key concepts in science. The development of their scientific thinking and manipulative skills will also be investigated in conjunction with this. Extended sequences of learning experiences, or programs, will be planned and implemented.

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

- MDB385 INFORMATION TECHNOLOGIES IN EDUCATION

A critical reflection on the history of technological development and the social impact of these developments combined with issues relating to the uses of information technologies in teaching and learning. Lecture sessions with workshop and laboratory sessions will assist students to become competent in applying information technologies to academic tasks accessing electronic information sources, creating documents, engaging in computer-based dialogues, analysing, evaluating.

Course: ED52
Credit Points: 12  Contact Hours: 3 per week

- MDB386 MATHEMATICS FOUNDATIONS

This unit will introduce prospective teachers in the primary school to those elements that are important to mathematics today. The unit will begin by exploring the ideas of mathematics in today’s society. The unit will then look at the history of mathematics relating to mathematics as it is presented in modern day classrooms. The historical analysis will look at the development of the structure of the unit. From this introduction, the formal connections between the disciplines – number, geometry and measurement – will be further analysed. The students will see that mathematics is a discipline with applications that are used today.

Course: ED52, ED51
Credit Points: 12  Contact Hours: 3 per week

- MDB387 SCIENCE FOUNDATIONS

This unit will develop students’ understandings of fundamental concepts related to natural and processed materials, energy, change and growth. Students will also examine issues such as the nature of science, the historical development of major concepts of science, the development of communication in science, and the relationship of science to society. Students will engage in the processes of working through practical hands-on activities, discussions and debates, and small project work.

Course: ED52, ED51
Credit Points: 12  Contact Hours: 3 per week

- MDB388 GAMING AND CHANCE

Discover the world of probabilistic mathematics, gaming, expectation and decision-making through games and activities that have application in mathematics teaching.

Course: ED52, ED51
Credit Points: 12  Contact Hours: 3 per week

- MDB389 LIFE AND LIVING PROCESSES

The interaction of organisms and their physical environment will be investigated, in particular, the human influence on the biosphere. The role of technology in empowering communities to exploit and/or protect biological systems and the integrity of the earth as humanity experiences it today will also be studied. Energy and energy changes, energy resources and the responsible use of those resources will be considered.

Course: ED52, ED51  Prerequisite: MDB387
Credit Points: 12  Contact Hours: 3 per week

- MDB390 NATURAL AND PROCESSES MATERIALS

This unit continues the development of students’ content knowledge in science by examining a range of scientific concepts that contribute to an understanding of science in a technological context. The focus will be on the exploitation of natural and processed materials and a consideration of the environment and social costs and benefits associated with the use of these materials.

Course: ED52, ED51  Prerequisite: Life and Living Processes
Credit Points: 12  Contact Hours: 3 per week

- MDB391 EARTH AND SPACE

The unit examines scientific concepts in important areas of space, time and motion, the origin and history of earth and its environments, and light and optics. Scientific principles and techniques for observing space and earth phenomena will also be investigated.

Course: ED52, ED51  Prerequisite: MDB390
Credit Points: 12  Contact Hours: 3 per week

- MDB392 EDUCATIONAL COMPUTING ENVIRONMENTS

An introduction to computer systems, including an understanding of computer systems and networks used in education. The focus will be on the technical management of personal and networked systems commonly found in schools. Students will use an appropriate educational programming language to apply their understandings of computer systems to a practical situation.

Course: ED52, ED51
Credit Points: 12  Contact Hours: 3 per week

- MDB393 NETWORKED COMMUNICATIONS

This unit examines how a number of computer-linked communities can provide access to information and re-
sources that teachers may use both personally and professionally. Students will use such things as local and wide area networks, electronic information services, Internet, and the World Wide Web to participate in global and local communities and contribute to the resources available to these communities.

Course: ED52, ED51
Credit Points: 12  Contact Hours: 3 per week

**MDB394 CHOOSING SOFTWARE FOR EDUCATIONAL CONTEXTS**

Through an examination of specific items of educational software, students will develop a set of criteria for evaluating such software. Software will include computer-based learning and computer-based managed learning materials, multimedia materials delivered via CD-rom or other computer-based media, and software designed to promote the development of higher order thinking and communicative skills.

Course: ED52, ED51
Credit Points: 12  Contact Hours: 3 per week

**MDB410 COMPUTERS IN THE SCHOOL CURRICULUM**

The introduction of computers into the school environment and curriculum; methods for teaching computer studies; the use of computers for classroom management and support; computer technology and its impact on schools and society. Access to an appropriate microcomputer is required.

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

**MDB411 EARLY CHILDHOOD MATHEMATICS TEACHING, LEARNING AND ASSESSMENT**

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, ED61
Credit Points: 12  Contact Hours: 3 per week

**MDB414 LEARNING ENVIRONMENTS USING INFORMATION TECHNOLOGY**

In this unit, students will explore the contribution that advanced information technologies can make to teaching and learning. Students will gain exposure to applications of technology such as multimedia materials and authoring software, the Internet, the World Wide Web, and CD-rom based materials. They will be required to apply these to a variety of curriculum settings.

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

**MDB417 ASSESSING THE MATHEMATICAL AND SCIENTIFIC ABILITIES OF STUDENTS**

This unit focuses on the identification, investigation and assessment of the mathematical and/or scientific abilities of students and the examination and implementation of strategies for enhancing and modifying those abilities. This unit has a major practical and research oriented component generally undertaken in a school setting. The mathematical and/or scientific abilities of studies can be related to any secondary subject.

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

**MDB418 CREATING MULTIMEDIA ENVIRONMENTS FOR TEACHING AND LEARNING**

The use of interactive technology in the teaching/learning processes; approaches to and uses of computer aided learning including hypermedia authoring systems such as Hypercard and Toolbook and their application in multimedia environments. Students will be involved in designing and producing an interactive learning environment using appropriate authoring software.

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

**MDB419 MAPPING CHILDREN'S LEARNING OF MATHEMATICS**

This unit will focus on strategies and techniques for mapping children's range of knowing, knowledge building and reasoning in mathematics; and for using this to provide a framework for guiding future learning. Students will act as teacher-researchers in a school based context, working with children to gain insight into their conceptions of mathematics and its learning and developing, and implementing programs to enhance learning.

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

**MDB429 INITIATIVES IN SCIENCE EDUCATION**

In this unit 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. An emphasis will be placed on catering for the individual and providing experiences which fully extend each child, including the exceptional child.

Course: ED51
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 applications 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

**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

**MDB446 SCIENCE FOR EARLY CHILDHOOD**

Science for young children; theoretical background of science education; development of process and manipulative skills; the role of the teacher in a child-centred science curriculum.

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

**MDB447 MATHEMATICS CURRICULUM**

Recent developments in the teaching and learning of mathematics; identification of effective curriculum models and teaching strategies for mathematics; understanding the content of school mathematics; developing and evaluating curriculum applications.

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

**MDB448 MATHEMATICS TEACHING, LEARNING & ASSESSMENT**

This unit focuses on recent trends in the teaching and assessment of mathematics in school and post-compulsory education. The ideas from recent reports and relevant theories are applied to specific areas of the math-
emic curriculum to develop practical teaching and assessment plans. Part of the unit allows participants to specialise in the use of a specific approach including problem solving and the use of historical topics.

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

**MDN615 CURRICULUM STUDIES IN MATHEMATICS, SCIENCE OR TECHNOLOGY EDUCATION**

A study of curriculum in one of the major areas of study in mathematics, science or technology education. Examples of topics to be addressed include: curriculum theory and design; intended, developed and enacted curriculums; curriculum implementation and evaluation; historical considerations; current curriculum considerations.

Courses: ED13, ED61 Credit Points: 12

**MDN616 PEDAGOGY IN MATHEMATICS, SCIENCE OR TECHNOLOGY EDUCATION**

The various factors that determine the effectiveness of the mathematics, science and technology learning environments. Factors considered include the role of the teacher, learning theories, social context. The unit achieves a balance between theoretical considerations and practical experience of the participants.

Courses: ED13, ED61 Prerequisites: EDN601 Credit Points: 12

**MDN619 TECHNOLOGICALLY SUPPORTED LEARNING AND TEACHING ENVIRONMENTS**

Computer-based software, equipment and educational settings as technological environments; models of interpreting technological environments; historical perspective of teaching/learning technologies; design of technological environments.

Courses: ED13 Credit Points: 12

**MDN620 STUDENT EVALUATION IN MATHEMATICS/SCIENCE/TECHNOLOGY EDUCATION: ASSESSMENT & INTERVENTION**

The major theoretical issues in assessment in mathematics, science and technology education. The role of assessment and intervention is discussed and expertise is developed in planning assessment instruments and in their evaluation.

Courses: ED13, ED11 Credit Points: 12

**MDN621 MATHEMATICAL AND SCIENTIFIC REASONING**

Recent theories and research in cognitive psychology and their application to mathematics and science education. Topics of study include the nature of mathematical and scientific knowledge and understanding, cognitive complexity, analogical reasoning, and problem solving and thinking in mathematics and science. The unit develops students' understanding of these issues so that they might apply this to their own teaching and research.

Courses: ED13, ED11 Prerequisites: EDN601 Corequisites: MDN616 Credit Points: 12 Contact Hours:

**MDP401 JUNIOR SCIENCE CURRICULUM STUDIES 1**

Development of basic proficiencies in teaching Junior Science. The unit is based upon current theories of learning and models of science education; laboratory safety and management.

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

**MDP402 JUNIOR SCIENCE CURRICULUM STUDIES 2**

See MDP401. The opportunity to extend expertise with respect to a wide range of teaching strategies and learning contexts.

Course: ED37 Prerequisite: MDP401 Credit Points: 12 Contact Hours: 3 per week

**MDP403 MATHEMATICS CURRICULUM STUDIES 1**

A foundation for the planning and implementation of mathematics instruction; learning theories; practical curriculum planning; school syllabuses and programs in mathematics are examined.

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

**MDP404 MATHEMATICS CURRICULUM STUDIES 2**

See MDP403.

Course: ED37 Prerequisite: MDP403 Credit Points: 12 Contact Hours: 3 per week

**MDP405 COMPUTER EDUCATION CURRICULUM STUDIES 1**

The broad issues of computer curricula; specific computer units in secondary schools; syllabus analysis, work program development. Management of computer studies and computer education in a school.

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

**MDP406 COMPUTER EDUCATION CURRICULUM STUDIES 2**

Analysis of topics in computer studies programs, learning computer studies, assessment, teaching strategies, classroom management. Work unit development.

Course: ED37 Prerequisite: MDP405 Credit Points: 12 Contact Hours: 3 per week

**MDP407 SENIOR SCIENCE CURRICULUM STUDIES 1**

The opportunity to develop basic proficiencies in teaching a senior science subject; teaching strategies which foster the development of complex reasoning and skill development.

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

**MDP408 SENIOR AGRICULTURE CURRICULUM STUDIES 2**

Offers students the opportunity to extend expertise with respect to this particular discipline. Emphasis is placed on current issues in the discipline and teaching strategies which allow these issues to be freely discussed in the classroom.

Course: ED37 Prerequisite: MDP407 Credit Points: 12 Contact Hours: 3 per week

**MDP409 SENIOR BIOLOGY CURRICULUM STUDIES 2**

See MDP408.

Course: ED37 Prerequisite: MDP407 Credit Points: 12 Contact Hours: 3 per week

**MDP410 SENIOR CHEMISTRY CURRICULUM STUDIES 2**

See MDP408.

Course: ED37 Prerequisite: MDP407 Credit Points: 12 Contact Hours: 3 per week

**MDP411 SENIOR EARTH SCIENCE CURRICULUM STUDIES 2**

See MDP408.

Course: ED37 Prerequisite: MDP407 Credit Points: 12 Contact Hours: 3 per week

**MDP412 SENIOR MARINE STUDIES CURRICULUM STUDIES 2**

See MDP408.

Course: ED37 Prerequisite: MDP407 Credit Points: 12 Contact Hours: 3 per week
The contexts of learning and processes
See MDP408.

• MDP507 TEACHING SECONDARY
• MDP506 COMPUTER EDUCATION
• MDP451 MATHEMATICS, SCIENCE
• MDP450 MATHEMATICS, SCIENCE

schools are explored.
Credt Points:
Course: ED36
Credit Points: 12 Contact Hours: 3 per week

• MDP451 MATHEMATICS, SCIENCE & TECHNOLOGY 2
Application of key concepts and processes in mathematics/science; concepts and processes studied in Semester 1 transferred to other mathematics/science topics; development of teaching episodes incorporating the concepts and processes. Assessment and evaluation; difference between assessment and evaluation; 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. How information is modelled, stored and retrieved using relational database techniques; the impact on society of the use of information systems; the pedagogies associated with teaching about and using information systems in schools are explored.
Course: ED21, ED51, ED52 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, ED51, ED52 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, ED61 Credit Points: 12 Contact Hours: 3 per week

• MDP507 TEACHING SECONDARY COMPUTER STUDIES
Investigates and develops the pedagogy and management associated with Computer Studies courses currently implemented in Queensland Secondary schools. Emphasis is given to the Information Processing and Technology syllabus and the Practical Computer Methods syllabus.
Course: ED21 Prerequisites: MDP503, MDP532 Corequisite: 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.
Course: ED21, ED61 Prerequisites: MDP537 or MDP532 or MDP530 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.
Course: ED28, ED61 Credit Points: 12 Contact Hours: 3 per week

Incompatible with: MDP505

• 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, ED61 Credit Points: 12 Contact Hours: 3 per week

Incompatible with: MDP505

• MDP531 INVESTIGATIONS INTO COMPUTER-AIDED LEARNING
The use of interactive technology in the teaching/learning process; approaches to and uses of computer-aided learning, hypermedia authoring systems such as Hypercard, Linkways and Toolbook, and their applications in multimedia environments.
Course: ED21, ED61 Credit Points: 12 Contact Hours: 3 per week

Incompatible with: MDP501

• 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, ED61 Credit Points: 12 Contact Hours: 3 per week

Incompatible with: MDP501

• MDP533 TEACHING INFORMATION SYSTEMS MODELLING
Designed for prospective teachers of information systems modelling; explores the pedagogies and approaches appropriate for teaching students at a variety of levels including a secondary school environment; development and writing of specification documents for information system implementation within an educational context; tools such as relational languages and CASE used by students to implement small educational information systems.
Course: ED21 Prerequisite: MDP503 Credit Points: 12 Contact Hours: 3 per week

Incompatible with: MDP509
- MDP534 EDUCATIONAL APPLICATIONS OF ARTIFICIAL INTELLIGENCE
  Artificial Intelligence (AI) as a discipline impacting on education, philosophical issues, and methods used in AI; focuses particularly on AI applications which cross broad areas of the school curriculum; provides appropriate curriculum support for teachers of the AI topic within the Information Processing and Technology unit at a secondary school level.
  Course: ED21 Prerequisite: MDP535
  Credit Points: 12 Contact Hours: 3 per week
  Incompatible with: CSP842

- MDP535 EDUCATIONAL SOFTWARE DEVELOPMENT
  Data, procedural and object-oriented 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
  Credit Points: 12 Contact Hours: 3 per week
  Incompatible with: CSP837

- MDP536 COMPUTER GRAPHICS IN TEACHING
  The use of computer graphics to enhance teaching and learning in a school environment. A problem-solving approach is employed and students are given the opportunity to apply what they are learning to their own curriculum areas.
  Courses: ED21, ED61
  Prerequisites: MDP532 or MDP530
  Credit Points: 12 Contact Hours: 3 per week
  Incompatible with: CSP843

- MDP537 MAJOR ISSUES IN COMPUTER EDUCATION
  The application and implication of the use of information technologies in an educational environment; the impact of teaching, learning and the curriculum.
  Courses: ED21, ED61
  Credit Points: 12 Contact Hours: 3 per week
  Incompatible with: MDP502

- 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: 3 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

- MEB111 DYNAMICS
  The principles of dynamics; kinetics of particles and systems of particles in plane motion; coordinate systems; relative motion; various methods for the solution of mechanisms; freebody diagrams; work-energy equations; impulse; momentum and impact.
  Courses: EE43, EE44, EE45, IF56, ME35, ME45, ME46, ME47
  Prerequisite: MAB187
  Credit Points: 8 Contact Hours: 3 per week

- MEB134 MATERIALS I
  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.
  Allaying and strengthening in metals, polymers and ceramics.
  Courses: CE42, CE43, EE43, EE44, EE45, IF42, IF56, ME45, ME46, ME47
  Credit Points: 8 Contact Hours: 3 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: IF56
  Credit Points: 8 Contact Hours: 3 per week

- MEB175 MANUFACTURING PRACTICE 1
  Workplace health and safety practices. Lectures and hands-on instruction on general fitting and fabrication; metal joining (electric and gas); metrology. Industry visits.
  Course: ME35
  Credit Points: 8 Contact Hours: 3 per week

- MEB181 ENGINEERING COMMUNICATION
  An introductory course in engineering graphics covering the application of the principles of geometric drawing to the preparation of engineering drawings. Topics include orthographic projection; auxiliary views; sectioning; use of manufacturing symbols; dimensioning and tolerancing; pictorial views and sketching; data presentation; oral and written reporting. Computer aided drafting is introduced.
  Courses: CE31, CE42, CE43, EE43, EE44, EE45, IF56, ME35, ME45, ME46, ME47, IF25, IF42, IF44
  Credit Points: 8 Contact Hours: 5 per week

- MEB191 ENGINEERING IN THE MEDICAL ENVIRONMENT
  Overview of the health system in Australia; clinical disciplines within medicine; medical terminology; history of health technology; health technology from an engineering perspective; case studies.
  Course: ME46
  Credit Points: 8 Contact Hours: 3 per week

- MEB213 MECHANICS OF SOLIDS
  Concepts of stress, strain and elasticity; analysis of stress and strain; stresses in simple beams; torsion of circular shafts; stresses in thin-walled pressure vessels; strain measurement and strain gauging.
  Courses: IF56, ME35, ME45, ME46, ME47, IF25, IF42, IF44
  Prerequisite: CEB184
  Credit Points: 8 Contact Hours: 4 per week

- MEB221 ENGINEERING SCIENCE 1
  Statics: forces in equilibrium; resolution of forces; friction; inertia and change of motion; application to connected bodies; dynamics of rotation; centripetal force; the hoist; periodic motion; balancing: work and energy; impulse and momentum; introduction to fluids at rest and in motion.
  Courses: IF54, PS47, PS48, IF55
Prerequisite: MAB188  Corequisite: PHB172  Credit Points: 8  Contact Hours: 3 per week

**MEB275 MANUFACTURING PRACTICE 2**
Workplace health and safety practices. Lectures and hands-on instruction on machine tools; industrial presses; foundry methods; component assembly. Industry visits.  Course: ME35  Prerequisite: MEB175  Credit Points: 8  Contact Hours: 3 per week

**MEB282 DESIGN 1**
This introductory design course covers the selection of basic machine elements based on their function, size and capacity as part of a mechanical system. The course comprises mechanical design; power transfer; V-belt drives; chain drives; gear drives; machine components: introduction to, preparation and use of spreadsheets and databases.  Courses: IF56, ME35, ME45, ME47  Prerequisites: CEB184, MEB181 or MEB134  Corequisites: MEB314 or MEB181  Credit Points: 8  Contact Hours: 4 per week

**MEB283 COMPUTER AIDED DESIGN AND DRAFTING**
This subject will allow students to expand previously acquired 2D CAD expertise to main frame, surface and solid modelling and to customise menus for personal use.  Course: ME35  Credit Points: 8  Contact Hours: 4 per week

**MEB314 MECHANICS 1**
Kinematic and dynamic analysis of planar linkages and mechanisms: link synthesis and its application to the design of mechanisms; determination of static and dynamic forces and torques due to inertia and other effects in mechanisms; balancing; design and synthesis of parts with specified motion using graphical and analytical methods; kinematic analysis of spur gears in mechanisms.  Courses: IF56, ME35, ME45, ME46, ME47  Prerequisites: CEB184, MEB111  Credit Points: 8  Contact Hours: 4 per week

**MEB333 BIOMATERIALS**
Characterisation of materials; metallic, ceramic, polymeric implant materials; composites as biomaterials; structure-property relationships of biomaterials; tissue response to implants; soft tissue replacements; hard tissue replacements; transplants.  Course: ME46  Prerequisite: MEB133 or MEB134  Credit Points: 8  Contact Hours: 3 per week

**MEB334 MATERIALS 2**
Introduction to fracture mechanics; plastic zone size and limitation of linear elastic fracture mechanics (LEFM); application of LEFM to static design, stress corrosion cracking, and fatigue crack growth; characteristics of polymers and composites; review of engineering ceramics.  Courses: IF56, ME35, ME45, ME47  Prerequisites: MEB133 or MEB134  Credit Points: 8  Contact Hours: 4 per week

**MEB352 THERMODYNAMICS 1**
Basics of engineering thermodynamics; reversibility; first and second laws of thermodynamics; liquid, vapour and gas; reversible non-flow processes; heat engine cycles; positive displacement expanders and compressors; multi-stage compressors; engine performance testing.  Courses: IF56, ME35, ME45, ME46, ME47  Credit Points: 8  Contact Hours: 4 per week

**MEB355 THERMOFLUIDS**
This unit introduces students to principles of heat transfer, fluid power and more advanced application of fluid mechanics and thermodynamics. Unsteady fluid flow; dynamic similarity; rotodynamic machines; hydraulic fluid power systems; Rankine cycle and its application in steam power generation industry; vapour compression; gas turbines.  Courses: ME35  Credit Points: 8  Contact Hours: 4 per week

**MEB362 THERMOFLUIDS**
Fluid properties; forces on fluids at rest; definition and applications of the continuum equation, the momentum equation and the energy equation; isentropic compressible flow including boundary layer effects; first and second laws of thermodynamics.  Course: EE43  Credit Points: 8  Contact Hours: 3 per week

**MEB363 FLUIDS 1**
Fluid properties; forces on a fluid at rest; manometry; fluid pressure on submerged bodies; states of equilibrium; fluid flow; fluid flow and pressure drop in pipes; power transmission through pipelines; momentum and fluid flow; energy equation and fluid flow; applications of the momentum and energy equations; branching pipes.  Courses: IF53, IF56, ME35, ME45, ME46, ME47  Prerequisites: CEB184, PHB134, MAB188  Credit Points: 8  Contact Hours: 4 per week

**MEB381 DESIGN 2**
Methodology for mechanical design: design of machine elements; design for strength and fatigue; computer-aided design.  Courses: ME35, ME45, ME47  Prerequisites: CEB184, MEB101 or MEB282, MEB121 or MEB181  Corequisite: MEB314  Credit Points: 8  Contact Hours: 3 per week

**MEB409 PROJECT 2**
Investigate and present a formal report on a mechanical engineering problem; project may be industry based or arise from applied research.  Course: ME45  Prerequisites: MEB502  Credit Points: 7  Contact Hours: 3 per week

**MEB430 MATERIALS 3**
Nucleation and growth phenomena in commercial materials; structure-property relationships and design considerations; welding of structural and joining materials; review of structure-property relationships in wrought alloys; engineering properties of steels.  Courses: IF53, IF56, ME45, ME46, ME47  Prerequisites: MEB133 or MEB134  Credit Points: 8  Contact Hours: 4 per week

**MEB450 AIR CONDITIONING**
Psychrometry; cooling load calculations; air conditioning systems; vapour compression refrigeration cycle analysis; multipurpose systems; absorption refrigeration; field visit.  Course: ME35  Prerequisites: MEB251 or MEB455, MEB462 or MEB466  Credit Points: 7  Contact Hours: 3 per week

**MEB454 AERODYNAMICS 1**
Incompressible airflow around bluff bodies and aerofoils and in a tube of varying cross-sections; stalling of aerofoils; variations with angle of attack of lift, pressure, pitching moment and drag coefficients; the influence of Reynolds's number including the effect of boundary layers, turbulent and laminar; high lift devices and fuselage effect; planform effects; aircraft layouts such as canards and delta wings.
Course: EE43
Credit Points: 8
Contact Hours: 3 per week

■ MEB455 THERMODYNAMICS 2
Prerequisite: MEB362
Credit Points: 8
Contact Hours: 3 per week

Steam plant; nozzles; impulse and reaction turbines; gas turbines; mixtures; refrigeration; chemistry of combustion.
Courses: ME45, ME47
Prerequisite: MEB352
Credit Points: 8
Contact Hours: 4 per week

■ MEB456 AIR CONDITIONING
See MEB50.
Courses: ME35, ME36, ME45, ME47
Prerequisites: MEB251 or MEB455, MEB462 or MEB466
Corequisites: MEB554
Credit Points: 8
Contact Hours: 3 per week

■ MEB463 TRIBOLOGY
The fundamentals of tribology; specification and measurement of surface roughness; lubrication modes; lubricants; wear modes; bearing design; lubrication of machine elements; seals.
Course: ME35
Credit Points: 6
Contact Hours: 3 per week

■ MEB464 FLUIDS 3
Boundary layer theory; viscous flow via the Navier-Stokes and Reynolds' equations; isotropic compressible flow; normal and oblique shock waves.
Course: ME45
Prerequisites: MAB893, MEB462 or MEB466
Credit Points: 7
Contact Hours: 3 per week

■ MEB465 BIOFLUIDS
Continuity of flow; viscosity and its measurements; Newton's law of measurement; non-Newtonian fluids; Navier-Stokes equations of motion; Eulerian and Lagrangian descriptions of flow; boundary layer theory; dimensional similarity; rheology and rheological models; rheology of biofluids; hemodynamics; artificial pumps, valves and pacers for bioluid systems; anaesthesia machines; blood flow meters; heart-lung by-pass machines.
Course: ME546
Credit Points: 8
Contact Hours: 3 per week

■ MEB466 FLUIDS 2
Unsteady fluid flow in piping systems; dynamic similarity; regimes of incompressible flow around a body (potential and boundary layer flow); principles of operation of pumps, turbines and hydrokinetic devices; Navier-Stokes equations applied to viscous flow; compressible fluid flow including normal shock waves.
Courses: ME35, ME45, ME47
Prerequisite: MEB363
Corequisite: MAB488
Credit Points: 8
Contact Hours: 4 per week

■ MEB473 MANUFACTURING ENGINEERING 1
Practical machining principles; cutting tools and cutting tool materials; analysis of tool wear and tool life; introduction to CNC technology and CNC part programming; types of welding processes; grinding and non-traditional material cutting processes; principles of metrology.
Courses: IF56, ME35, ME36, ME45, ME46, ME47
Corequisites: MEB363, MAB488
Credit Points: 8
Contact Hours: 4 per week

■ MEB483 DESIGN 3
Design of mechanisms; welded structures; flexible components; journal bearings; computer aided design.
Courses: IF53, IF56, ME45, ME47
Prerequisites: CEB102, CSB191, MEB111, MEB133, MEB314 MEB381
Corequisites: MEB334
Credit Points: 8
Contact Hours: 3 per week

■ MEB484 BIOENGINEERING DESIGN 1
Introduction to design methodology and problem solving; risk and safety factors in design; types of bearing and bearing selection; design of beams and shafts; type and choice of gear mechanisms; human factors engineering; psychological factors in design of displays; bioengineering applications of design theory.
Course: ME46
Prerequisites: CEB185, MEB121 or MEB181
Credit Points: 8
Contact Hours: 3 per week

■ MEB490 PROJECT
Investigation and analysis of technological or managerial problems in medical engineering and presentation of a written report.
Course: ME46
Credit Points: 16
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

■ MEB503 SPECIAL TOPIC 1
A series of lectures and tutorials in areas which are of special professional relevance to the student's intended career path, or which may be available on occasion from visiting scholars.
Courses: IF53, ME35, ME45, ME47
Prerequisite: Students to have achieved an appropriate level of preparation in topic area concerned.
Corequisite: Depends on the syllabus of the particular special topic offered
Credit Points: 8
Contact Hours: 3 per week

■ MEB512 NOISE & VIBRATIONS
Introduction to acoustics; noise levels, frequency and duration; sound power level; free and reverberant field; free and forced vibration and vibration absorption; torsion vibration; Holzer's method.
Courses: ME45, ME47
Prerequisites: PHB134, MAB493, MEB111
Credit Points: 8
Contact Hours: 4 per week

■ MEB513 STRESS ANALYSIS
Stress and strain in three dimensions; strain-gauge rosette analysis; two-dimensional problems; axisymmetrically loaded problems; torsion of non-circular section; introduction to plates.
Courses: ME45, ME46, ME47
Prerequisites: MEB212 or MEB213, MAB493
Credit Points: 8
Contact Hours: 4 per week

■ MEB532 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: ME35, ME45, ME47
Prerequisites: MEB230 and MEB231 or MEB334 and MEB430
Credit Points: 8
Contact Hours: 3 per week

■ MEB550 HEAT TRANSFER
Conduction: steady-state, one and two-dimensions, unsteady-state; convection: boundary layers, forced, natural and radiation black and grey bodies, shape factors.
Course: ME35
Credit Points: 6
Contact Hours: 3 per week

■ MEB551 PROPULSION & ENGINES
Piston engines; super chargers and carburetors; actuator disc theory of propellers and rotary wing aircraft;
gas turbine engines, compressors, turbines, ignition systems, fuel control systems and afterburners, rocket motors, fuels and thrust calculations.

Course: EE43  Prerequisite: MEB362  Credit Points: 8  Contact Hours: 3 per week

- MEB543 AERODYNAMICS 2

Transonic and supersonic flows, critical Mach numbers, quasi one-dimensional stationary current equations, shock waves, compressional and expansional, linear flow around aerofoil sections, convergent divergent nozzles; qualitative study of flow around differing wing areas and shape, climb, cruise, descent, take off and landing calculations.

Course: EE43  Prerequisite: MEB454  Credit Points: 8  Contact Hours: 3 per week

- MEB544 HEAT TRANSFER

Conduction and convection heat transfer; overall heat transfer coefficient; viscous and inviscid flow, boundary layers, empirical and practical relations for forced-convection heat transfer, natural-convection systems, radiation heat transfer, condensing and boiling, heat exchangers.

Courses: ME45, ME47  Credit Points: 8  Contact Hours: 3 per week

- MEB572 MANUFACTURING ENGINEERING 2

Extraction of metallochemical principles; hot and warm forging operations; extrusion operation; flat rolling operation; deep drawing operation; shearing, blanking operation; spinning operation; non-traditional metal forming operations; die/moulds in manufacturing processes; introduction to casting of ferrous and non-ferrous metals and alloys; shrinkage and porosity, fluid flow and design considerations in casting.

Courses: IF53, IF56, ME45, ME46, ME47  Credit Points: 8  Contact Hours: 4 per week

- MEB580 BIOENGINEERING DESIGN 2

Effect of manufacturing processes on material properties and product design, manufacturing tolerances; computer-aided design and solid modelling; effect of computer aided manufacturing on component design; rapid prototyping techniques; use of prototypes in manufacture; reverse engineering by non-invasive techniques; design/testing/prototyping/production cycle; application of design for manufacturing of bioengineering devices.

Course: ME46  Prerequisite: MEB448  Credit Points: 8  Contact Hours: 4 per week

- MEB602 SPECIAL TOPIC 2

See MEB503 Special Topic 1.

Courses: IF53, IF56, ME35, ME45, ME46, ME47  Credit Points: 8  Contact Hours: 3 per week

- MEB611 STABILITY & CONTROL OF AIRCRAFT

Equations of motion, longitudinal, lateral and directional stick fixed and stick free control and stability, manoeuvring flight; use of aerodynamic coefficients without derivation, control system modelling.

Course: EE43  Prerequisite: MEB553  Credit Points: 8  Contact Hours: 3 per week

- MEB612 MECHANICAL MEASUREMENTS

Stress and strain, force, torque and power measurements, vibration measurements, pressure and sound measurements, flow measurements, data transmission and recording.

Courses: ME35  Credit Points: 8  Contact Hours: 3 per week

- MEB613 MECHANICS 2

Analysis of two-dimensional frames; small curvature beam theory, analysis of compression members; introduction to energy methods; introduction to matrix methods; free and forced vibration, damped vibration, energy methods in vibration analyses.

Courses: ME45, ME47  Credit Points: 8  Contact Hours: 3 per week

- MEB641 AUTOMATION 1

Mathematical models of mechanical systems; time domain, frequency domain, S-plane, including plotting of root locus diagrams.

Courses: IF53, ME45, ME46, ME47, IF56  Credit Points: 8  Contact Hours: 3 per week

- MEB660 FLUID POWER

Introduction to fluid power; graphical symbols, simple circuits, cascade method, Boolean algebra, fluid logic, Karnaugh-Veitch method; hydraulic components, hydraulic system design and hydraulic circuits.

Course: ME35, ME45  Prerequisite: MEB462 or MEB466  Credit Points: 6  Contact Hours: 3 per week

- MEB661 TRIBOLOGY

Terminology in lubrication, friction and wear, ploughing and adhesion components of friction, characterisation of solid surfaces, wear modes, chemistry of lubricants, lubrication modes, bearing design; lubrication of transmission elements; failure diagnosis, special lubrication problems; biological deterioration of lubricants, lubrication of human and prosthetic joints.

Courses: IF53, IF56, ME35, ME45, ME46, ME47  Credit Points: 8  Contact Hours: 4 per week

- MEB662 FLUID POWER

Components of hydraulic and pneumatic systems, fluid power graphical symbols, hydraulic components, hydraulic system design, hydraulic circuits.

Courses: IF53, IF56, ME43, ME47  Prerequisite: MEB462 or MEB466  Credit Points: 8  Contact Hours: 4 per week

- MEB670 INDUSTRIAL ENGINEERING 1

Project planning and control, plant location and layout, work study, design of experiments, linear programming applications.

Course: ME35  Credit Points: 6  Contact Hours: 3 per week

- MEB672 TOTAL QUALITY MANAGEMENT

Total quality control and systems, total quality management technology, statistical process control, product and system reliability, ISO9000 and AS3900, management of engineering projects.

Courses: IF53, IF56, ME35, ME45, ME46, ME47  Credit Points: 8  Contact Hours: 3 per week

- MEB675 PLASTICS TECHNOLOGY

Mechanical and physical properties of polymers, low moulding, compression moulding, transfer and rotational moulding, extrusion and plastic injection moulding, tooling and product design for plastic components, machinery, process control and instrumentation in the plastics forming process.

Course: ME35  Credit Points: 7  Contact Hours: 3 per week

- MEB676 DESIGN FOR MANUFACTURING 1

Introduction to solid modelling, techniques used in the development of solid models; use of solid modelling in rapid prototyping, solid modelling in the concurrent engineering environment; introduction to CAD/CAM; use of CAM computer software for different manufacturing processes; rapid prototyping techniques such as stereolithography.
Courses: IF53, IF56, ME35
Credit Points: 8
Contact Hours: 3 per week

■ **MEB677 INDUSTRIAL ENGINEERING 1**
See MEB670.
Course: ME35
Credit Points: 8
Contact Hours: 3 per week

■ **MEB678 PLASTICS TECHNOLOGY**
See MEB675.
Course: IF56
Credit Points: 8
Contact Hours: 3 per week

■ **MEB681 BIOENGINEERING DESIGN 3**
Real-time data processing circuits; operational amplifier design and application; filter selection and design; logic circuit design; electrical control circuits; design for safety and reliability; biomedical transducers and sensors; computer control and data logging; use of stepper motors and gears; design of typical biomedical instruments.
Course: ME46
Prerequisites: EEB202, EEB371, PHB504
Credit Points: 8
Contact Hours: 3 per week

■ **MEB682 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 optimization techniques.
Courses: ME35, ME45, ME46, ME47
Prerequisites: MEB230 and MEB231 or MEB334 and MEB430, MEB411, MEB483
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, e.g. detailed analysis of undercarriage and flap systems; aircraft fuel systems; pressurisation systems; cockpit instrumentation and associated equipment; principles and operation of gyroscopes and accelerometers.
Course: EE43
Credit Points: 8
Contact Hours: 3 per week

■ **MEB701 SPECIAL TOPIC 3**
See MEB503.
Course: ME45
Prerequisite: Students to have achieved an appropriate level of preparation in topic area concerned.
Corequisite: Depends on the syllabus of the particular special topic offered
Credit Points: 7
Contact Hours: 3 per week

■ **MEB702 SPECIAL TOPIC 3**
See MEB503.
Course: ME45, ME47
Prerequisite: Students to have achieved an appropriate level of preparation in topic area concerned.
Corequisite: Depends on the syllabus of the particular special topic offered
Credit Points: 8
Contact Hours: 3 per week

■ **MEB703 RELIABILITY AND MAINTENANCE OPTIMISATION**
Development of reliable designs; bathtub curve, FMECA; series, active and standby reliability and availability; matrix methods; system productiveness; fault trees; distribution forms; Weibull analysis; renewal theory, age renewal; block renewal, bad-as-new renewal; Hastings' repair limit; inspect or monitor; physics of failure.
Course: ME46
Credit Points: 8
Contact Hours: 3 per week

■ **MEB710 AUTOMATION 2**
Use of computer packages in control system design (e.g. Matrix, X'); fundamentals of discrete time systems; instrumentation used in the acquisition and analysis of digital data (e.g. Labtech); programmable logic controllers.
Course: ME45
Prerequisite: MEB640 or MEB641, MEB660 or MEB662
Credit Points: 6
Contact Hours: 3 per week

■ **MEB711 AUTOMATION 2**
Classical control: performance specification, system identification, creation of control loops, tuning, simulation; modern control: state space modeling, state variable feedback, controllability/observability, simulation.
Courses: ME45, ME47
Prerequisite: MEB640 or MEB641, MEB660 or MEB662
Credit Points: 8
Contact Hours: 4 per week

■ **MEB740 MAINTENANCE MANAGEMENT & TECHNOLOGY**
Economic and environmental importance of maintenance: management including organisation; data systems; cost control; spares policy; design for reliability; planning of overhauls; maintenance of buildings; mechanical maintenance and failure analysis; electrical and electronic maintenance.
Courses: EE43, ME35
Credit Points: 6
Contact Hours: 3 per week

■ **MEB741 MAINTENANCE MANAGEMENT & TECHNOLOGY**
See MEB740.
Courses: IF56, ME35, ME46
Credit Points: 8
Contact Hours: 3 per week

■ **MEB742 INDUSTRIAL ENGINEERING 2**
See MEB771.
Course: IF53
Prerequisite: MEB670
Credit Points: 8
Contact Hours: 3 per week

■ **MEB771 INDUSTRIAL ENGINEERING 2**
Forecasting; manufacturing resources planning; scheduling; capacity planning; total quality control; modeling and simulation.
Course: ME45
Prerequisite: MEB670 or MEB677
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,
Credit Points: 6
Contact Hours: 3 per week

■ **MEB774 OPERATIONS MANAGEMENT**
Forecasting analysis and inventory control, linear programming, distribution models of assignment and transportation problems; plan layout including the principles of work study; maintenance and Monte Carlo simulation.
Course: ME35
Credit Points: 7
Contact Hours: 3 per week

■ **MEB775 TECHNOLOGY MANAGEMENT**
Ethics in business, policy and public service; health and safety administration and responsibilities; innovation, planning, creativity and intellectual property; planning and legal aspects of new technology and technology management.
Courses: ME45, ME47
Credit Points: 8
Contact Hours: 3 per week
MEB776 DESIGN FOR MANUFACTURING 2
The system of limits and fits; AS1654; geometric analysis for different features; interchangeability and loops equation; geometric tolerancing; datum systems; basic features of jig and fixture design.
Courses: IF53, ME35, ME45, ME47
Credit Points: 8 Contact Hours: 3 per week

MEB777 OPERATIONS MANAGEMENT
See MEB774.
Courses: EE43, IF53, ME45, ME47, IF56
Credit Points: 8 Contact Hours: 3 per week

MEB778 CONCURRENT ENGINEERING
The unit aims at introducing the student to the issues impacting on product development and how the principles of concurrent engineering are used to reduce time to market for new products. Introduction to concurrent engineering and formation of product development teams; Quality Function Deployment; basics and design for assembly and manufacture; product portfolio analysis; organisation; technologies such as CAD, rapid prototyping, rapid tooling.
Course: IF56
Credit Points: 8 Contact Hours: 3 per week

MEB779 ENGINEERING PROJECT APPRAISAL
See MEB772.
Course: ME45
Credit Points: 8 Contact Hours: 3 per week

MEB780 REHABILITATION EQUIPMENT DESIGN & EVALUATION
Functional requirements of orthoses; orthotic biomechanics; design and construction of orthoses; biomechanics of artificial limbs; alignments techniques; amputee socket design and manufacture; wheelchair design requirements; clinical evaluation of rehabilitation equipment.
Course: ME46
Credit Points: 8 Contact Hours: 3 per week

MEB780 SPACECRAFT & SATELLITE DESIGN
Analysis techniques of space vehicle control including stabilisation 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; altitude control; libration dampers; accelerometers and station keeping systems; requirements for satellite and ground-station equipment design and operation.
Course: EE43 Prerequisite: EEB692
Credit Points: 8 Contact Hours: 3 per week

MEB800 SPECIAL TOPIC 4
See MEB803.
Course: ME45
Prerequisite: Students to have achieved an appropriate level of preparation in topic area concerned
Corequisite: Depends on the syllabus of the particular special topic offered
Credit Points: 7 Contact Hours: 3 per week

MEB801 PROJECT
Investigate and present a formal report on a mechanical engineering problem; project may be industry based or arise from applied research.
Courses: ME45, ME47
Credit Points: 40 Contact Hours: 6 per week (Sem 1); 8 per week (Sem 2)

MEB802 PROJECT
The student is required to investigate in depth and present a formal report on a problem area taken from the full range of mechanical engineering practice. Project may arise through investigation in applied research programs or specific topic from industry.
Course: ME45
Credit Points: 32 Contact Hours: 6 per week

MEB803 SPECIAL TOPIC 4
See MEB803.
Courses: IF56, ME45, ME46, ME47
Prerequisite: Students to have achieved an appropriate level of preparation in topic area concerned
Corequisite: Depends on the syllabus of the particular special topic offered
Credit Points: 8 Contact Hours: 3 per week

MEB805 PROJECT
See MEB801.
Course: ME45
Credit Points: 36 Contact Hours: 6 per week

MEB807 INDUSTRIAL NOISE & VIBRATION
Vibration measurements; spectrum analysis; Kurtosis, Cepstrum and envelope analysis; averaging; gear, bearing and rotor vibration; whole body and arm vibration; noise measurements; noise power; industrial standards; attenuation methods.
Course: ME45 Prerequisite: MEB510 or MEB512
Credit Points: 8 Contact Hours: 3 per week

MEB810 INDUSTRIAL NOISE & VIBRATION
See MEB810.
Courses: IF53, ME45, ME47
Prerequisites: MEB510 or MEB511
Credit Points: 8 Contact Hours: 3 per week

MEB811 COMPUTER CONTROL OF MANUFACTURING SYSTEMS
Analysis of digital control systems and its application to process monitoring; programmable controllers; control of manufacturing and information systems in manufacturing; integration and interfacing of machine tools; applications and control systems associated with industrial robots; communications networks for manufacturing including MAPTOP.
Course: IF53, IF56
Credit Points: 8 Contact Hours: 4 per week

MEB871 DESIGN FOR MANUFACTURING 3
Materials selection; design for manufacturing processes including casting, forging, extrusion, metal stamping, forming, powder metallurgy, welding and joining; design for assembly; design with advanced materials including plastics, ceramics and adhesives; electromechanical parts assembly; productability, quality and cost considerations.
Course: IF53, IF56
Prerequisite: MEB776
Credit Points: 8 Contact Hours: 3 per week

MEB872 COMPUTER INTEGRATED MANUFACTURING
Systematic approach to integrated manufacturing systems; product-centred approach to manufacturing process; concepts of cell manufacturing; flexible manufacturing systems; modelling and simulation as a manufacturing system design tool; modelling and simulation methodology; use of commercial simulation package to evaluate manufacturing systems design.
Courses: IF53, IF56, ME35, ME45, ME47
Credit Points: 8 Contact Hours: 4 per week

MEB873 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.
Courses: IF53, IF56  
Credit Points: 8  
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 change; recall (hospital and production).  
Course: MEB891  
Credit Points: 8  
Contact Hours: 3 per week  
- MEB960 FLUID SYSTEMS DESIGN  
Analysis of selected fluid systems; performance characteristics of components and systems.  
Course: ME45  
Prerequisite: MEB464  
Credit Points: 7  
Contact Hours: 3 per week  
- MEB961 FLUID SYSTEMS DESIGN  
See MEB960.  
Courses: ME45, ME47  
Credit Points: 8  
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 or MEB411, MEB483, MEB512, MEB513  
Credit Points: 7  
Contact Hours: 3 per week  
- MEB981 DESIGN OF MATERIALS HANDLING SYSTEMS  
Design of bulk material conveying and process plants, storage silos and bins, ground stockpiling systems, and the associated supporting structures.  
Course: ME45  
Prerequisites: CEB184, CEB185, MEB111, MEB411, MEB483, MEB511  
Credit Points: 6  
Contact Hours: 3 per week  
- MEB983 INDUSTRIAL AUTOMATION  
To provide basic fundamentals in robotics as well as introducing the history, theory, applications and the future development of robotics. Introduction to robotics; robot kinematics; robot dynamics; trajectory planning; robot control; robot applications; robot related techniques.  
Course: IF53, IF56  
Credit Points: 8  
Contact Hours: 3 per week  
- MEB994 DESIGN OF POWER TRANSMISSION SYSTEMS  
See MEB980.  
Courses: ME45, ME47  
Prerequisites: EEB209, MEB313, or MEB314  
Credit Points: 8  
Contact Hours: 3 per week  
- MEN140 QUALITY & RELIABILITY ENGINEERING  
Development of reliable designs; bathtub curve, FMEA; series, active and standby reliability and availability; matrix methods; system productiveness; fault trees; distribution forms; Weibull analysis; renewal theory, age renewal; block renewal, bad-as-old renewal; overhaul and renewal; Hastings' repair limit; inspect or monitor; physics of failure.  
Course: ME75, ME76  
Credit Points: 12  
Contact Hours: 3 per week  
- MEN170 SYSTEMS MODELLING & SIMULATION  
The concept of a model and model building; techniques for the solution of the models; simulation as a decision-making tool; modelling for simulation and practical exercises in simulation using computer simulation packages in the areas of manufacturing systems and maintenance.  
Courses: BS81, ME75, ME76  
Credit Points: 12  
Contact Hours: 3 per week
MEN171 ADVANCED MANUFACTURING TECHNOLOGIES
Overview of manufacturing systems engineering and applications of advanced computer aided drafting and design; implementation of CAD/CAM systems using three-dimensional modelling techniques; classification systems for part family formation for production and tooling; benefits of computer aided process planning; introduction and installation of flexible manufacturing cells and systems including robotics, automated guiding vehicles, on-line computer aided inspection, automation integration, support technologies and planning for CIM.
Course: ME75, ME76
Credit Points: 12 Contact Hours: 3 per week

MEN180 PROJECT MANAGEMENT
Covers aspects of project management, including project planning feasibility assessments and financial evaluation, scheduling and resource control, controlling the project with respect to time, cost and equality.
Course: BS86, IF66
Credit Points: 6 Contact Hours: 3 per week

MEN181 LOSS CONTROL MANAGEMENT
Teaches students the principles of loss prevention and how to apply them to the reduction of accidents, property loss and quality improvements.
Course: BS86, IF66
Credit Points: 6 Contact Hours: 3 per week

MEN190 PROJECT
Substantial piece of work relevant to the course and carried out by each student on an individual basis; report is examined and marked by academic supervisor in consultation with industrial supervisor.
Course: ME76
Credit Points: 24 Contact Hours: 3 per week

MEN240 MAINTENANCE MANAGEMENT & TECHNOLOGY
Economic and environmental importance of 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: ME75, ME76
Credit Points: 12 Contact Hours: 3 per week

MEN270 MANUFACTURING RESOURCE PLANNING
Functions and interrelationships between the three major components - production planning, operations planning and operations control - of a manufacturing requirements planning (MRP) system; practical exercises to provide hands-on experience with a MRP system such as FACT.
Course: ME75, 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: ME75, 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.
Courses: BS77, IF69
Credit Points: 6 Contact Hours: 3 per week

MEP201 SAFETY TECHNOLOGY & PRACTICE 1
Overview of models of the accident phenomenon; technological background of potential hazards with electrical power; construction site mechanical equipment hazards and failure; failure modes of engineering materials; mechanical properties of engineering materials and their effect on failure mode.
Courses: HL88, PU65
Credit Points: 12 Contact Hours: 3 per week

MEP273 QUALITY MEASUREMENT & TESTING
Measurement basics; measurement and standards; measurement errors; reliability of measurements; application of statistics; the cumulative distribution function; weights and errors; statistical interpretation of test results; the hypergeometric distribution; the binomial distribution; the poisson distribution; the pascal distribution; the normal distribution; the central limit theorem. Quality assurance in the laboratory; calibration in the laboratory; uncertainty of measurements; the laboratory quality manual; assignments and laboratory audits.
Course: BS77
Credit Points: 6 Contact Hours: 3 per week

MEP274 QUALITY SYSTEMS IMPLEMENTATION & MAINTENANCE
Expectations of quality systems in relation to the AS3900 series of standards and AS2990/AS3905.2; system implementation principles; complexities and solutions; state purchasing policy; auditing objectives, philosophy, methodology and standards.
Courses: BS77, IF69, ME76
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

**MGB001 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: ME33
Credit Points: 8  Contact Hours: 2 per week
Incompatible with: HRB 149

**MGB002 INDUSTRIAL MANAGEMENT**
The management process, planning, leading, organising, controlling; human resource 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
Incompatible with: HRB111

**MGB003 MANAGEMENT (ENGINEERS)**
Career progression of the practitioner 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: ME35
Credit Points: 4  Contact Hours: 2 per week
Incompatible with: HRB121

**MGB004 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
Incompatible with: HRB148

**MGB006 PRACTICE MANAGEMENT**
Small business management; the various roles in which small business managers must develop at least rudimentary proficiency. The structure, organisation, finance, planning, control, taxation, marketing and environmental factors to equip students with skills necessary for starting a successful small business.
Courses: OH42, PU45
Credit Points: 4  Contact Hours: 2 per week
Incompatible with: HRB132

**MGB00 METHODS & ANALYSIS**
Designed to provide students with a conceptual map about conducting research. Students proceed through the research process moving from establishing a research question, determining dependent and independent variables, deciding on analytic technique, gathering data, data analysis, drawing conclusions and reporting the research outcomes. Emphasis is placed on qualitative methodologies, including ethnomethodology and archival research.
Courses: BS50, BS56

Prerequisite: BS102 or BS115
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: EPB109, EPB163

**MGB200 BUSINESS STRATEGY**
Does not presume previous major core studies in management. Provides students with an understanding of the context of strategy within business ventures and develops skills necessary in planning. Some critical analysis is included, but emphasis is on the process of formulating and implementing business strategy and policy at developed levels in large organisations and in small businesses.
Courses: BS50, BS56
Prerequisite: BS102 or BS115
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: MIB314

**MGB201 EMPLOYMENT REGULATION & ADMINISTRATION**
The formal regulatory nature of the employment relationship, and the informal rules and systems examined in the economic, political and social framework; practical and operational knowledge in relation to the contract of employment; awards, agreements, superannuation, termination and workers' compensation.
Courses: BS50, BS56
Prerequisites: HRB131 or HRN104 or MGB207 and MGB211
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRB103

**MGB202 EQUITY AT WORK**
The 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 application of the principle of merit, day to day impacts of equity legislation; practical models for EEO management planning.
Courses: BS50, BS56
Prerequisites: 192 credit points including MGB207 and MGB211
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRB133

**MGB203 GOVERNMENT-MANAGEMENT INTERFACE**
Provides an essential understanding of the complex and dynamic relationships between business and Australian governments. Students will extend their basic knowledge of the role of governments to develop a more specific conceptual and empirical basis to understand how interactions between Australian government and business are managed. The focus is upon the political context of business activity, government policies towards business, their processes of development and operational impacts, and the constraints and capacities of various business sectors to influence the political system.
Courses: BS50, BS56
Prerequisites: EPB124 or BS114 and MGB207 and MGB211
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRB130

**MGB204 INDUSTRIAL RELATIONS**
The structures, functions and roles of the main industrial relations institutions: courts, tribunals, unions and employer associations. Regulation of industrial relations by the state and management; various approaches to industrial relations theory and the causation, manifestation and resolution of industrial conflict.
Courses: BS50, BS56
Prerequisites: HRB131 or MGB207 and MGB211
MGB205 MACHINERY OF GOVERNMENT
Provides a detailed understanding of Australian government. Examines and compares mechanisms, processes and issues in the three levels of Australian government (national, state and local). Includes areas such as constitutional arrangements, intergovernmental agencies and relationships, government business enterprises, the public service, fiscal and legal administrative arrangements.
Provides a detailed knowledge of how government works in Australia, and an understanding of the dynamics of government processes.

Courses: BS50, BS56
Prerequisite: EPB124 or BS114
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: HRB114

MGB206 MANAGEMENT AND ORGANISATION THEORY
Examines the historical and theoretical roots of management and organisation concepts and practices, and the way management and organisation have been constructed as fields of inquiry by both management practitioners and academics. Organisational theories explained in this unit include: Weber’s bureaucracy, stages of corporate development; transaction cost analysis; institutional and neo-institutional theory; population ecology; and various critical theories of organisation. Students have the opportunity to find out the strengths and limitations of management and organisational theories using a variety of critical approaches.

Courses: BS50, BS56
Prerequisites: BSB102 or MGB207 and MGB211
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: HRB127

MGB207 MANAGING HUMAN RESOURCES
Key functions and processes in the management of human resources from the perspectives of the various stakeholders in the employment relationship, a strategic approach in a total environment context, human resources management and industrial relations in theoretical and applied senses.

Courses: BS50, BS56
Prerequisites: BSB115
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: HRB131

MGB208 MANAGEMENT PROCESSES
This unit builds on theories of management encountered in introductory units. It has a focus on developing skills in the analysis of concepts and on practical application of managerial principles. It emphasises decision making in the context of strategic planning; development and adaptation of structure; control systems; process analysis. It analyses organisations within a systems paradigm considered in an environment of change.

Courses: BS50, IS52, IS43 Prerequisites: BSB102
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: HRB126

MGB209 OCCUPATIONAL HEALTH AND SAFETY MANAGEMENT
Health and safety management at work; hazard identification, risk management and evaluation, control strategies and implementation programs; legal frameworks, government policy and management strategies; safety audits and the management of health and safety functions.

Courses: BS50, BS56
Prerequisites: HRB131 or HRN104 or MGB207 and MGB211
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: HRB128

MGB210 OPERATIONS, PRODUCTION AND SERVICE MANAGEMENT
Extends general management philosophies to the production/operations customer sub-systems. The pivotal concept is the organisation as a dynamic system affected by both external and internal forces. Operations management narrows the focus to the sub systems within the organisation that physically produces that organisation’s goods or services. Issues of quality and efficiency are considered analytically in terms of broader strategies and constraints.

Courses: BS50, BS56
Prerequisites: HRB130 and HRB131, or MGB207 and MGB211
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: HRB129

MGB211 ORGANISATIONAL BEHAVIOUR
Impact that individual, group, and organisational characteristics have on behaviour within organisations. Theories, research and applications for understanding, predicting, changing behaviour and developing people in organisations. Topics include: abilities, learning, work motivation and attitudes, leadership and group dynamics, as well as macro issues such as structure and culture.

Courses: BS50, BS56
Prerequisite: BSB115
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: HRB130

MGB212 PERSPECTIVES ON ORGANISATIONS
Current and potential ways of understanding and designing organisations from a theoretical and practical point of view; Western and Asian perspectives on organisations; the emergent organisation as well as the ‘designed’ organisation; introduction to selected design skills.

Courses: BS50, BS56
Prerequisites: MGB207 and MGB211
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: COB103, COB129

MGB213 PUBLIC SECTOR MANAGEMENT
Provides a detailed understanding of the theories, mechanisms and practices of contemporary public sector management in Australia. Particular attention will be given to the problems and strains of public administration by examining its traditional foundations, structural dynamics, and the introduction of recent reforms. Examines the functions, operations and objectives of public sector management, including service delivery, finances and budget processes, marketing, performance review and evaluation, workplace issues and accountability. Students will develop a comprehensive and critical appraisal of the distinctive character and implications of contemporary public sector management.

Courses: BS50, BS56
Prerequisites: MGB205
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: EPB157, EPB162, HRB402

MGB214 SOCIAL RESPONSIBILITY IN BUSINESS
Critical ethical dilemmas which students are likely to face in their professional careers in change management and organisational design. Focuses on recognising, reasoning about, and dealing with such dilemmas, particularly using a behavioural approach; cross-cultural perspectives.

Courses: BS50, BS56
Prerequisites: BSB111 and MGB212
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: COB105

MGB215 SPECIAL TOPIC
Allows students to undertake specialised study on a topic
area relevant to particular needs. Permits an in-depth examination of an issue of importance. Content varies depending upon the issue examined, and the academic member(s) involved (including short-term visiting academics).

Courses: B550, B556
Prerequisites: As deemed appropriate to particular topic. Credit Points: 12 Contact Hours: 3 per week

**MGB216 TECHNOLOGY MANAGEMENT**
Explores the links between research, technical process, product innovation and management structure, policy and practice. Emphasises the consequences of changes to technologies for the organisation, for example, in information technology. It further examines the internal operations, with particular respect to management (of human, material and financial resources), technological innovations, and social change; the nature of product and process innovation, and technology transfer; intellectual property and licensing; evaluating technology; key technology areas (e.g. government policy and assistance) and research and development in technology.

Courses: B550, B556
Prerequisites: B550 or B564 or MGB211
Credit Points: 12 Contact Hours: 3 per week Incompatible with: HRB140

**MGB217 TRAINING & DEVELOPMENT I**
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/audiovisual; administering a training course; evaluating training, writing and scoring test items; follow-up training.

Courses: B550, B556
Prerequisites: HRN104 or completion of 84 credit points
Credit Points: 12 Contact Hours: 3 per week Incompatible with: HRB120

**MGB218 VENTURE SKILLS**
Designed to develop student skills in business planning and business analysis. This is a preparatory unit for units that carry out in-depth business planning and analysis. The types of learning carried out in this unit is to develop skills in business planning for small businesses. The analysis of business includes how to analyse cases and actual small business operations.

Courses: B550, B556
Prerequisites: HRB130 and HRB131, or MGB207 and MGB211
Credit Points: 12 Contact Hours: 3 per week

**MGB219 WORK & SOCIETY**
The theoretical and research aspects of work and the organisation of work in industrialised society, the relationship with industrial relations processes and structures, examination of the various perspectives which deal with control systems, work practices and technical change.

Courses: B550, B556
Prerequisites: HRB131 or HRN105 or MGB207 and MGB211
Credit Points: 12 Contact Hours: 3 per week Incompatible with: HRB138

**MGB200 ADVANCED ORGANISATIONAL BEHAVIOUR**
Investigates and analyses major organisational behaviour issues from the viewpoints of organisational effectiveness and quality of work life, using three frames: learning in organisations, actors in organisations, and organisations as political arenas. Through examination of literature and research, an emphasis on data gathering, analysis, and evaluation skills. Macro level issues are considered. Concepts are applied via case studies, surveys, and/or projects.

Courses: B550, B556
Prerequisites: HRB104 and HRB130 or 192 credit points, including MGB211 and MGB315
Credit Points: 12 Contact Hours: 3 per week Incompatible with: HRB100

**MGB301 ADVOCACY**
Skills in preparing a case and conducting it before a variety of industrial tribunals, rules of evidence in Magistrates' Courts, the Australian Industrial Relations Commission, and where rules of evidence do not apply, significant industrial legislation (industrial relations, workers' compensation, anti-discrimination, and workplace health and safety).

Courses: B550, B556
Prerequisites: HRB131 or HRN105 or MGB204 and MGB204
Credit Points: 12 Contact Hours: 3 per week Incompatible with: HRB102

**MGB302 COOPERATIVE ORGANISATION**
The development of cooperative relations across social, organisational, cultural and geographical boundaries from a theoretical and practical point of view. Types of cooperative arrangement will be examined including networks, strategic alliances, social partnerships, cooperative, and labour-management cooperation. Structural and behavioural issues will be addressed.

Courses: B550, B556
Prerequisite: MGB212
Credit Points: 12 Contact Hours: 3 per week Incompatible with: COB108

**MGB303 ENTREPRENEURSHIP**
Examines the processes of small business start up in terms of developing skills and knowledge entrepreneurship and new venture creation. Examines the entrepreneur in terms of entrepreneurial personality theories, entrepreneurial management and intrapreneurship. New venture creation deals with business planning and resourcing a business start-up. New venture creation develops skills and knowledge for students to analyse and manage the external environment of a small business start-up. Additionally students develop skills and knowledge on how to design and manage own time the internal operations and response to the external environment of a start-up firm.

Courses: B550, B556
Prerequisites: B552 or HRN104, or MGB207 and MGB211 and B550
Credit Points: 12 Contact Hours: 3 per week Incompatible with: HRB102

**MGB304 HUMAN RESOURCE PLANNING & INFORMATION SYSTEMS**
Detailed examination of organisational strategy, business plans and link with human resource planning; quantitative and qualitative approaches to prediction. Careers, career management, succession planning, downsizing. Extensive reference to the role, design and use of computerised human resource information systems as the database facilitating human resource planning and managerial decision making.

Courses: B550, B556
Prerequisite: MGB328
Credit Points: 12 Contact Hours: 3 per week

**MGB305 HUMAN RESOURCE MANAGEMENT STRATEGIES & POLICY**
This is the capstone of the HRM extended 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; policy development and evaluation is examined; an experiential approach based in case scenarios and simulation is adopted.

Courses: BS50, BS56
Prerequisites: HRB105 or HRN104 or completion of BS50, BS56
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRB136

- MGB306 INDEPENDENT STUDY

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 include literature review, research (mini-thesis), project, practicum (work placement), or alternative deemed acceptable by the supervisor.

Courses: BS50, BS56
Prerequisite: 192 credit points
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRB151

- MGB307 INTERNATIONAL HUMAN RESOURCE MANAGEMENT

Overviews international business management, and develops a strategic appreciation of the role of human resource management in an international context. Specific human resource processes are detailed, including: expatriate selection, cross-cultural training, management, and remuneration; global management; and the competencies required to manage a culturally diverse workforce, the relationship between international human resource management and international industrial relations, and contemporary research in international human resource management.

Courses: BS50, BS56
Prerequisites: HRB131 or HRN104 or MGB207 and MGB211
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRB117

- MGB308 INTERNATIONAL INDUSTRIAL RELATIONS

Industrial relations processes which operate under a range of social, economic, cultural and political arrangements; European and Pacific-rim systems.

Courses: BS50, BS56
Prerequisites: HRB131 or HRN105 or MGB219
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRB130

- MGB309 MANAGEMENT POLICY & STRATEGY

Presumes previous studies in management areas. Provides students with an ability to understand and participate in the formulation and implementation of management policy and strategy. Emphasises a critical analysis of the literature in the field of strategic management and the effect this has had on the processes adopted by different organisations. As a capstone unit, it gives students the opportunity to analyse synergies between the various strands of their major and to develop skills in influencing the strategic direction of organisations.

Courses: BS50, BS56
Prerequisites: BS8102 and HRB127 (recommended), or MGB303
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRB125

- MGB311 MANAGING CHANGE

Builds on introductory and intermediate units in management and is designed to equip managers with an understanding of the management of change in a variety of organisational and contextual settings. Explores the complexity of uncertainty and its implications for management. Emphasis is placed on developing change management skills, through a program of skills development embedded in a sound understanding of relevant theory.

Courses: BS50, BS56
Prerequisites: MGB206
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: COB102

- MGB312 NEGOTIATION & COLLECTIVE BARGAINING

Theory of negotiation, the basic concepts of integrative and distributive bargaining, process and phases of negotiation in practice, negotiating enterprise bargaining agreements.

Courses: BS50, BS56
Prerequisites: HRB131 or HRN105 or MGB201 and MGB204
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRB102

- MGB313 ORGANISATIONAL CHANGE & DEVELOPMENT

A range of interventions designed to improve an organisation's capacity to actively adapt to its environment. Interventions oriented to various levels of analysis will be covered, e.g., individual, interpersonal, group, intergroup, organisational, and the organisation in its broader context.

Courses: BS50, BS56
Prerequisite: MGB314
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: COB102

- MGB314 ORGANISATIONAL CONSULTING & COUNSELLING

Conceptual and theoretical bases of consulting and counselling; relationship building, diagnosis, intervention, and evaluation. Personal and interpersonal skills of the consultant/counsellor developed to a substantial level. Emphasis is placed on designing process to achieve outcomes.

Courses: BS50, BS56
Prerequisites: MGB207 and MGB211
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: COB102

- MGB315 PERSONAL & PROFESSIONAL DEVELOPMENT

Develops personal, interpersonal and professional competencies (in both cognitive and affective domains) necessary in a human resource or management professional. Develops personal awareness and understanding, interpersonal competencies, and professional behaviour and ethics. Also examines influence processes, negotiation and conflict resolution, stress management and personal career management. Throughout, it emphasises the design of processes to achieve outcomes and skills of reflective practice.

Courses: BS50, BS56
Prerequisites: COB129 or HRB130 or HRN108 or MGB207 and MGB211
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRB104

- MGB316 POLICY IMPLEMENTATION & EVALUATION

Examines the implementation and evaluation of policies and strategies by examining appropriate frameworks, structures, dynamics and delivery systems. Conceptual developments in implementation and evaluation are applied to case studies of public policies, programs and national strategies. This unit explores both micro and macro analytical methodologies including the development of monitoring systems and performance indicators. Issues to be analysed include policy coordination, policy...
of government administration. Explores the central theoretical conceptions of the modern state (liberal-pluralist, elitist, variants of Marxism and the "new right") which have been the main source of political and administrative analysis and debate. The emphasis is on the analytical and administrative insights of each perspective, although their ideological, political and institutional implications also will be examined.

Courses: BS50, BS56
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: EPB100, EPB112, EPB156

■ MGB317 POLITICAL & ADMINISTRATIVE ANALYSIS
Develops an understanding of the dynamic and contested relationship between political theory and the practices of government administration. Explores the central theoretical conceptions of the modern state (liberal-pluralist, elitist, variants of Marxism and the "new right") which have been the main source of political and administrative analysis and debate. The emphasis is on the analytical and administrative insights of each perspective, although their ideological, political and institutional implications also will be examined.

Courses: BS50, BS56
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: EPB159

■ MGB318 PUBLIC POLICY
Provides a thorough understanding of policy processes by means of a detailed study of relevant literature, Acts, and programs (i.e. policy instruments). Policy models and frameworks will assist students to understand how policy should be developed. Policy analysis frameworks will assist students to understand how policies are developed (i.e. the 'is/isought' dichotomy).

Courses: BS50, BS56
Credit Points: 12
Prerequisites: MGB205
Contact Hours: 3 per week
Incompatible with: EPB159

■ MGB319 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.

Courses: BS50, BS56
Credit Points: 12
Prerequisites: BS102 or HRN104 or MGB210
Contact Hours: 3 per week
Incompatible with: HRB403

■ MGB320 RECRUITMENT & SELECTION I
Draws on conceptual and research foundations established in MGB328. Examines the environment of recruitment and selection, especially legal requirements. Recruitment is considered from the perspective of both the organisation and the individual. Recruitment strategies are evaluated. Basic selection strategies are examined. Skills in planning and conducting interviews are developed. Technical issues include validity, reliability and utility analysis.

Courses: BS50, BS56
Credit Points: 12
Prerequisites: HRB105 or HRP110 or MGB328
Contact Hours: 3 per week
Incompatible with: HRB134

■ MGB321 RECRUITMENT & SELECTION II
Examines advanced selection strategies. Sophisticated use of biographical data; aptitude, ability, and personality testing; work samples; assessment centres; previous performance. Data manipulation and decision making processes. Selection for particular occupational groups. Workshop and experiential project activities.

Courses: BS50, BS56
Credit Points: 12
Prerequisite: MGB320
Contact Hours: 3 per week
Incompatible with: HRB134

■ MGB322 REMUNERATION MANAGEMENT
Examines remuneration management processes and practices in the environment of enterprise bargaining and employment contracts. Structure and effects of remuneration packages. Examination of range of types of remuneration, and the advantages and disadvantages of each. Remuneration in the context of organisation strategy and policy.

Courses: BS50, BS56
Prerequisite: MGB328
Credit Points: 12
Contact Hours: 3 per week

■ MGB323 SMALL BUSINESS MANAGEMENT
Deals with the role and importance of small business in Australia. It includes detailed considerations concerning the management of a troubled firm. Operational areas requiring attention in small business management are examined, as well as personal factors involving small business managers. Relations with government and sources of information and assistance are also considered.

Courses: BS50, BS56
Credit Points: 12
Incompatible with: HRB135

■ MGB324 THE VIRTUAL ORGANISATION
Organisational futures: working and managing in a real-time, no-boundaries context; interconnectivity; cultural diversity; role of technologies in the virtual organisation; implications for people and work futures.

Courses: BS50, BS56
Credit Points: 12
Contact Hours: 3 per week

■ MGB325 TRAINING & DEVELOPMENT II
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; the competencies of a trainer. Experiential and project activities.

Courses: BS50, BS56
Credit Points: 12
Incompatible with: HRB120 or MGB217

■ MGB326 UNDERSTANDING ORGANISATIONS
Classical and contemporary theory and issues associated with understanding work, industry and organisation. Critical analysis of formal organisations as an important social invention; economic explanations of organisation and industry, the behaviour of firms and work experience in them; critical review of theoretical perspectives on these issues.

Courses: BS50, BS56
Credit Points: 12
Prerequisite: MGB212
Incompatible with: COB103, COB129

■ MGB327 WAGES & EMPLOYMENT
Determination of 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.

Courses: BS50, BS56
Credit Points: 12
Incompatible with: COB103, COB201

■ MGB328 WORK & PERFORMANCE
Builds on material covered in MGB207, and focuses in depth on the theory and practice of job design and analysis, performance management, job evaluation, and remuneration management; examines the theoretical measurement and methodological foundations of human re-
The relationship between government and business, especially in Australia; the historical development of the relationships that exist between the private and public sectors and of the impact that the policy decision of each has on the operations of the other. Case studies are used to explore these relationships and contemporary trends.

Courses: BS30, BS70, BS91, GS70, GS80, GS81
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: EPN101

MGN403 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.

Credit Points: 6
Contact Hours: 3 per week
Incompatible with: HRP105

MGN404 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: BS74, BS91, ED23, GS70, GS80
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRP104

MGN405 INDUSTRIAL RELATIONS AND THE ECONOMY
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.

Courses: BS30, BS74, BS93, GS70, GS80, GS81, IF64
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRP106

MGN406 INDUSTRIAL RELATIONS PROCESSES
Negotiation practices in industrial law; elements and techniques of advocacy; case preparation and research; industrial tribunal representation.

Course: BS74
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRP104

MGN407 INDUSTRIAL RELATIONS STRATEGIES AND 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.

Courses: BS30, BS74, BS93, GS70, GS80, GS81, IF64
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRP103

MGN408 INDUSTRIAL RELATIONS THEORY
The resolution and regulation of conflict in work and employment; theories of collective organisation; bipartite and tripartite schema of labour market regulations and workplace process.

Course: BS74
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRP107

MGN409 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, BS91, ED23, GS70, GS80
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRP104
Courses: BS30, BS71, BS78, BS81, BS91, ED23, GS70, IF64
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRN105

MGN411 MANAGEMENT OF SERVICE QUALITY
Application of quality management principles to services and processes in service operations and organisations: marketing; differentiation of services from products; implications for management.
Courses: BS77, IF69
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRP112

MGN412 PEOPLE IN ORGANISATIONS
The internal operation of organisations and the behaviour of people in them; exploration of a range of theories and models of individual, group and organisational level influences on behaviour; this exposure encourages students to critically evaluate such theories and models, and the implications for management behaviour.
Courses: BS30, BS70, BS74, BS78, BS81, ED23, GS70
Prerequisite: HRN104
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRN108

MGN413 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.
Courses: BS77, IF69
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRP111

MGN414 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: BS78
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: COP10

MGN500 ADVANCED READINGS IN HUMAN RESOURCE MANAGEMENT I
This unit permits students to explore in depth advanced theory, research, and issues of practice in human resource management.
Course: BS93
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRN115

MGN501 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, BS63, BS92, BS93
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRN118

MGN502 ADVANCED THEORY & COMPARATIVISM
The historical and cultural factors of industrial relations; social theory and industrial relations, explanations of institutional development and the political economy of industrial relations; government intervention in industrial relations and current developments in Australia, the EEC and South East Asia.
Courses: BS62, BS83, BS93
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRN119

MGN503 BUSINESS POLICY
Develops a manager's knowledge, analytical understanding and action-taking competencies. The paradigm adopted is that of strategic management; analyses of stakeholders, environments and capabilities, strategy formulation, and strategy implementation. Teaching methodologies emphasise the process of management as well as analysis, content and concepts. At the conclusion of this unit, students should understand how and why strategic decisions are made, and be prepared to make them.
Courses: BS70, BS81, BS86, IF64, IF66
Prerequisite: 72 credit points from MBA core or approval of Course Coordinator
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRN112

MGN504 CONSULTING & CHANGE MANAGEMENT
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: BS93
Prerequisites: GSN208
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRN115

MGN505 CONTEMPORARY ISSUES IN HRM
Postgraduate students need to be familiar with the contemporary issues and the current theoretical and practical developments within their field of specialisation. These matters need to be pursued at a level of intellectual rigour beyond that required for an undergraduate degree. The main objective of this unit is to identify, analyse and report on contemporary issues in HRM. To research information relevant to identified topics. Content may vary according to which issues are current or predictably important in the future. Special expertise of staff, visiting scholars or distinguished HRM professionals may be utilised.
Courses: BS62, BS83, IF66, BS63, BS92, BS93
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRN119

MGN506 CONTEMPORARY 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, BS63, BS92, BS93
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: HRN119

MGN507 HRM CASES
Further development of students' capacity to analyse, evaluate and solve business problems and encourages them to develop the facility for independent thought and critical analysis. In this unit students are required to:

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examine a HR function in an organisation, and report observations; (b) relate these observations to relevant theory and recent research; and (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, BS86, BS93, BS93
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRN116

**MGN509 HUMAN RESOURCE MANAGEMENT PROJECT I**
This unit provides the opportunity for students to undertake an approved project to develop and enhance learning associated with the coursework elements of human resource management.
Course: BS93
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRN116

**MGN510 HUMAN RESOURCE MANAGEMENT PROJECT II**
This unit provides the opportunity for students to undertake an approved project to develop and enhance learning associated with the coursework elements of human resource management.
Course: BS93
Credit Points: 12
Contact Hours: 3 per week

**MGN511 IMPLEMENTING & SUSTAINING TOTAL QUALITY MANAGEMENT**
The management issues that need to be addressed in implementing a sustainable structure for TQM. These include the definition of an appropriate structure based on organisational strengths and weaknesses, and the development of a strategy for implementation.
Course: IF66
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: BSN143

**MGN512 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 within an analytical framework, and will enhance knowledge of workplace studies. Through this unit students are introduced to the social aspects of industrial organisation and industrial relations, and will also be introduced to associated legislative aspects. Concepts such as the new 'managerialism' are explored.
Courses: BS62, BS83, BS93
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: HRN117

**MGN513 LEGAL & INDUSTRIAL REQUIREMENTS**
The industrial relations and legal issues addressed in implementing TQM. These include the Australian industrial system, the requirements for occupational health and safety and the role of trade unions.
Courses: BS86, IF66
Credit Points: 6
Contact Hours: 3 per week
Incompatible with: HRN114

**MGN514 MANAGEMENT PROJECT I**
This unit provides the opportunity for students to undertake an approved project to develop and enhance learning associated with the coursework elements of management.
Course: BS93
Credit Points: 12
Contact Hours: 3 per week

**MGN515 MANAGEMENT PROJECT II**
This unit provides the opportunity for students to undertake an approved project to develop and enhance learning associated with the coursework elements of management.
Courses: BS93
Credit Points: 12
Contact Hours: 3 per week

**MGN516 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, and (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, BS64, BS93, GS81, GS70, BS30
Prerequisites: An undergraduate degree
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: EPN104

**MGN517 PROGRAM MANAGEMENT & EVALUATION**
Understanding of program management and evaluation in the public sector, with an emphasis on skills development, theory and methodology of evaluation research; qualitative and quantitative tools and the application of these to a public sector program.
Courses: BS62, BS83, IF64, BS93, GS81, GS70, BS30
Prerequisites: An undergraduate degree
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: EPN106

**MGN518 PROJECT**
Students undertake an analytic study of approaches to TQM implementation that forms a basis for development of an approach to implementation tailored to a particular organisation. This forms the groundwork for unit BSN150. The project report covers either (a) a detailed study of the strengths and weaknesses of the TQM approach of a particular organisation, or (b) a critical review of approaches to TQM reported in the literature.
Course: IF66
Credit Points: 12
Incompatible with: BSN149

**MGN519 PROJECT**
Students undertake an in-depth study of the practical requirements for implementing a TQM approach, either within a specific organisation or at a range of organisations. By integrating this practical study with the theoretical content of other units, students develop skills that enable them to take a leading role in developing and implementing an organisational strategy based on quality. The project report covers either (a) a critical analysis of the approaches used in a particular organisation for the implementation of a quality program, or (b) a research-based report on the applicability and implementability of TQM. This may focus on broad theoretical issues or on a particular industry. The precise scope is developed in consultation with the Course Coordinator.
Course: IF66
Credit Points: 24
Incompatible with: BSN150

**MGN520 RESEARCH DISSERTATION**
All students undertake a research dissertation. Each student is assigned to a supervisor, subject to the approval of the Course Coordinator, in consultation with the relevant Head of School. In general, the supervisor provides guidance in relation to the choice of topic, preparation and submission of the dissertation. Supervisors are appointed...
The dissertation is examined by an examiner of at least two examiners, one of whom may be external to the university, plus the Course Coordinator, who acts as chair of the committee.

Course: IF64  Credit Points: 48  Incompatible with: BSN151

- MGN521 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, BS63, BS92  Credit Points: 12  Contact Hours: 3 per week  Incompatible with: BSB400

- MGN522 RESEARCH SEMINAR
  Quality in policy research requires sound understanding of appropriate research methodologies, their design and implementation. This unit is intended to help provide students with the understanding, tailored to the specific needs of individual research dissertations. It provides a particular focus upon methods and techniques relevant to evaluation research.
  Courses: BS62, BS78, BS81, BS83, IF64, BS63, BS92  Credit Points: 12  Contact Hours: 3 per week  Incompatible with: EPN118

- MGN523 SCIENCE & TECHNOLOGY POLICY
  This course assists students in understanding science and technology policy. It is structured into two parts. The first examines policy structures and processes whilst the second examines science and technology policy issues which are sector specific. The latter part of this course has a particular focus on policy and the issues are sector specific. The latter part of this course has a particular focus on policy and the commercialisation of technology although issues relevant to other sectors are also addressed.
  Courses: BS62, BS78, BS81, BS83, IF64, GS80, GS81, GS80, BS30  Prerequisites: Undergraduate degree or equivalent  Credit Points: 12  Contact Hours: 3 per week  Incompatible with: EPN119

- MGN524 SPECIAL TOPIC IN MANAGEMENT
  This unit allows students to undertake specialised study on a topic area relevant to particular needs. It permits an in-depth examination of an issue of importance. The content varies depending on the issue examined and the academic member(s) involved (including short-term visiting academics).
  Courses: BS93  Credit Points: 12  Contact Hours: 3 per week

- MGN525 SPECIAL TOPIC IN MANAGEMENT II
  This unit allows students to undertake specialised study on a topic area relevant to particular needs. It permits an in-depth examination of an issue of importance. The content varies depending on the issue examined and the academic member(s) involved (including short-term visiting academics).
  Courses: BS93  Credit Points: 12  Contact Hours: 3 per week

- MGN526 ADVANCED READINGS IN MANAGEMENT II
  This unit permits students to explore in depth advanced theory, research and issues of practice in management.
  Course: BS93  Credit Points: 12  Contact Hours: 3 per week  Incompatible with: HRN118

- MGN527 ADVANCED READINGS IN HUMAN RESOURCE MANAGEMENT II
  This unit permits students to explore in depth advanced theory, research and issues of practice in human resource management.
  Course: BS93  Credit Points: 12  Contact Hours: 3 per week

- MGN528 SPECIAL TOPIC IN HRM I
  This unit allows students to undertake specialised study on a topic area relevant to particular needs. It permits an in-depth examination of an issue of importance. The content varies depending on the issue examined and the academic member(s) involved (including short-term visiting academics).
  Courses: BS93  Credit Points: 12  Contact Hours: 3 per week

- MGN529 SPECIAL TOPIC IN HRM II
  This unit allows students to undertake specialised study on a topic area relevant to particular needs. It permits an in-depth examination of an issue of importance. The content varies depending on the issue examined and the academic member(s) involved (including short-term visiting academics).
  Courses: BS93  Credit Points: 12  Contact Hours: 3 per week

- MGN600 DISSERTATION
  This unit is a culmination of a research degree in that students apply theory and research material to explore in some depth an applied or theoretical topic in their chosen field. Students develop a research topic, collect information about that topic from primary and/or secondary sources, evaluate the evidence and arguments, and present the results of that critical assessment in an organised and logical form. The thesis consists of a substantial written report. Honours theses of 48 credit points could be expected to contain about 20,000 words. The thesis is assessed by two examiners, one of whom must be external to QUT. Students select a supervisor to assist them with the development and implementation of their research topic. They negotiate a learning contract which stipulates among other things the frequency and duration of meetings with the supervisor, and the timetable for submission of interim and final reports. Planning for the thesis should begin as early as possible, allowing lead units to be key to the thesis as appropriate.
  Courses: BS62, BS83, BS63, BS92  Prerequisites: BSB400 and two of three major units  Credit Points: Students enrol in sequential 12 credit point theses units commencing with MGN600 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.  Incompatible with: BSN144

- MGN601 THESIS
  This unit is a culmination of a research degree in that students apply theory and research material to explore in some depth an applied or theoretical topic in their chosen field. Students develop a research topic, collect information about that topic from primary and/or secondary sources, evaluate the evidence and arguments, and present the results of that critical assessment in an organised and logical form. The thesis consists of a substantial written report. Ordinarily this would involve a report of up to 60,000 words of examinable material for a 144 credit point thesis.
Courses: BS62, BS83, BS92
Prerequisite: BSN144
Credit Points: Students enrol in sequential 12 credit point units commencing with BSN145/1 until they have completed the requisite number of thesis credit points. Progress is assessed at the end of each semester. Note that each thesis is assessed on one major report submitted at the completion of all necessary thesis units.
Incompatible with: BSN145

■ MIB001 MARKETING (INFO TECH)
Definition of marketing including its fit into strategic plans of firms or institutions, either profit or non-profit; full explanation of components of the marketing mix with emphasis on a systems approach. The components of the marketing mix defined as price, promotion, product and distribution; the integration of the above elements with branding, packaging sales and sales promotion to create the marketing plan.
Courses: CS28, IS28, IS10, IS43
Credit Points: 12
Contact Hours: 3 per week

■ MIB002 PROPERTY MARKETING
Characteristics of the Australian property market, the nature of marketing problems. The marketing mix: the mix, implementation of plan and sales forecast; pricing decisions, approaches 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.
Course: BS56
Credit Points: 7
Contact Hours: 2 per week

■ MIB200 ASIAN BUSINESS DEVELOPMENT
In this subject students will undertake an analysis of economic change in Asia since 1820. Material presented will cover the response of Japan, China and Southeast Asia to European intrusion and the growth of the international economy. Topics studied will include: the economic consequences of colonisation; the impact of war; technological change; ideology and development policies; ASEAN; the rise of the NICs.
Courses: BS50, BS56
Prerequisite: BSB116
Credit Points: 12
Contact Hours: 3 per week

■ MIB201 AUSTRALIAN EXTERNAL AFFAIRS AND BUSINESS
Australian business exists within a complex and dynamic global environment. An important part of the structure of that environment, especially as regards access to various national markets, is determined by national governments. A range of international agreements entered into by those governments. Australian governments play a vital role, through their various external affairs policies, in this system. The aim of this unit is to provide students with an understanding of external affairs policies in relation to business, their development and implementation.
Courses: BS50, BS56
Prerequisite: BSB114

Copyright Points: 12
Contact Hours: 3 per week
Incompatible with: EPB105

■ MIB202 BUSINESS AND THE WORLD ECONOMY
The focus of this unit is on the application of concepts from economics to the trade and finance problems of the international economy and their relationship to business. Topics covered include determination of a country's comparative and competitive advantage in international trade, and the conduct of international trade in a variety of industries. The economics and policies of trade policy, the multinational firm, trading blocs, strategic trade policy and the relationship between industries performance, trade and trade policy. International monetary arrangement (gold standard, Bretton Woods System, flexible exchange rates, currency reform); the role of political institutions in economic development (EMS, Maastricht Treaty), international debt and the increasing importance of emerging equity markets will be considered.
Courses: BS50, BS56
Prerequisite: BSB116 and BSB113 or EPB172 or EPB140 or EPB150
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: EPB132

■ MIB203 COMPARATIVE REGULATORY SYSTEMS
This unit is intended to provide the student with an understanding of the regulatory systems within which businesses operate, on a comparative and international basis. It examines the need for, and the development of, regulatory systems, followed by an examination of regulatory systems in relation to: individual and organisational transactions; business structures; the roles and duties of managers and employees in the workplace; capital; a selection of major industries; and theories of regulation.
Courses: BS50, BS56
Prerequisite: BSB114 or EPB124
Credit Points: 12
Contact Hours: 3 per week

■ MIB204 CONSUMER BEHAVIOUR
The field of consumer behaviour is young and dynamic. Its focus is the goods and services bought and used, and the ways in which these fit into individual lifestyles. The unit examines how individual characteristics such as motives, personality, lifestyles and attitudes; social variables such as culture, social class, and groups and situational variables can influence the decision making process and how this relates to marketing strategy.
Courses: BS50, BS56, IP56
Prerequisite: BSB116 or MKB140
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: MKB142

■ MIB205 CROSS CULTURAL COMMUNICATION & NEGOTIATION
This unit will analyse the complex interdependence between cultures, management philosophies, corporate strategies and business negotiations. It is designed to develop skills in managing and negotiating in the Asia-Pacific environment. The unit will assess the relationships among values, significant religions (e.g. Confucian ethics, Islam) and managerial and corporate communications behaviour in diverse environments; it will discuss communications, negotiation and management problems; and deal with socio-cultural issues and behaviours which impact upon international firms.
Courses: BS50, BS56
Prerequisite: BSB117 or COB160
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: MKB142
amination 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, BS56, ED50
Prerequisites: EPB140 and EPB150, or EPB172 or EPN102 or BSBI13
Credit Points: 12  Contact Hours: 3 per week

**MIB207 ECONOMICS OF INFORMATION**

This unit will provide students with an understanding of the economics of information in an age when the production and control of information is of increasing importance. A variety of topics are covered, including: information as a commodity; the demand for information; the economics of the production of information; the costs of information; the cost, pricing and charging out of information within organisations; the market supply of information; information technology and supply curve, the structure of the information of industry; information and industry concentration; public good characteristics of information; government intervention and economic impacts.

Courses: BS50, BS56
Prerequisites: BSBI113 or EPB172 or EPB140 or EPB150
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: EPB169

**MIB208 EUROPEAN BUSINESS DEVELOPMENT**

This subject will provide a survey of the economic development of Europe up to the Second World War focusing on the major factors involved in that development and their impact on business. Topics covered will include: demographic change; agriculture; trade and colonisation; transport and communications; financial institutions and capital accumulation; intellectual and religious movements; economic theories; the role of government; war and revolution; industrialisation; big business; the Great Depression and social change. Various countries will be used as case studies to illustrate the topics.

Courses: BS50, BS56  Prerequisite: BSBI116
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: EPB120

**MIB209 EVENTS MARKETING**

This unit emphasises the significance of special events as tourism offerings which contribute to destination development. The scope of special events industry and event typologies (including cultural, heritage, sporting and others) within the categories of hallmark, corporate and community based events are reviewed. Research of the marketing environment in which special events occur and analyses of markets and stakeholders will be examined relative to developing integrated marketing strategies. Segmentation of events markets, target marketing and positioning strategies will be studied in the context of specific events. The unit will focus on strategic marketing of events relevant to tourism and cultural growth. Marketing communication elements and the sponsorship function are highlighted in this context.

Courses: BS50, BS56, IF56  Prerequisite: MIB217 or MKB141 or an equivalent unit, with the approval of the Subject Area Coordinator
Credit Points: 12  Contact Hours: 3 per week

**MIB210 EXPORT MANAGEMENT**

This unit is aimed at providing the student with a fundamental understanding of how to plan, organise implement and control the export operations of an Australian business enterprise. The unit is highly applied and covers a range of topics which focus upon the managerial aspects of exporting goods and services to overseas markets. The managerial issues include: an understanding of the internationalisation process, export planning steps, intermediary decisions, transaction/transportation/insurance management issues, domestic and overseas regulatory aspects, and an investigation of overseas contemporary export management practices.

Courses: BS50, BS56, IF56  Prerequisite: BSBI116
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: MKB143

**MIB211 GLOBALISATION AND BUSINESS**

This unit aims to introduce students to the nature of the international systems impacting upon business. It adopts an historical and thematic approach that traces the development of dominant factors over time, regions and industries. Specific issues include: the nature and extent of globalisation; the changing world economy; politics, business and the nation state; transnational corporations and the changing pattern of production, trade, investment, the internationalisation of key industries and sectors such as automobiles, electronics and services.

Courses: BS50, BS56  Prerequisite: BSBI116
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: EPB133

**MIB212 INDUSTRY AND REGIONAL ANALYSIS**

The aim of this unit is to analyse the nature and structure of industry in national and international contexts in order to provide a suitable framework that can be used by students in the study of the specific industries they select for examination. Topics examined include: interindustry dependencies; regional and interregional linkages; demand analysis; transactions in information, goods, services and other products; network analysis; strategies in structured markets.

Courses: BS50, BS56  Prerequisite: BSBI113 or EPB140 or EPB150 or EPB172
Credit Points: 12  Contact Hours: 3 per week

**MIB213 INTERNATIONAL MARKETING**

The aim of this unit is to provide students with a thorough understanding of the multiplicity of issues which impact on the development of international marketing strategies and plans and their operational implementation. The unit is highly applied and provides students with the opportunity to understand the importance of international marketing; examine and analyse environmental forces influencing international marketing decisions; screen, select and segment priority markets; be aware of the methodological issues involved in primary market research; design and develop an operationally sound international marketing plan; study the role of marketing in the globalisation of business.

Courses: BS50, BS56, IF56  Prerequisites: MIB217 or MKB141
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: MKB149

**MIB214 MANAGEMENT OF SPORT AND RECREATION**

This subject will examine the development of sports and recreation management within an increasingly competitive and global leisure environment. It will examine the full range of management functions in the sports and recreation context, aiming to provide the student with a
comprehensive understanding of those functions in this applied context. Both continuing and special event environments will be investigated, with an emphasis upon project planning and control. Extensive use of case materials will illustrate the diversity characteristic of this sector.

Courses: BS50, BS56
Prerequisite: MIB222
Credit Points: 12
Contact Hours: 3 per week

■ MIB215 MARKETING LOGISTICS
Marketing logistics is concerned with the planning, development, maintenance and control of the system of supply and distribution activities that place the organisation’s product or service in the hands of its customers. The subject is designed to enable students to: understand the importance of logistics; and make improvements that will increase customer service and reduce distribution costs. The subject involves the application of mainly quantitative models and techniques concerned with product flow from producer to consumer and covers: purchasing and procurement, manufacturing and distribution strategies, quality, inventory costs and control, warehousing and transportation, project network analysis, location and logistics planning. Plant visits are an important part of the learning process.

Courses: BS50, BS56, IF56
Prerequisite: MIB217 or MIBK141 or MIB227
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: MKB136

■ MIB216 MARKETING DECISION MAKING
This unit provides a detailed examination of decisions in specific tactical and strategic areas of marketing and marketing management. These areas include sales forecasting, market analysis, product planning, pricing, promotion, distribution and other areas. Decisions are viewed from quantitative perspectives with emphasis on computer models and spreadsheets. A primary part of the course is devoted to a computer-based marketing simulation which provides a realistic decision-making environment.

Courses: BS50, BS56, IF56
Prerequisite: MIB217 or MIBK141
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: MKB148

■ MIB217 MARKETING MANAGEMENT
The unit extends the student’s knowledge of the fundamental principles covered in the foundation unit in the degree (Marketing & International Business) and focuses on the application of these concepts and theories within the business environment. Emphasis is on the role of the Marketing Manager at the Strategic Business Unit/Product Manager level with regard to their responsibilities in planning, developing and managing marketing activities. Theory is applied through the development of a marketing plan incorporating the pivotal steps of: environmental analysis; market segmentation, targeting and positioning; product development and management; the implementation issues in promotion, distribution and pricing.

Courses: BS50, BS56, IF56
Prerequisite: BSBI16 and MKB140
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: MKB141

■ MIB218 MARKETING SPORT AND RECREATION
This subject will encompass the development of sports marketing strategies in an increasingly competitive and global leisure environment. In addition to product development, pricing and distribution elements, the subject will emphasise the importance of innovative promotion and sponsorship plans. Principles of sports marketing will be supported by case analyses and guest lecturers from the sports sector.

Courses: BS50, BS56
Prerequisite: MIB222
Credit Points: 12
Contact Hours: 3 per week

■ MIB219 NORTH AMERICAN BUSINESS DEVELOPMENT
The aim of this unit is to provide the student with an understanding of the development of business and industry in the North American context since 1945. It will describe major patterns in the development of business, and the major social, economic, political and cultural factors determining those trends. Topics covered will include: the impact of the Second World War; capital and finance in American business development; agricultural developments; manufacturing industry; the rise of the service sector; transport and distribution; communications and media.

Courses: BS50, BS56
Prerequisite: BSBI16
Credit Points: 12
Contact Hours: 3 per week

■ MIB220 ORGANISATIONAL MARKETS
This subject addresses the special requirements and buyer behaviour of large-scale, bulk-buying customers, such as industrial, resellers and government buyers. There is growing recognition in marketing education that these markets constitute a powerful and essential part of world economy, being the preliminary source for retailing and manufacturing operations and the force behind major services sectors in supplying government and non-government services, including health, education and works. As such, organisational markets are the driving factor behind the economy’s health, nationally and internationally.

Courses: BS50, BS56
Prerequisite: MIB217 or MIBK141
Credit Points: 12
Contact Hours: 3 per week

■ MIB221 RETAIL INDUSTRY
The aim of this unit is to provide a detailed examination of the nature of the retail sector in Australia. It will commence with an examination of the development of the sector in the post 1945 era, followed by an examination of contemporary trends and issues. Students will have the opportunity of focusing on a particular segment of this very complex industry in order to develop a specialised understanding.

Courses: BS30, BS56
Prerequisites: BSBI16 and BSBI13
Credit Points: 12
Contact Hours: 3 per week

■ MIB222 SPORT AND RECREATION INDUSTRIES
This subject will examine the diverse organisations (private, public and not-for-profit) which comprise the sport and recreation industries; patterns of leisure behaviour and consumption; relationship between sport/recreation work and the economy; impacts of media, the environment, changing demographics and globalisation on the business of sport and recreation.

Course: BS50
Prerequisites: BSBI16 and BSBI15 or BSBI102
Credit Points: 12
Contact Hours: 3 per week

■ MIB223 TECHNOLOGY AND INTERNATIONAL BUSINESS
This subject introduces the student to a conceptual analysis of evolution, the creation of knowledge, and the impact of technology in shaping the economic and commercial strategic agenda of the firm in the international environment. It concentrates on the determining factors of technology, the measurement of impact and patterns of development at a global level.

Courses: BS50, BS56
Prerequisite: BSB113 or EPB116 or EPB140 or EPB150
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: EPB173

- MIB224 TECHNOLOGY AND MARKETING
This unit examines the impact of technology and technological change on modern marketing and marketing systems. New technology is forcing significant change in many traditional marketing processes, while at the same time providing unique opportunities for gaining access to customers and vital market data. The unit covers an assessment of the overall impact of new technology on marketing; planning and using database marketing techniques; the impact of information technology on marketing; using expert marketing systems technology and the role of the global information super highway and its impact on contemporary marketing practice. The unit is essentially applied and is taught using case studies, hands on computer laboratory work and individual projects for relevant work organisations.
Courses: BSS0, BS56
Prerequisite: BSB116, BSB113 or EPB140 and EPB116 (or any introductory Economics unit)
Credit Points: 12 Contact Hours: 3 per week

- MIB225 TOURISM
This unit will provide a detailed understanding of tourism in the domestic and international contexts, and their interaction. It will focus upon: the developing nature of tourism products and services; the significance of tourism in the domestic and international economies; tourism as a market process; government and tourism; managing tourism ventures; cultural and environmental dimensions of tourism; and contemporary issues and trends.
Courses: BSS0, BS56, IF56
Prerequisite: BSB113 and BSB115 or BSB102 and any Economics unit
Credit Points: 12 Contact Hours: 3 per week

- MIB226 TOURISM MARKETING
This unit explores services marketing within tourism contexts. It provides students with detailed understanding of the issues affecting the marketing of tourism destinations, elements of the destination mix and various tourist attractions. Services marketing techniques are explored within key elements of the destination mix at the regional, state, national and international levels.
Courses: BSS0, BS56, IF56
Prerequisite: BSB116 or MKB140
Credit Points: 12 Contact Hours: 3 per week

- MIB300 CONTEMPORARY BUSINESS IN EUROPE
The aim of this unit is to examine major issues in relation to business in contemporary Europe. It will build upon the historical understanding established in MIB208. The focus is a description and analysis of contemporary developments in relation to business, including: the growth of regional cooperation in Europe; business and regional cooperation; European Union policies and business; developments and opportunities in Eastern Europe; case studies in trading with Europe.
Courses: BSS0, BS56
Prerequisite: MIB208 or EPB120
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: EPB121

- MIB301 CONTEMPORARY BUSINESS IN NORTH AMERICA
The aim of this unit is to examine major issues in relation to business in contemporary North America, with a primary focus upon the USA. It will build upon the historical understanding developed in MIB219. The unit commences with an examination of current macroeconomic and industry trends, and government policies in relation to business. It moves on to examine financial markets, North American businesses in world trade and finance, NAFTA and its impact, USA-Japan relations, and Australia-North American trade relationships.
Courses: BSS0, BS56
Prerequisite: MIB219
Credit Points: 12 Contact Hours: 3 per week

- MIB302 CULTURAL INDUSTRIES ANALYSIS
The objectives of this subject are to provide students with an understanding of the structure, conduct and performance of the cultural and artistic sector of our economy and develop and apply appropriate marketing skills and strategy for that sector. Topic areas include the development and structure of cultural industries and institutions, funding and subvention, estimating demand for cultural products, pricing arts products, corporate philanthropic practices, relationship marketing in the arts, the value of public cultural goods, trade leverage from cultural goods and an introduction to cultural economics.
Courses: BSS0, BS56
Prerequisite: BSB113 and MIB212
Credit Points: 12 Contact Hours: 3 per week

- MIB303 INTERNATIONAL LOGISTICS
This unit builds upon MIB215. It provides an overview of international trade and then focuses upon: managing international distribution channels; network links; transport modes and modal interface systems; transport regulation; sourcing and supply of components; location of manufacturing plants and warehouses; information, communication; cost management; network audit and evaluation.
Course: BS56
Prerequisite: MIB215
Credit Points: 12 Contact Hours: 3 per week

- MIB305 MARKET RESEARCH
The purpose of this subject is to provide students with a sound theoretical base in market research and to examine the practical problems encountered in the field. Its objectives are: to ensure students gain the knowledge to effectively buy and use market research; to give students the basic skills necessary to undertake simple market research projects; and to introduce more advanced market research subjects.
Courses: BSS0, BS56, IF56
Prerequisite: MIB217 or MKB141
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: MKB151

- MIB307 PRODUCT INNOVATION AND MARKET DEVELOPMENT
This subject deals with the dynamics of product innovation and product development within the mix of core marketing activities in organisations operating in both national and international markets. Products are defined in the broadest sense to include both tangible and intangible and the various categories of consumer, industrial, services, events and so on. The course covers such areas as product market analysis, design, innovation, research and testing, branding and packaging, and investment analysis. The learning methodology will be mostly experiential and will include some hands-on computer usage, visits to industry where relevant and specific practical exercises.
Courses: BSS0, BS56, IF56
Prerequisite: MIB217 or MKB141 or MIB223
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: MKB151

- MIB308 PROFESSIONAL MARKETING PRACTICE
The aim of this unit is to provide the student with experience of professional practice in a suitable company
where they actively work on a part-time basis. Students undertake a preferred study program within the marketing framework. Students are required to submit a number of reports reflecting the theoretical concepts acquired during the degree program and how they might be applied in practice. The study program is drawn up in consultation with and on the approval of the lecturer.

Courses: BS50, BS56, IF56
Prerequisite: MIB217 or MKB151
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: MKB153

■ MIB309 PROMOTIONAL STRATEGY
This unit provides critical understandings of the linkage between the nature of marketing strategies adopted and decision making about the marketing or promotional strategy. There is a definite need for the marketing graduate to fully understand the characteristics of the market environment and business and marketing strategies in order to have an adequate information base to decide message positioning, choice of marketing communication or promotional mediums and balance of expenditure across these mediums. Such a unit will clearly enable students to both grasp theoretical and practical skills with regard to this essential marketing element.

Courses: BS50, BS56, IF56
Prerequisite: MIB217 or MKB141
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: MKB152

■ MIB310 RETAIL MARKETING
This unit is an introduction to the dynamics of the retailing industry. It provides the student with detailed knowledge of the way retail marketing is conducted nationally and internationally from both strategic and operational perspectives. The unit provides a balance of theory and application in topics such as retail institutions and the retail life cycle, macro and micro store location analysis, store layout, planning and design, merchandising promotion and stock planning, franchising and industry trends. Field trips and instore projects are an integral part of the learning process.

Courses: BS50, BS56, IF56
Prerequisite: MIB221 or BSB116
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: MKB145

■ MIB311 SERVICES MARKETING
This subject is concerned with the special characteristics of services and the marketing strategies needed to deal with these characteristics. Topics covered include the nature and classification of services; the differences between services and products and their implications for marketing strategy; the concept of productivity for services including the management of demand and supply; the search for service quality; customer service; distribution; and international trade in services.

Courses: BS50, BS56, IF56
Prerequisite: MKB141 or BSB116
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: MKB146

■ MIB312 SPECIAL TOPIC IN INTERNATIONAL BUSINESS
This is intended to be an "open-ended" unit where the opportunity will be available for staff and visiting scholars to offer a specialised program of study.

Course: BS56
Prerequisite: MIB203
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: EPN110 unless the permission of the Course Coordinator is gained

■ MIB313 SPECIAL TOPIC IN MARKETING
This is intended to be an "open-ended" unit where the opportunity will be available for staff and visiting scholars to offer a specialised program of study.

Courses: BS56
Prerequisite: MIB217
Credit Points: 12 Contact Hours: 3 per week

■ MIB314 STRATEGIC BUSINESS ANALYSIS
A knowledge of international and domestic industry market trends and their specific impacts upon the organisation provides the basic data for the development of flexible strategic visions and plans. The aim of this unit is to provide an examination of major paradigms in strategic formulation and implementation, and to develop a synthesis of competing prescriptive and descriptive approaches. It will enable the development of an integrating framework to explore why organisations differ and how these differences, in terms of individual competencies and organisational capacities, provide for sustainable competitive advantage in domestic and international markets.

Courses: BS50, BS56
Prerequisite: MIB212 or MGB208 or MGB206
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: Business Policy or Strategic Management units from the Management Core Major

■ MIB315 STRATEGIC MARKETING
Strategic Marketing is the capstone marketing unit. Students are exposed to a variety of advanced marketing techniques and issues through lectures, seminars and case studies. Topics include: determining what marketing strategy can realistically accomplish for a business; identifying underlying factors that must be considered in developing marketing strategy; discussion of problems and their solution for successful marketing strategy implementation; bringing in the customer focus in developing marketing strategy; organising for successful strategy implementation.

Courses: BS50, BS56, IF56
Prerequisite: MIB217 or MKB141
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: MKB153

■ MIB316 TOURISM DEVELOPMENT
The operation and development of tourism markets is the central concern of this unit, building upon the base provided in MIB225. It focuses upon product and service development, demand and market strategies, using a variety of case study materials and analytical methods. At the completion of the unit the student will have an understanding of the economic context of tourism, the development of tourism markets, and the factors that contribute to successful tourism ventures.

Courses: BS50, BS56, IF56
Prerequisite: MIB225
Credit Points: 12 Contact Hours: 3 per week

■ MIB317 CONTEMPORARY BUSINESS IN ASIA
The business and cultural environments of Japan, China the NICs and ASEAN; the major Asian economies, their structure and related issues; social and institutional foundations of the economies concerned; interaction between Asia and Australia.

Courses: BS56
Prerequisite: MIB200 or EPB105
Credit Points: 12 Contact Hours: 3 per week
Incompatible with: EPB108

■ MIN400 ARTS ADMINISTRATION AND SOCIETY
This unit is designed to familiarise students of arts administration with the structures, philosophies and policies of arts and cultural organisations in the local, national and international community and the processes involved in administering arts and culture in society. It focuses upon social, cultural, political and economic influences upon the arts; public policies on arts and culture, and associated funding processes; organisational
structures and planning; community, multicultural and regional arts; current research in arts administration.

Courses: G970, BS30
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: MNP108

■ MIN401 AUSTRALIAN FOREIGN AFFAIRS AND BUSINESS
Australian business exists within a complex and dynamic global environment. An important part of the structure of that environment, especially as regards access to various international markets, is determined by national governments and a range of international agreements entered into by those governments. Australian governments play a vital role, through their various external affairs policies, in this system. The aim of this unit is to provide students with an understanding of external affairs policies in relation to business, their development and implementation.

Courses: BS93
Prerequisites: GSN101, or GSN204, or MGN516 or BSN408
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: EPN113

■ MIN403 BUSINESS IN ASIA
The aim of this unit is to enable a more intensive study of business and markets in Asia. The development of the major industries will be examined, together with major intra-regional patterns of trade, commerce and finance. Significant economic, political and social factors determining developments will be focused upon, as well as regulatory restraints governing market access. The student will be required to undertake a project which requires the application of knowledge of the region to a business issue.

Courses: BS63, BS92, BS93, GS80
Prerequisites: GSN101 or GSN204 or GSN204
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: EPN110, unless the permission of the Course Coordinator is gained

■ MIN404 BUSINESS IN EUROPE
The aim of this unit is to enable a more intensive study of business and markets in Europe. The development of the major industries will be examined, together with intra-regional patterns of trade, commerce and finance. A particular focus will be the development of a single European market and its international implications. Significant economic, political and social factors determining developments will be focused upon, as well as regulatory restraints governing market access. The student will be required to undertake a project which requires the application of knowledge of the region to a business issue.

Courses: BS63, BS92, BS93, GS80
Prerequisites: GSN101 or GSN204 or GSN204
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: EPN110, unless the permission of the Course Coordinator is gained

■ MIN405 BUSINESS IN NORTH AMERICA
The aim of this unit is to enable a more intensive study of business and markets in North America. The development of the major industries will be examined, together with intra-regional patterns of trade, commerce and finance. A particular focus will be the development of NAFTA and its international implications. Significant economic, political and social factors determining developments will be focused upon, as well as regulatory restraints governing market access. The student will be required to undertake a project which requires the application of knowledge of the region to a business issue.

Courses: BS63, BS92, BS93, GS80

Prerequisites: GSN101 or BSN408 or GSN204
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: EPN110, unless the permission of the Course Coordinator is gained

■ MIN406 COMPARATIVE REGULATORY SYSTEMS
This unit will provide the student with a detailed understanding of the regulatory systems within which businesses operate, on a comparative and international basis. The major focus is upon Europe, Asia and North America. The development of regulatory systems and their impact upon actual or potential markets will be examined, especially in relation to significant differences that inhibit or enhance international business.

Courses: BS63, BS92, BS93
Prerequisites: 48 credit points from GS80 or GS81 or GS70 or MGN516
Credit Points: 12  Contact Hours: 3 per week

■ MIN407 CONTEMPORARY ISSUES IN MARKETING
This unit introduces emerging issues in marketing theory and the discipline of marketing, plus issues that may not have been covered earlier in the course but are nevertheless important. The specific issues covered each year will be negotiated with the staff members involved. Issues could include: pricing, market orientation, integrative marketing communication, organisational marketing, and public policy (for example, green marketing). Classes would usually include presentations by staff and by students who have worked individually or in groups to research issues.

Courses: BS85, BS61
Prerequisites: 48 credit points from GS80, GS81 or GS70 or an undergraduate specialisation in marketing
Credit Points: 12  Contact Hours: 3 per week

■ MIN408 FUNDRAISING CAMPAIGNS
This unit aims to develop an expertise in planning and implementing fundraising campaigns. Topics include: planning a complete campaign; defining relevant constituencies and appropriate means for linking these to potential markets; budgeting and managing campaign elements; working successfully with boards and volunteers; evaluating fundraising efforts. Students undertake a project in the form of an analysis of a fundraising campaign.

Courses: BS63, BS92, BS93
Credit Points: 12  Contact Hours: 3 per week

■ MIN409 FUNDRAISING PRINCIPLES
This unit examines the principles of fundraising, including: preparation of the case statement; planning methods; techniques for fundraising. The application of basic concepts from public relations, advertising, marketing and management are examined. Specific topics include: philosophy of fundraising and its role in society; budgeting; gift and capital campaigns; planned giving; researching and establishing prospect bases; procedures of solicitation; team building; volunteers; role of foundations.

Courses: BS63, BS92, BS93
Credit Points: 12  Contact Hours: 3 per week

■ MIN411 INDUSTRY COMPETITION AND NETWORK ANALYSIS
This unit aims to emphasise the need to identify and monitor those elements inside and outside a business upon which a sustainable competitive advantage is built. It builds concepts and tools (such as PIMS analyses) with which to analyse dynamic, competitive and collaborative forces within an industry. The industries involved in this unit will be both domestic Australian and international ones.
MIN413 MARKET AND BUSINESS RESEARCH METHODS
The aim of this unit is to provide an understanding of the issues underlying the conduct of market and other business related research. Issues include: identifying the research problem, ethical considerations, collecting and analysing data, computer programs, how to write a report and make a presentation to management. Teaching processes will include lectures, seminar discussions, group pilot research reports, and class presentations. The writing and presentation skills will be used through the rest of the course.

Courses: BS85, BS61
Prerequisite: MIN413 or MKN100
Credit Points: 12  Contact Hours: 3 per week

MIN414 MARKETING DECISION SYSTEMS
Students of this unit will learn how to use computer programs to facilitate marketing decision making, and explore issues raised by information technology and the information highway. The computer programs may include spreadsheets, suites of programs for specific marketing decisions including forecasting, and SPSS. Issues may include the future impact on the future of marketing communication and distribution channels (including direct and database marketing), methods for dealing with information load/overload, customer acceptance of interactive media, and the effects of re-engineering on the marketing function.

Courses: BS85, BS61
Prerequisite: MIN413 or MKN100 or 48 credit points from GS80, GS81 or GS70
Credit Points: 12  Contact Hours: 3 per week

MIN415 MARKETING FOR ARTS ADMINISTRATORS
This unit is designed to provide students of arts administration with an understanding of the basic marketing concepts and their application within the context of culture and the arts. It examines the principles of cultural enterprise; promotion; sponsorship; advertising; communication; market research and the development of marketing plans; and campaigns for arts and cultural organisations.

Courses: GS70, BS30
Prerequisite: MIN400 or MIN430 as a corequisite
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: Any postgraduate unit in Marketing

MIN419 SEMINARS IN CONSUMER BEHAVIOUR
Introduction to the area of consumer behaviour and a forum for discussion of theory and research in the field. Students will execute research projects and discuss the interdisciplinary nature of consumer behaviour. Issues from past classes include: children as consumers; consumerism, ethical decision making; gender representation in advertising; emotions; research; time; hedonism and materialism; and cross-cultural research.

Courses: BS85, BS61
Prerequisite: An undergraduate specialisation in marketing or 48 credit points from GS80, GS81 or GS70
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: MKN108

MIN421 SEMINARS IN INTERNATIONAL MARKETING
This unit covers international marketing theory and planning. Theoretical issues will include segmentation of international markets, life cycle and contingency approaches to international market entry choice, and market development and extension. Planning issues could cover the strategic marketing processes involved, including international market research involved, and their application to regions and countries in the Asia-Pacific region or Europe.

Courses: BS85, BS61
Prerequisite: An undergraduate specialisation in marketing or 48 credit points from GS80, GS81 or GS70
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: MKN108
issues covered include: environmental analysis, strategic positioning, and the development of strategic marketing plans. The unit usually includes groups of students creating strategic marketing plans for real world organisations.

Courses: BS85, BS61  Prerequisites: 48 credit points  Credit Points: 12  Contact Hours: 3 per week  Incompatible with: MKN110

■ MIN426 SPECIAL TOPIC IN INTERNATIONAL BUSINESS
This is intended to be an ‘open-ended’ unit where the opportunity will be available for staff and visiting scholars to offer a specialised program of study.

Courses: BS63, BS92, BS93  Prerequisites: A first degree  Credit Points: 12  Contact Hours: 3 per week  Incompatible with: EPN110 unless the permission of the Course Coordinator is gained

■ MIN428 STRATEGIC ISSUES AND TOURISM
Tourism represents a complex exchange of numerous differentiated and diverse goods and services involving many industries, activities, operators and government agencies. It is the nature of the interactions between the tourist and the various providers which determines quality of the tourist experience and the extent to which tourist expectations are realised. The strategic management of tourism involves considerations of variability, interdependence, complexity and transaction interactions normally not encountered in non-tourist settings. The aim of this unit is to help the student develop an understanding of the need for, and ability to generate, appropriate strategic perspectives and plans.

Courses: BS63, BS92, BS93  Prerequisite: MIN433  Credit Points: 12  Contact Hours: 3 per week

■ MIN429 STRATEGIC MARKETING MANAGEMENT
This unit is the capstone unit of the Masters program. It aims to ensure students can manage the complete marketing function at a senior level within a corporation, and includes assessing the marketing function's performance with appropriate tools to diagnose, assess, track and evaluate performance and to modify processes to improve the function. Links between the marketing function and other functions of a business such as accounting, operations and human resources will be drawn, so that the student would be in a position to move into top management if the opportunity arose. Learning methodologies may include a complex computer simulation requiring a series of competitive strategic marketing decisions with feedback on them.

Courses: BS85, BS61  Prerequisites: 96 credit points, including MIN422  Credit Points: 12  Contact Hours: 3 per week

■ MIN430 THE ARTS INDUSTRY
This unit provides a general framework for the analysis of the arts and culture as an industry. It examines the operational procedures of arts organisations, including the relationships of the arts with: the legal system and the law; the media; industrial awards; business; the public; the human resources of the organisation; and multimedia developments. It concludes with an examination of cultural leadership in the community.

Courses: GS70, BS30  Prerequisites: MIN400  Credit Points: 12  Contact Hours: 3 per week  Incompatible with: MKP109

■ MIN431 TOURISM DEVELOPMENT
The aim of this unit is to examine tourism projects and their developmental impacts. It will focus on project analysis, formulation and implementation in a variety of project contexts, both domestic and international. The notion of a tourism cycle is introduced, with an examination of the opportunities and problems associated for specific projects with each stage in the cycle.

Courses: BS63, BS92, BS93  Prerequisite: MIN433  Credit Points: 12  Contact Hours: 3 per week

■ MIN432 TOURISM MARKETING
This unit explores services marketing within tourism contexts. It provides students with a detailed understanding of the issues affecting the marketing of tourism destinations, elements of the destination mix and various tourist attractions. Services marketing techniques are explored within key elements of the destination mix at the regional, state, national and international levels.

Courses: BS63, BS92, BS93  Prerequisite: MIN433  Credit Points: 12  Contact Hours: 3 per week

■ MIN433 TOURISM: NATIONAL AND INTERNATIONAL
The aim of this unit is to provide a detailed examination of tourism trends on a national, international and comparative basis. The primary focus will be upon the Australian, Asian and European markets, with a detailed examination of types of tourism markets, their development and impact. Current major issues will be assessed and related to the supply of tourism services and products.

Courses: BS63, BS92, BS93  Credit Points: 12  Contact Hours: 3 per week

■ MIN434 SPECIAL TOPIC – MARKETING
This is intended to be an ‘open-ended’ unit where the opportunity will be available for staff and visiting scholars to offer a specialised program of study.

Courses: BS63, BS92, BS93  Prerequisites: A first degree with a specialisation in marketing  Credit Points: 12  Contact Hours: 3 per week

■ MJB101 JOURNALISM INFORMATION SYSTEMS
This unit acquaints students with the uses journalists make of computers in their work: for wordprocessing, personal information management, time management, and gathering information for stories by searching online and CD-ROM databases, by analysing public records with spreadsheets and by using email to ‘interview’ sources found on Internet Bulletin Boards and on Newsgroups, Usergroups, and Listservers.

Course MJB20  Prerequisite: Journalism majors and minors only  Corequisite: MJB120  Credit Points: 12  Contact Hours: 3 per week

■ MJB111 MEDIA WRITING
Introduction to writing for the electronic media. The major requirements for writing practice within a variety of electronic media industry contexts, and the implications for writers of these diverse contexts and audiences. Film, television, radio and multimedia, including drama, documentary, comedy, educational and corporate.

Course MJB20  Credit Points: 12  Contact Hours: 3 hours per week

■ MJB115 SUPERVISED PROJECT FILM AND TELEVISION
Students undertake one or more specialist roles in the production of an approved major film or television project.

Course: BS50, MJB20. Available to Film and Television Production majors only  Prerequisites: MJB113, MJB114, MJB134  Credit Points: 12  Contact Hours: 6 per week  Incompatible with: MJB352
■ MJBI18 FUNDAMENTALS OF PHOTOGRAPHY
Historical development of the photographic arts, role of the photographer in society, the principles of visual perception, composition and design, photography as both art and craft; display photography, news photography, photo layout and design; the still camera, developing, printing and enlarging; creative use of camera and darkroom; colour and electronic imaging. Fortnightly photographic assignments and portfolio.
Courses: BS50, IF52, IF54, IT20, MJ20, MJ23
Credit Points: 12  Contact Hours: 4 per week

■ MJBI20 NEWSWRITING
Students learn to think like journalists, to evaluate events for their potential news value, to interview and perform other reporting tasks and to write news stories; the evolution and theories of reporting.
Course: MJ20  Prerequisite: MJB101
Credit Points: 12  Contact Hours: 3 per week

■ MJBI21 JOURNALISTIC INQUIRY
The philosophical rationale behind the free flow of information and its use studied from practical and theoretical perspectives. The journalist's role in society defined and explored through the use of advanced research techniques involving Freedom of Information, property and company searches and the use of newspaper databases.
Courses: BS50, MJ20
Prerequisites: MJB120, MJB101
Credit Points: 12  Contact Hours: 3 per week

■ MJBI27 FILM NARRATIVE
An historical analysis of narrative in the cinema through a study of the development of innovative cinematic storytelling techniques and the impact of improved technology. The inter-relationship between improved technical means - cameras and lenses, editing techniques, sound equipment and lighting - and how these have increased the creative scope of film makers. Content will not be simply restricted to film but will also discuss elements of the graphic arts, the novel, dramatic forms and social phenomena in various national groupings.
Courses: BS50, MJ20, MJ23
Credit Points: 12  Contact Hours: 3 per week

■ MJBI30 MEDIA TEXT ANALYSIS
The unit acquaints students with a range of approaches, both traditional and contemporary, to the analysis of media texts. It equips students with practical methods of understanding the creation and structuring of social meaning through media. The strategies applied in the analysis of texts will be drawn from the following areas: Utilitarianism, New Criticism and the traditional legacy; Semiotics and Structuralism/Post-Structuralism; Marxism and Contextual/Historical Approaches; Feminism, Psychoanalysis, and Multi-Culturalism. The media texts chosen will include newspaper articles, cartoons, photographs, advertisements, films and television programs.
Courses: ED50, MJ20
Credit Points: 12  Contact Hours: 3 per week

■ MJBI40 MEDIA AND SOCIETY
A range of theoretical positions on mass media study; the political economy of the media; the role and meaning of advertising; the manufacture of news; theories of journalism; audience theory; media representation of different societal groups - gender, race, ethnicity, class, age; public access media; media ownership and control; the treatment of particular social issues in the media; textual and discourse analysis; new technologies; ethics.
Courses: AA11, AA21, AA51, AA71, ED50, JU20, MJ20, SS07
Credit Points: 12  Contact Hours: 3 per week

■ MJBI41 FILM AND TELEVISION LANGUAGE
The unit surveys the processes by which meaning is constructed in film and television programs. This is first studied in relation to the question of form, and attention is given to how films, both narrative and non-narrative, and television programs, may be structured. The production of meaning is explored through a detailed examination of mise-en-scene (movement and placement of actors, setting, lighting, and costume), cinematography (including camera-angle, camera-distance, camera-movement and special effects), editing and sound.
Courses: ED50, MJ20
Corequisite: MJB130 or equivalent
Credit Points: 12  Contact Hours: 4 per week

■ MJBI47 FILM AND TELEVISION GENRES
This unit explores the concept of genre in films and television programs. It investigates the conventions and iconography of particular film and television genres. It also examines the relationships between film genres and television genres, between genre and history/ideology, between genre and the film and television industries, and between the generic texts produced by these industries.
Courses: ED50, MJ20
Prerequisite: MJB130 or equivalent
Credit Points: 12  Contact Hours: 3 per week

■ MJBI49 FILM HISTORY
The unit explores how film has developed throughout this century and the relationship of this development to historical and technological change. It also examines what constitutes film history and the perspectives from which that history may be written. The following topics are treated: the development of the Hollywood classical continuity style; notions of 'realism' and their relation to French poetic realism of the '30s, neo-realism in post-war Italy, and the 'kitchen-sink' films of Britain in the '60s; modernism; expressionism and film noir; the impact of widescreen formats; the various 'new waves' of the '50s and '60s; and the impact of new technologies and information systems on film.
Course: ED50
Credit Points: 12  Contact Hours: 3 per week

■ MJBI55 MEDIA PRODUCTION
Analysis of audio-visual media in terms of markets served; criteria used in the selection of the appropriate mediated form; the technology and development of film and television; the principles of production and production management. Introduction to script layout. Principles of directing, camera, lighting, sound and editing, introduction to animation, graphics and special effects; introduction to multi-media technology, principles and future directions.
Courses: BS50, ED50, MJ20, MJ23
Credit Points: 12  Contact Hours: 5 per week
Incompatible with: MJBI26

■ MJBI65 CREATIVE SOUND
Creation and manipulation of sound in the communication context; fundamentals of sound and sound recording; dynamic range, distortion, bias, equalisation, multi-tracking and mixing; microphone techniques, digital recording and MIDI.
Courses: MJ20, MJ23
Prerequisite: Available to non-Film and Television Production majors in Semester 2 only
Credit Points: 12  Contact Hours: 4 per week
Incompatible with: MJB108

■ MJBI66 CREATIVE IMAGE
Foundation principles in the manipulation of light and image, illusion and visual impression. Introduction to the relationship between light, vision and image. Con-
cepts covered include energy theory, physical optics, the physiology and psychology of vision, and the recording and processing of photochemical, electronic, and digital images. Theoretical concepts are applied through the use of broadcast industry image production software on networked desktop computing systems.

Course: MJB20
Prerequisite: Available to non-Film and Television Production majors in Semester 1 only.
Credit Points: 12  Contact Hours: 4 per week Incompatible with: MJB108

- **MJB180 SPEECH COMMUNICATION FOR JOURNALISTS**
  
  This unit draws on the theories of rhetoric, semiotics, group dynamics and interpersonal communication as a base for developing professionals who are articulate presenters, probing but empathic interviewers and interviewees, and good team players. Theory and practice are inter-related to develop understanding and self-reflexivity within students concerning their own communication skills. Practice in simulated work situations will allow growth and learning in the laboratory of the classroom.

  Course: MJB180
  Prerequisite: MJB120
  Credit Points: 12  Contact Hours: 3 per week

- **MJB200 VIDEO DRAMA PRODUCTION**
  
  Principles of single camera film and video production. Realising the intention of the programme, conversion of script to format, budgeting and production management. Principles, aesthetics and practice of: directing, editing, camera, sound, lighting and design crafts. Casting and working with actors, achieving performance, coverage and a quality product.

  Course: BS50, MJB20
  Prerequisite: MJB155 or MJB126. Available to non-Film and Television Production majors in Semester 1 only
  Credit Points: 12  Contact Hours: 6 per week

- **MJB204 MEDIA INDUSTRIES AND ISSUES**
  
  An introduction to the study of mass media and cultural production, with particular emphasis on Australian media industries, including television, radio, the press, advertising, film, video, publishing and music. The unit considers media industries from social, historical and industrial perspectives, examines the development and implementation of regulation and policy, and explores a range of contemporary and future issues.

  Course: MJB204
  Credit Points: 12  Contact Hours: 3 per week Incompatible with: MJB104

- **MJB209 AUSTRALIAN TELEVISION**
  
  This unit deals with the role of television in the construction of Australia’s cultural identity. Particular attention is paid to the part played by a number of historical mini series and documentary films in this process. The unit examines how issues such as war, religion, race, ethnicity, foreign relations and sport are dealt with in a number of texts.

  Courses: ED50, MJB20
  Prerequisite: 96 credit points of undergraduate study
  Credit Points: 12  Contact Hours: 3 per week Incompatible with: MJB109

- **MJB213 FILM DRAMA PRODUCTION**
  
  This unit provides students with ‘hands on’ experience in a range of specialist activities required to produce a film drama. Through the application of advanced production techniques, it allows students to realise their creative potential through experimentation and to develop communication skills and methods of working. Students are required to work in professional crew structures to produce a significant short film.

  Course: BS50, MJB20;
  Prerequisites: (MJB126 and MJB129) or (MJB200 and MJB229)
  Credit Points: 12  Contact Hours: 6 per week Incompatible with: MJB113; Not available to cross-institutional students.

- **MJB224 FEATURE WRITING**
  
  Students use the principles of reporting to produce newspaper and magazine articles that profile personalities, or that treat processes, events and places to exploit their human-interest news value.

  Courses: BS50, MJB20, MJB23
  Prerequisite: MJB121 or MJP100
  Credit Points: 12  Contact Hours: 3 per week Incompatible with: MJB124

- **MJB229 FILM AND TELEVISION SCRIPTWRITING**
  
  Writing through analysis of features, documentaries and drama; in-depth approach to writing through analysis of scripts, audiences and the industry; dialogue and character development; use of film in television and public relations; analysis of scripts and script requirements in contemporary markets.

  Courses: BS50, MJB20, MJB23
  Prerequisite: MJB111 or MJB127
  Credit Points: 12  Contact Hours: 3 per week Available to non-Film and Television Production majors in Semester 2 only Incompatible with: MJB129

- **MJB231 TELEVISION STUDIO PRODUCTION**
  
  The operational and artistic requirements for simple television studio production including post production for news, current affairs, magazine formats and simple drama. The unit will involve students as a working crew in live studio production. Students will gain direct experience of the roles of producer, director, designer, technical director, floor manager, vision mixer, production assistant and operators of camera, audio, lighting, CCU’s, tapes, character generator and teleprompter. The nature of television studio production necessitates an understanding of all crew roles and the interdependence of each to the creative output. Each student will be assessed on all aspects of studio/control room roles and functions, and will be required to present a paper and a run-down script.

  Courses: BS50, MJB20
  Prerequisites: MJB111 and MJB200
  Credit Points: 12  Contact Hours: 6 per week Incompatible with: MJB131; Not available to cross-institutional students

- **MJB232 RADIO AND 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 seminars and workshops. Strong emphasis is placed on current affairs knowledge.

  Courses: BS50, MJB20
  Prerequisites: MJB100 and MJB121 or MJP100
  Credit Points: 12  Contact Hours: 3 per week Incompatible with: MJB132

- **MJB233 TELEVISION CULTURES**
  
  The aim of the course is to provide students with some ways to think about and to begin to account for the processes by which people make sense of and take pleasure from their encounters with television. It allows students to understand better the nature of television as a form of communication. The subject draws on the insights pro-
vided by a range of media studies approaches: semiotics and structuralism, British cultural studies, narrative theory, reception theory, ideological analysis, feminist criticism, and psychoanalysis. It examines television production as ‘texts’, and analyses the factors determining their construction and their possible meanings for audiences.

**Course: MJ20**  
**Prerequisite: MJB130 or equivalent**  
**Credit Points: 12**  
**Contact Hours: 3 per week**  
**Incompatible with: MJB133**

■ **MJB239 JOURNALISM ETHICS AND ISSUES**  
The Australian Journalists’ Association code of ethics is examined against the background of Australia’s multicultural and pluralistic democracy; the evolution of the code, its philosophical underpinnings, how it compares to other national and international media codes and the general value of codes of ethics. Students will be placed in ethical dilemmas and asked to make decisions and justify their choices; the value of deathknocks, privacy, defining off-the-record, handling leads and women in the media.

**Courses: SS50, MJ20, MJ23**  
**Prerequisite: MJB121**  
**Credit Points: 12**  
**Contact Hours: 3 per week**  
**Incompatible with: MJB139**

■ **MJB250 LANGUAGE AND LITERATURE**  
This unit develops advanced critical and analytical skills in dealing with a variety of textual forms. Students acquire an understanding of various forms of literary or creative language forms. Students are introduced to literary theory as well as key language theory.

**Courses: SS50, MJ20**  
**Credit Points: 12**  
**Contact Hours: 3 per week**  
**Incompatible with: COB144**

■ **MJB260 COMMUNITY AND EDUCATIONAL VIDEO**  
New approaches to educational and community-focused video production using still and video cameras, editing equipment and computers; maximising outcomes using low-cost new wave technologies to produce magazine programs, oral histories, corporate promotional, educational and training videos and CD-ROMs.

**Course: ED50**  
**Prerequisite: MJB100 or MJB126 or MJB155**  
**Credit Points: 12**  
**Contact Hours: 3 per week**  
**Incompatible with: COB144**

■ **MJB303 NEWS PRODUCTION**  
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.

**Courses: SS50, MJ20**  
**Prerequisites: MJB322, MJB338 (none for MBA students)**  
**Credit Points: 12**  
**Contact Hours: 3 per week**  
**Incompatible with: MJB103**

■ **MJB305 AMERICAN FILM AND SOCIETY**  
This unit is a contextual study of American films across 50 years. It allows students to explore how films form part of and contribute to the ideologies current during the period of their production. The subject examines the refractive of the Great Depression and Roosevelt’s New Deal in 1930s genre films; the post-war reconstruction and the reaffirmation of the family in 1940s films; the anti-communist hysteria and conservatism of the 1950s; the relation of 1960s films to various radical movements of the period; and the treatment of a range of social issues in 1970s and 1980s and 1990s films.

**Courses: ED50, MJ20**  
**Prerequisite: 96 credit points of undergraduate study**  
**Credit Points: 12**  
**Contact Hours: 3 per week**  
**Incompatible with: MJB105**

■ **MJB307 FEMINIST MEDIA STUDIES**  
This subject is designed to examine critically the issue of gender, sexuality and the media within cultures. A range of media texts will be investigated. Cultural discourses such as masculinity, femininity, romance, the body, sexuality and violence will be discussed. Issues such as cross-cultural, new technologies, spatial politics, celebrities and political correctness will also be addressed from a feminist media studies perspective.

**Courses: ED50, MJ20**  
**Prerequisite: 96 credit points of undergraduate study**  
**Credit Points: 12**  
**Contact Hours: 3 per week**  
**Incompatible with: MJB107**

■ **MJB310 ASIAN AND LATIN AMERICAN CINEMA**  
This subject provides an introduction to the study of the national cinemas of China and Cuba. China here will be taken to include reference to the cinemas of Hong Kong and Taiwan. The films will be placed within their political, cultural and historical contexts. Thus Chinese cinema will be studied from the perspective of the new cinema which emerged from the film makers Chen Kaige, Wu Tianming, Zhang Yimou and Tian Zhaoguang, and Cuban cinema will be dealt with in the context of the Cuban revolution.

**Courses: ED50, MJ20**  
**Prerequisite: 96 credit points of undergraduate study**  
**Credit Points: 12**  
**Contact Hours: 3 per week**  
**Incompatible with: MJB110**

■ **MJB314 FILM AND TELEVISION BUSINESS**  
The role of the producer and executive producer in the packaging and financing of film and television production including corporate, training and documentary, grant films, features telemovies and mini-series; matching television network programming needs and achieving balance in above-the-line, below-the-line and marketing costs. Sources of finance: Film Queensland, networks, corporate sponsors, corporate clients, investors, pre-sales, government grants, Film Finance Corporation; methods of obtaining finance, insurance, completion guarantees, legal and accounting requirements; social and ethical issues.

**Courses: MI20, MJ23**  
**Prerequisite: MJB213 or two years in a degree program**  
**Credit Points: 12**  
**Contact Hours: 3 per week**  
**Incompatible with: MJB114**

■ **MJB322 SUB-EDITING AND LAYOUT**  
Introduction to the basic copy editing and design principles for newspapers. These skills are incorporated with the latest desktop publishing technology with specific reference to newspapers. Students use wire stories from Australian Associated Press, Reuters, Associated Press and Agence France Presse in news and feature page design exercises.

**Courses: SS50, MJ20, MJ23**  
**Prerequisite: MJB224 or MJ100**  
**Credit Points: 12**  
**Contact Hours: 3 per week**  
**Incompatible with: MJB122**

■ **MJB334 VIDEO DOCUMENTARY PRODUCTION**  
An orientation to the history and development of documentary and associated theoretical perspectives. Workshop sessions build on previously acquired skills in the areas of programme concept, script development, approaches to production, camera, sound and editing techniques. Exercises include shooting and editing several short magazine style pieces to a tight deadline and the production of a significant short documentary or corporate video.
Courses: BS50, MJ20
Prerequisites: (MJB155 and MJB111) or (MJB126 and MJP100 or MJB129)
Credit Points: 12
Contact Hours: 6 per week
Incompatible with: MJB134; Not available to cross-institutional students

MJB335 PROFESSIONAL MEDIA PRACTICE
An opportunity to observe, and gain insight into, the applications of theory to practice. The student is placed with an approved employer. The lecturer in charge of the unit obtains reports from the student at regular intervals. The student is required to contract the completion of a progressive assessment program. The student's result is determined on the basis of reports, continuous assessment and the employer's report. Film and Television Production students may seek approval from the Unit Coordinator for specific production activity to be counted as partial credit towards this unit.

Course: MJ20
Prerequisites: One of: MJB122, MJB138, MJB322 or MJB338 for BA (JNL) majors and one of: MJB113, MJB134, MJB213 or MJB334 for BA (FTV) majors
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: MJB135; Not available to cross-institutional students

MJB336 NEW MEDIA TECHNOLOGIES
The implications of new media technologies and associated industrial and cultural changes, are an increasingly central issue for those involved both in media studies and media production. This course will examine the relationship between new technologies and media production in their social and cultural context, evaluating the impact of developments such as digitisation and convergence on work, leisure, film, television, print media and other areas of cultural production. It will also address emerging policy issues such as privacy, information access, cultural diversity and the relationship between personal freedom and social regulation on media such as the Internet. Through such an examination, this course will consider the insights that media theory can provide for an understanding of the new technologies and their social and cultural impact, and consider how changes in dominant media forms impact upon the study of the media and contemporary culture.

Courses: ED50, MJ20
Prerequisite: 144 credit points of undergraduate study
Credit Points: 12
Contact Hours: 3 per week

MJB337 PUBLIC AFFAIRS REPORTING
This is an advanced reporting unit stressing the watchdog role of the press and utilising investigative techniques, including computer-assisted reporting, Internet and other online searching. Students undertake in-depth practical assignments for possible publication.

Courses: BS50, MJ20
Prerequisite: MJB124 or MJB224
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: MJB137

MJB338 RADIO AND TELEVISION JOURNALISM II
Philosophy and formulation of radio and television current affairs, anchor techniques, radio and television news production using computers.

Courses: BS50, MJ20
Prerequisite: MJB132 or MJB232
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: MJB138

MJB343 AUSTRALIAN FILM
A study of New Wave Australian films within their cultural and institutional contexts; issues facing the film industry today; the filmic construction and circulation of cultural discourses such as national identity, nationalism, gender, ethnicity and class; the Australian landscape in film; experimental and avant garde films; indigenous films; new technological and global challenges.

Courses: ED50, MJ20
Prerequisite: 96 credit points of undergraduate study
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: MJB143

MJB344 EUROPEAN CINEMA
The post World War II cinema of two European countries related to their social and historical context. The content coverage of Italian and French cinema is shown as an example. The Italian section will examine neorealism, the influence of Marxism on filmmakers such as Visconti, Pasolini and Bertolucci, and the films of Fellini, Antonioni and the Taviani brothers. The French section will explore the style and context of the New Wave, the work of independent filmmakers, and the work of contemporary directors such as Varda, Pialat, Blier and Deville.

Courses: ED50, MJ20
Prerequisite: 96 credit points of undergraduate study
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: MJB144

MJB346 AUSTRALIAN DOCUMENTARY: FILM AND TELEVISION
This unit deals with the growth and development of the documentary film in Australia. The unit examines the role of government and non-governmental institutions in the sponsoring of Australian documentaries. The unit also studies the work of leading film makers such as John Pilger, Tom Zubricki, David Bradbury and others.

Courses: ED50, MJ20
Prerequisite: 96 credit points of undergraduate study
Credit Points: 12
Contact Hours: 3 per week
Incompatible with: MJB146

MJB350 CREATIVE WRITING AND PUBLISHING
This subject is an advanced elective for students working towards a vocation involving professional writing, especially writing involving creativity. The subject has a particular focus on narrative writing, but students may work in other genres as well. It offers advanced techniques in professional writing and editing, including publishing and marketing, and is suitable for practitioners in literature, journalism, film & television, media studies, communication and education.

Credit Points: 12
Contact Hours: 3 per week
Incompatible with: COB147

MJB352 ADVANCED FILM AND TELEVISION STUDIES
Advanced Film and Television Studies is a capstone elective unit designed to enable students to optimise their practical skills. It is available only to Advanced Film and Television Production majors. It is a 24 credit point contract learning unit across two semesters, and involves individual study and a major production. Students who wish to take this practical skill building path must, during Semester 4, choose a specialisation for their Advanced Film and Television Studies and submit a work proposal including a role on a major production. A written invitation to undertake Advanced Film and Television Studies must be received prior to enrolling in the unit.

Course: MJ20
Prerequisite: MJB213
Corequisites: MJB314
Credit Points: 24
Contact Hours: 6 per week for two semesters
Incompatible with: MJB115; Available to Film and Television Production majors only
**MJNI00 ADVANCED MEDIA THEORY**
As a preliminary to undertaking research in media studies, students study contemporary media theory in detail, extending their overview of communication and media theory. 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.
**Prerequisite:** MJNI01 or equivalent
**Credit Points:** 12  
**Contact Hours:** 3 per week

**MJNI01 ADVANCED MEDIA ANALYSIS**
Theoretical strategies discussed in MJNI00 are here given practical application in regard to textual practice. The more important theories of textual analysis – semiotics, structuralism, psychoanalysis, Marxism and feminism – are applied to a range of texts drawn from print media, including newspapers and magazines; film; television; and popular fiction.
**Prerequisite:** MJNI00
**Credit Points:** 12  
**Corequisite:** MJNI00
**Contact Hours:** 3 per week

**MJNI03 AUSTRALIAN MEDIA CONTEXTS**
Analyses specific aspects of the interaction between mass media and the Australian cultural context; addresses 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.
**Prerequisite:** MJNI00
**Credit Points:** 12  
**Corequisite:** MJNI00
**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.
**Credit Points:** 12  
**Contact Hours:** 3 per week

**MJNI06 JOURNALISTIC FREEDOM AND 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 an historical, legal or ethical issue.
**Credit Points:** 12  
**Contact Hours:** 3 per week

**MJNI910 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.
**Course:** MJ23  
**Credit Points:** 12  
**Contact Hours:** 3 per week

**MJNI910 MEDIA THEORY (FORMERLY COMMUNICATION THEORY 2)**
A systematic introduction to the critical and qualitative traditions of media theory and research, with special emphasis on critical media theory. Applications to mass media, including television, film, radio, advertising, print, and new media. Bread theoretical traditions in media theory; history of media theory; media institutions; media organisation and culture; media text analysis; media audiences; media futures.

**MJNI912 MEDIA POLICY ENVIRONMENT (FORMERLY COMMUNICATION POLICY ENVIRONMENT)**
The public policy environment associated with media practice and processes; current issues; the participating and critical views. A study of the public process in selected countries with special emphasis on Australian media policy. Social, legal, political and technical environments; current and major issues, and the differing approaches to media policy studies.
**Courses:** AT22, MJ21, MJ23
**Credit Points:** 12  
**Contact Hours:** 3 per week

**MJNI913 CREATIVE WRITING THEORY**
This unit examines the major theories underlying and informing the practice of writing creative texts, including narrative prose and film script. Such theory enhances critical awareness and knowledge of writing strategies relevant to the production of a text.
**Courses:** AT22, MJ23
**Credit Points:** 12  
**Contact Hours:** 3 per week

**MJNI915 THEORIES OF JOURNALISM**
The body of ‘classical’ literature pertaining to the theories of journalism and mass communication; identification of individual research interests; the empirical traditions of mass communication theory.
**Courses:** AT22, MJ21, MJ23
**Credit Points:** 12  
**Contact Hours:** 3 per week

**MJNI916 DISSERTATION**
The culmination of the Honours degree in Film and Television Production, Journalism or Media Studies in that students apply the theory and research material covered in earlier units to explore in some depth an applied or theoretical topic in their chosen discipline area. The dissertation is normally based on information from secondary sources and consists of a written report of approximately 12 000 – 15 000 words. It is also possible to undertake a creative work such as a film or multimedia script or production.
**Course:** MJ21
**Prerequisites:** Normally MJNI01, MJNI02, MJNI05
**Credit Points:** 48  
**Contact Hours:** 1 per week

**MJNI917 DISSERTATION (1-3)**
The culmination of the part-time Honours degree in Film and Television Production, Journalism or Media Studies in that students apply the theory and research material covered in earlier units to explore in some depth an applied or theoretical topic in their chosen discipline area. The dissertation is normally based on information from secondary sources and consists of a written report of approximately 12 000 – 15 000 words. It is also possible to undertake a creative work such as a film or multimedia script or production. Students enrol in two sequential 12 credit point units (MJNI917/1, MJNI917/2) followed by one 24 credit point unit (MJNI917/3) until they have completed 48 credit points. Normally, MJNI917/1 will involve students beginning to apply the theory and research material covered in earlier units, to a chosen dissertation topic, in consultation with an approved supervisor. MJNI917/2 will involve students consolidating the preparatory work begun in MJNI917/1 by preparing drafts of two chapters under structured supervision. MJNI917/3 completes the sequence of dissertation units. Students complete the drafting of their dissertation and revise to a final copy for submission under supervision. Length will be 12 000 – 15 000 words or an equivalent in other media forms.
**Courses:** MJ21
Prerequisites: Normally two of MJP101, MJP102, MJP105
Credit Points: 48 Contact Hours: 1 per week

■ NSB113 VALUES, CULTURE AND NURSING
This unit will enable students to gain an understanding of the complex interrelationships between philosophical principles, culture, nursing and health related behaviours. It will draw upon contemporary nursing practice to facilitate the provision of culturally sensitive and relevant care in a culturally diverse world.
Course: NS40, NS48
Credit Points: 12 Contact Hours: 3 per week

■ NSB116 NURSING 1
An introduction to the key concepts underpinning nursing as a profession. Topics include: historical, social and political factors which have shaped the development of nursing practice; contemporary roles of the nurse; theoretical perspectives of nursing; nursing and health promotion.
Course: NS40
Credit Points: 12 Contact Hours: 3 per week

■ NSB121 NURSING 2
Further development of the key concepts underpinning nursing as a profession. Topics include: the concept of client within the nurse-client relationship; theoretical perspectives of the helping relationship as applied to nursing; judgment and decision making processes within the context of nursing practice; collaboration within the health care team and governance in nursing.
Course: NS40 Pre requisite: NSB116
Credit Points: 12 Contact Hours: 3 per week

■ NSB122 CLINICAL PRACTICE 1
The development and application of skills which are fundamental to nursing practice: communication skills, health assessment skills, care planning skills, skills which support client comfort and safety. Students will engage in a variety of on-campus activities which include laboratory practice sessions. In addition, an off-campus clinical practicum will be undertaken in a healthcare setting.
Course: NS40 Corequisite: NSB121
Credit Points: 12

■ NSB212 CLINICAL PRACTICE 2
Further development and application of the theoretical and practical knowledge and skills necessary in the provision of safe, effective nursing care in a variety of settings. Students will practise the application of problem solving and technical skills in both University (on-campus) and clinical (off-campus) settings. The off-campus clinical practicum will be undertaken in a variety of healthcare settings which include hospitals, palliative care facilities and psychiatric mental health facilities.
Course: NS40 Corequisite: NSB122
Credit Points: 12

■ NSB213 NURSING 3
This unit provides theoretical foundations for clinical decision making and problem solving related to the promotion, maintenance and/or restoration of health for clients experiencing alterations in activity/exercise, nutritional/metabolic and sleep patterns.
Course: NS40 Prerequisites: NSB111, NSB121
Corequisite: NSB212
Credit Points: 12 Contact Hours: 3 per week

■ NSB221 NURSING 4
This unit provides theoretical foundations for clinical decision making and problem solving related to the promotion, maintenance and/or restoration of health for clients experiencing alterations in cognitive/perceptual, coping value/belief patterns.
Course: NS40 Prerequisites: NSB111, NSB121
Corequisite: NSB222
Credit Points: 12 Contact Hours: 3 per week

■ NSB222 CLINICAL PRACTICE 3
Further development and application of the knowledge and skills necessary in the provision of safe, effective nursing care in a variety of settings. Students will practise the application of problem solving and technical skills in both University (on-campus) and clinical (off-campus) settings. The off-campus clinical practicum will be undertaken in a variety of healthcare settings which include hospitals, palliative care facilities and psychiatric mental health facilities.
Course: NS40 Prerequisites: NSB112, NSB122
Corequisite: NSB222
Credit Points: 12

■ NSB223 MENTAL HEALTH NURSING
This unit will enable students to gain an understanding of the important issues and principles associated with the promotion of mental health and prevention of mental illness in the community. Topics to be addressed include various perspectives of mental health and illness; factors underlying the development of mental illness; intervention strategies in the promotion/maintenance of optimal mental health; mental health policies.
Course: NS40, NS48 Prerequisite: SSB101
Credit Points: 12 Contact Hours: 3 per week

■ NSB224 RESEARCH APPROACHES IN NURSING
An understanding of the various approaches to research is central to contemporary nursing practice and the scholarly advancement of nursing knowledge. Topics addressed in this unit include the significance of research in nursing; methodologies used to research nursing practice; and appraisal of research reports.
Course: NS40
Credit Points: 12 Contact Hours: 3 per week

■ NSB301 NURSING & BIOPHYSICAL HEALTH 1
Effects of selected pathophysiologic processes on meeting human needs. Topics include: assessment and nursing diagnosis of gas exchange, circulation, hydration, physical comfort and safety problems; and independent and collaborative strategies designed to promote, maintain and/or restore health.
Course: NS40 Prerequisites: NSB151, NSB152
Credit Points: 8 Contact Hours: 3 per week

■ NSB302 NURSING & MENTAL HEALTH 1
Theories, concepts and models which provide the basis for understanding individuals and their mental health needs; provides a framework for nursing care which acknowledges the importance of promoting, maintaining and restoring mental health. Addresses contemporary concepts of mental health and mental illness; biological and socio-cultural factors which can influence mental health and mental health problems; mental health assessment; and strategies for mental health promotion.
Course: NS40 Prerequisites: NSB151, NSB152
Credit Points: 8 Contact Hours: 3 per week

■ NSB308 NURSING & MENTAL DISORDER
Mental disorder is common and extensive across Australia, and affects all age and social groupings. This unit provides a framework for addressing the important issues and principles associated with the understanding of the interrelatedness of individual, family, community and environment in the development, maintenance and resolution of mental disorders. Topics include the psychodynamics of normal and abnormal behaviour, diagnosis and presentation of common mental disorders, psychobiology, psychopharmacology, nursing intervention and research in the aetiology and treatment of men-
Clinical practice and theoretical knowledge. Students will be assisted to further develop skills in reflective practice and peer consultation as strategies to support a more critical approach to clinical practice. A variety of topics will be addressed through a combination of self-directed learning activities and small group discussion sessions.

Course: NS40, NS48
Credit Points: 8
Contact Hours: 3 per week

- **NSB321 PROFESSIONAL PRACTICE DEVELOPMENT**
  This unit is designed to make explicit the link between clinical practice and theoretical knowledge. Students will be assisted to further develop skills in reflective practice and peer consultation as strategies to support a more critical approach to clinical practice. A variety of topics will be addressed through a combination of self-directed learning activities and small group discussion sessions.
  
  Course: NS40, NS48  
  Corequisite: NSB323  
  Credit Points: 12  
  Contact Hours: 3 per week

- **NSB323 CLINICAL PRACTICE 5**
  This final clinical unit is designed to enable students to consolidate the knowledge and skills essential in the provision of safe, effective client care. Emphasis will be placed on students’ proficiency to think critically, reflect upon their practice and use a problem-solving approach to the provision and management of safe nursing care in preparation for a successful transition to beginning level practice as a registered nurse.
  
  Course: NS40  
  Prerequisites: NSB212, NSB213, NSB222  
  Corequisites: NSB321  
  Credit Points: 16

- **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 advanced level, a theoretical foundation for mental health nursing practice with a focus on diagnostic reasoning and intervention strategies to promote mental health and wellbeing. Topics include: theories of stress and adaptation; assessment, diagnosis and intervention in situations of developmental disorder, selected organic and non-organic mental syndromes and crisis intervention.
  
  Course: NS40  
  Prerequisites: NSB151, NSB152  
  Credit Points: 8  
  Contact Hours: 3 per week

- **NSB406 NURSING & THE FAMILY**
  Family nursing practice recognises the substantial impact families can have on the health of individuals within the family unit, and upon society as a whole. An introduction to the knowledge base which underpins family nursing practice, facilitating the development of decision-making skills in this area. Topics include: nature of the family unit; family development; models of the family; and families with particular situational or developmental needs.
  
  Courses: NS40, NS48  
  Credit Points: 8  
  Contact Hours: 3 per week

- **NSB407 NURSING & THE COMMUNITY**
  Community health is an important focus for nursing practice; provides an introduction to fundamentals of community nursing practice and facilitates development of decision-making skills in this area. Topics include: models of community; community development; perspective of community health; application of epidemiological principles to community health; community groups with particular health needs; strategies for promotion of community health.
  
  Courses: NS40, NS48  
  Credit Points: 8  
  Contact Hours: 3 per week

- **NSB413 ADVANCED RESEARCH IN APPROACHES TO NURSING**
  This unit will provide students with the opportunity to further develop their capacity for research and scholarship in preparation for future studies in the Bachelor of Nursing (Honours) course. Topics to be addressed include: statistical analysis – descriptive statistics, sampling, estimation and inferential statistics; research process – generation of researchable questions, literature review, theoretical frameworks in research, research methodology, ethical considerations and conducting research in the field.
  
  Course: NS48  
  Prerequisite: NSB224  
  Credit Points: 12  
  Contact Hours: 4 per week

- **NSB417 INTRODUCTION TO NURSING**
  This unit aims to provide a framework within which students with advanced standing in the Bachelor of Nursing (Pre-registration) course can develop an evolving concept of nursing practice. Topics will include an historical, social and political analysis of the development of nursing, contemporary views of nursing as a profession, theoretical perspectives which underpin the development of nursing knowledge, the helping relationship as applied within a nursing context, clinical judgment and decision making within nursing and governance in nursing.
  
  Course: NS40  
  Credit Points: 12  
  Contact Hours: 3 per week

- **NSB560 CLINICAL PRACTICE 5A/BH**
  Provides the opportunity for students to develop a range of clinical skills associated with the Health strand which was not chosen for study during the second year of the program. Students practise the application of problem-solving skills; selected technical skills; organising, health education, client advocacy skills in both the University (on-campus) and clinical (off-campus) laboratories. The clinical laboratory experiences in this unit are undertaken in settings which include hospitals and palliative care facilities or psychiatric-mental health facilities.
  
  Course: NS40  
  Corequisites: NSB214, NSB215  
  Credit Points: 8  
  Contact Hours: 3 per week

- **NSB561 CLINICAL PRACTICE 5B/BH**
  Provides the opportunity for students to develop a range of clinical skills associated with the Health strand which was not chosen for study during the second year of the program. Students practise the application of problem-solving skills; selected technical skills; organising, health education, client advocacy skills in both the University (on-campus) and clinical (off-campus) laboratories. The clinical laboratory experiences in this unit are undertaken in settings which include hospitals and palliative care facilities or psychiatric-mental health facilities.
  
  Course: NS40  
  Corequisites: NSB214, NSB215  
  Credit Points: 8  
  Contact Hours: 3 per week

- **NSB570 CLINICAL PRACTICE 5A/MH**
  Provides the opportunity for students to develop a range of clinical skills associated with the Health strand which was not chosen for study during the second year of the program. Students practise the application of problem-solving skills; selected technical skills; organising, health education, client advocacy skills in both the University (on-campus) and clinical (off-campus) laboratories. The
clinical laboratory experiences in this unit are undertaken in settings which include hospitals and palliative care facilities or psychiatric-mental health facilities.

**Course: NS40**  Corequisites: NSB214, NSB215  Credit Points: 8  Contact Hours: 3 per week

- **NSB571 CLINICAL PRACTICE SB/MH**
  Provides students with the opportunity to consolidate skills which they have acquired in previous units, particularly NSB560 / NSB570. It aims at the achievement of an increasing level of competence in clinical situations. The learning experiences are conducted in clinical (off-campus) laboratories, and the settings are as described for the preceding clinical practice units.
  
  **Course: NS40**  Corequisites: NSB560 or NSB570  Credit Points: 8  Contact Hours: To be advised by Course Coordinator

- **NSN406 DISSERTATION**
  This study represents an independent piece of research completed with the guidance of a supervisor. The dissertation provides an opportunity for coursework conducted in the area of specialisation to be applied in a practical manner reflecting the student's specific interest in nursing. The third section of the three step-locked dissertation units in the Master of Nursing.
  
  **Course: NS85**  Credit Points: 12  Contact Hours: 3 per week

- **NSN411 RESEARCH SEMINAR**
  This is the first of three step-locked dissertation units. It provides the student with the opportunity to produce a well researched and indepth literature review in the area of the dissertation topic.
  
  **Course: NS85**  Credit Points: 12  Contact Hours: 3 per week

- **NSN412 RESEARCH PROJECT**
  Students design and implement research and gather and analyse data. This is the second of three step-locked dissertation units in the Master of Nursing.
  
  **Course: NS85**  Credit Points: 12

- **NSNS01 ADVANCED CLINICAL STRATEGIES**
  This unit is designed to provide registered nurses with advanced skills in the area of clinical problem solving across a variety of clinical contexts. Students undertake the unit in the initial stages of their specialisation course, and the knowledge and skills which they develop are extended and applied through the specialty units.
  
  **Courses: NS64, NS85**  Credit Points: 12  Contact Hours: 3 per week

- **NSNS02 NURSING KNOWLEDGE**
  Students will explore content related to the historical and current development of nursing knowledge. Contemporary nursing practice is examined in relation to the development of nursing as a discipline in order to assist each student to reflect upon their conceptions of nursing as a field of study and practice.
  
  **Courses: NS64, NS85**  Credit Points: 12  Contact Hours: 3 per week

- **NSNS05 QUANTITATIVE APPROACHES TO NURSING RESEARCH**
  Students develop skills in research design and data collection processes related to clinical phenomena. Students have the opportunity to apply statistical concepts and a computer package to the analysis of numerical data.
  
  **Course: NS64, NS85**  Credit Points: 12  Contact Hours: 3 per week

- **NSNS06 CLINICAL PROJECT**
  Offers students the opportunity to implement a project of clinical relevance and value which will lead to the resolution of practical issues facing nursing. It advances and extend the student's learning from their clinical specialty and the supporting units.
  
  **Course: NS85**  Credit Points: 24  Contact Hours: Negotiated with Course Coordinator

- **NSNS07 CONTEMPORARY ISSUES IN NURSING**
  This unit is designed to explore, through the application of relevant theoretical frameworks, contemporary political, social, economic and organisational issues in nursing practice. These issues have a major impact on the context within which nurses provide care. The unit content provides students with a body of knowledge to support their further development of nursing practice.
  
  **Courses: NS64, NS85**  Credit Points: 12  Contact Hours: Negotiated with Course Coordinator

- **NSNS08 ADVANCED READINGS IN NURSING**
  Provides the opportunity for students to access and review a body of literature relevant to an area of individual interest in nursing. This will enable students to extend their knowledge and understanding of a topic which is not specifically addressed elsewhere in the course. In addition, students undertaking this unit will have the opportunity to develop advanced skills in information retrieval, critical analysis and writing for publication.
  
  **Courses: NS64, NS85**  Credit Points: 12  Contact Hours: Negotiated with Course Coordinator

- **NSNS09 SPECIAL TOPIC**
  Provides the opportunity for students to engage in a group learning process to explore, in depth, an area of professional relevance which may be available from local or visiting scholars with particular expertise or knowledge of specific areas. It enables students to capitalise upon important learning opportunities which might not otherwise be possible.
  
  **Courses: NS64, NS85**  Credit Points: 12  Contact Hours: Negotiated with Course Coordinator

- **NSNS10 CLINICAL ELECTIVE 1**
  The purpose of this unit is to explore the theoretical and practical knowledge and skills required to provide effective nursing care to patients with highly specialised nursing management problems. Students will have the opportunity to develop theory and clinical problem-solving skills intrinsic to the nursing care of a specific range of patients within a defined subspeciality nursing area. Content will be individually negotiated in order to meet the needs of nurses, in particular nursing specialty areas. Content may include clinical and theoretical concepts in cardiology, emergency, neuroscience, neonatal, recovery room, or other specialty nursing areas.
  
  **Courses: NS64**  Credit Points: 12  Contact Hours: To be advised by Course Coordinator

- **NSNS11 CLINICAL ELECTIVE 2**
  This unit provides the opportunity for students to expand the professional knowledge and skills which have been acquired during Clinical Elective 1. Students will have the opportunity to acquire theoretical, conceptual and practical knowledge in a variety of advanced topics specific to developing knowledge and theory in specialised areas of nursing practice. The content in this unit will be individually negotiated to provide students with a further opportunity to explore the clinical and theoretical concepts introduced in previous units. Content may include advanced knowledge, skills, and attitudes in cardiology, emergency, neuroscience, neonatal, recovery room, or other specialty nursing areas.
  
  **Courses: NS64**  Credit Points: 12  Contact Hours: To be advised by Course Coordinator
■ NSN521 CLINICAL SPECIALISATION 1
Provides an introduction to the theory, process and practice of nursing in a designated specialty area. Although a range of knowledge and skills is addressed, an emphasis is placed upon health promotion within the context of a specialty area of health care.
Courses: NS64, NS85
Credit Points: 12  Contact Hours: 3 per week

■ NSN522 CLINICAL SPECIALISATION 2
Develop students’ understanding of the theory, process and practice of nursing in a designated specialty area of nursing. Although health promotion is reinforced, the emphasis in this unit is placed on the development of strategies to assist clients who are experiencing particular health dysfunctions.
Courses: NS64, NS85
Credit Points: 12  Contact Hours: 3 per week

■ NSN523 CLINICAL SPECIALISATION 3
Provides the opportunity for students to further develop and consolidate professional knowledge and skills which have been acquired during the previous clinical units. Students are facilitated to incorporate theoretical, conceptual and practical knowledge into the assessment, planning, implementation and evaluation of the care provided.
Courses: NS64, NS85
Credit Points: 12  Contact Hours: 3 per week

■ NSN581 CLINICAL STUDIES 1
An exploration of nursing practice in specialty areas of health care at a level which is not possible within the ambit of introductory studies. It enables students to address current trends, changing perspective of practice and issues of national and international significance. The broad perspective which is utilised in this unit equips students to select a specific area(s) of practice to be examined in more detail in NSN582 and NSN583.
Courses: NS64, NS85
Credit Points: 12  Contact Hours: 3 per week

■ NSN582 CLINICAL STUDIES 2
Provides students with the opportunity to build upon their learning in NSN581 by choosing an area of specialised nursing practice which they wish to explore and examine in greater detail. This allows students to deepen their appreciation of the clinical issues which relate to their practice in a particular specialty area of nursing.
Courses: NS64, NS85
Credit Points: 12  Contact Hours: 3 per week

■ NSN583 CLINICAL STUDIES 3
Designed to complement NSN581 and NSN582. Enables the student to examine, from a clinical perspective, an area of specialised nursing practice. This approach not only develops students’ awareness of the theoretical aspects of nursing issues, but highlights the clinical implications as well. Provides the opportunity for students to further develop clinical skills which complement their theoretical knowledge of the selected area.
Courses: NS64, NS85
Credit Points: 12  Contact Hours: Negotiated with Course Coordinator

■ OPB210 OPHTHALMIC OPTICS 2
Development of optometry and optometric education; legal standing and scope of service; role of health care services; professionalism and ethical behaviour; professional bodies and relationships with other professions; role of optometry.
Course: OP42
Credit Points: 4  Contact Hours: 2 per week

■ OPB232 CLINICAL OPTOMETRY 2
Optical concepts, refraction and notation; neutralisation, transportation, prismatic effects, multifocals; frame and lens materials, quality, dimensions; vertometers, ordering, prescription writing; protection against radiation and mechanical hazards; special lens types.
Course: OP42  Prerequisite: PHB122
Credit Points: 12  Contact Hours: 4 per week

■ OPB312 VISUAL SCIENCE 3
The performance of the eye as an optical system is considered in the context of ocular aberrations, refractive errors and image formation. An introduction to visual performance characteristics includes absolute and relative thresholds, dark and light adaptation and relative luminous efficiency curves.
Course: OP42  Prerequisites: PHB240, LSB230
Credit Points: 12  Contact Hours: 5 per week

■ OPB401 OCULAR & REGIONAL ANATOMY
The gross anatomy of the head and neck region with particular reference to the central nervous system. The microscopic and macroscopic anatomy of the orbit, extracarotid muscles, eyelids, lacrimal apparatus, cornea, conjunctiva, sclera, uveal tract, lens, retina, optic nerve, aqueous, vireous and the neural pathways and vascular circulation. Ocular embryology.
Course: OP42  Prerequisites: LSB230, OPB312
Credit Points: 10  Contact Hours: 4 per week

■ OPB405 CLINICAL OPTOMETRY 4
Provides students with an understanding of the scope of clinical practice. Students are taught the basics of communicating with patients, how to understand prescriptions and frame selection and adjustment procedures. Measurement of vision, and correct recording procedures will also be covered.
Course: OP42  Prerequisite: OPB312
Credit Points: 4  Contact Hours: 2 per week

■ OPB412 VISUAL SCIENCE 4
Visual performance is examined with respect to its spatial and temporal characteristics. Perceptual aspects of vision as well as binocular and colour vision performance characteristics.
Course: OP42
Prerequisites: OPB312, PHB340, LSB415
Corequisites: OPB401, OPB405, OPB415
Credit Points: 12  Contact Hours: 5 per week

■ OPB415 OCULAR PHYSIOLOGY
All aspects of ocular physiology including the vegetative physiology of various ocular structures, visual neurophysiology and an introduction to electrophysiological techniques.
Course: OP42
Prerequisites: LSB230, LSB415, OPB312
Corequisites: OPB401, OPB405, OPB412
Credit Points: 12  Contact Hours: 4 per week

■ OPB504 CLINICAL OPTOMETRY 5
A continuation of OPB232 emphasising problems with spectacle lenses. Practical application of theory to ophthalmic dispensing in the laboratory.
Course: OP42  Prerequisites: OPB232, PHB340
Credit Points: 8  Contact Hours: 4 per week

■ OPB505 CLINICAL OPTOMETRY 5
The clinical application of techniques learnt in OPB309 (studied concurrently) in the management of patients presenting for eye examinations.
Course: OP42
Prerequisites: OPB412, OPB405, OPB401, OPB415
Corequisites: OPB505, OPB527, OPB520
Credit Points: 8  Contact Hours: 4 per week
The theory and practice of clinical procedures which are used in eye examinations.

Course: OP42
Prerequisites: OPB412, OPB401, OPB405, OPB415
Corequisites: OPB505, OPB520, OPB527
Credit Points: 18 Contact Hours: 9 per week

OPB520 PHARMACOLOGY

General pharmacokinetic and pharmacodynamic principles. Mechanisms of action and therapeutic applications of drugs used in the treatment of central and peripheral systemic diseases.

Course: OP42
Prerequisites: OPB401, OPB415, OPB412, LSB370
Corequisites: OPB505, OPB509, OPB527
Credit Points: 6 Contact Hours: 2 per week

OPB527 DISEASES OF THE EYE

The detection, diagnosis, referral and management of ocular disease. General pathological considerations. 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
Prerequisites: OPB327, OPB509, OPB305, OPB520
Co-requisites: OPB605, OPB608, OPB609, OPB617
Credit Points: 8 Contact Hours: 4 per week

OPB705 CLINICAL OPTOMETRY

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
Prerequisites: OPB505, OPB609
Corequisites: OPB709, OPB717, OPB750
Credit Points: 24 Contact Hours: 13 per week

OPB709 OPTOMETRY

Continuation of OPB609. Provides knowledge and understanding of the theory and clinical procedures involved in paediatric optometry, low vision, colour vision and aniseikonia.

Course: OP42
Prerequisites: OPB605, OPB609
Corequisites: OPB705, OPB717, OPB750
Credit Points: 10 Contact Hours: 5 per week

OPB717 CONTACT LENS STUDIES

A series of lectures and practical sessions in advanced aspects of contact lens practice. Topics include the physiological consequences of contact lens wear; management of contact lens patients; fitting of lenses for keratoconus, extended wear and presbyopia. Practical sessions provide training in advanced diagnostic and fitting techniques.

Course: OP42
Prerequisites: OPB605, OPB609
Corequisites: OPB705, OPB709, OPB730
Credit Points: 6 Contact Hours: 2 per week

OPB750 PROJECT

Students are required to undertake project work in Year 4, Semesters 1 and 2, working in groups of up to three on projects of their own choosing or on a topic chosen from a suggested list. Topics must be original. Students conduct a literature search (including a computer-based search in conjunction with a reference librarian), decide on the experimental hypotheses, plan and execute the experiment, analyse the results and write a report in manuscript form which is hoped is suitable for publication in the open literature. Oral presentations are given by each group to their peers, third-year students and staff, as part of a formal Year 4, Semester 2 colloquium.

Course: OP42
Corequisites: OPB709, MAB258, OPB705, OPB717
Credit Points: 10 Contact Hours: 2 per week

OPB803 OCCUPATIONAL/PUBLIC HEALTH OPTOMETRY

A course of study to introduce the basic concepts of eye safety and visual ergonomics. Content includes eye safety programs, occupational vision screening, legal aspects of eye safety, eye hazards; traumatic, radiation and chemical, eye protection, visual ergonomics and illumination engineering.

Course: OP42
Prerequisites: OPB709
Corequisites: OPB805, OPB750, OPB870
Credit Points: 6 Contact Hours: 2 per week

OPB805 CLINICAL OPTOMETRY

A continuation of OPB705. This unit places emphasis on the students' decision-making skills in the evalu-
opthalmic behaviour; relevant state and federal Acts; professional associations; types of practice; optometric practice and the law.

Course: OP42
Prerequisites: OPB705, OPB717, OPB709
Co-requisites: OPB750, OPB803, OPB810
Credit Points: 32 Contact Hours: 17 per week

**OPB810 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
Corequisites: OPB805, OPB803, OPB750
Credit Points: 4 Contact Hours: 2 per week

**OPN601 ADVANCED CONTACT LENS STUDES**
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**
Exploration of the techniques for the examination of the eye and visual function. Topics include: visual fields; static automated perimetry; screening versus threshold methods and their interpretation; modelling and trend analysis of visual field data; the visual field in glaucoma; contrast sensitivity function; alternative tests and their interpretation; clinical applications of contrast sensitivity function testing; colour vision; current research in congenital and acquired disorders; clinical tests, their application and interpretation; the design of colour vision screening procedures; entoptic phenomena and their application as diagnostic tools; advanced slit lamp biomicroscopy, gonioscopy, photography and fundus examination; other advanced methods of examination such as ultrasonography, dark adaptation, motion sensitivity, eye movement studies and electrophysiology.

Course: HL88
Credit Points: 12 Contact Hours: 3 per week

**OPN603 ADVANCED OCULAR PHARMACOLOGY**
Exploration of the use of drugs for the treatment of eye diseases. The unit does not seek to qualify optometrists to use these drugs, nor to impart the clinical skills or procedures necessary for such a scope of practice; instead, it will supply the background knowledge and understanding of current theoretical and practical research concepts in therapeutics so essential to complement this evolution in health care. Topics include: the anatomy, physiology and pathology of tissue changes in relevant eye diseases; neurohumoral transmission current concepts in receptor dynamics; the actions of systemic drugs; including antihypertensive, antikarhist, asthma, antidepressant and antiinflammatory 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

**OPN605 VISION REHABILITATION**
The epidemiology of visual impairment; the impact of visual impairment on individuals and families; the range of rehabilitation services available; assessment methods; preparation of individual rehabilitation programs for children and adults who are visually impaired.

Course: HL88
Credit Points: 12 Contact Hours: 3 per week

**PHA154 INTRODUCTORY PHYSICS**
An introduction to the basic concepts involved in the study of linear mechanics, ideal gases, liquids and solids, elasticity, surface tension, temperature and its measurement, heat content, heat transfer, reflection and refraction of light at plane surfaces, use of lenses in simple optical instruments, current, electricity, e.m.f. resistance, circuit analysis, heating effects, electrical measurements using moving coil galvanometers, potentiometers and Wheatstone bridge, magnetic field with simple applications. A series of laboratory experiments emphasises the above concepts.

Course: SC15
Credit Points: 8 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, ED50
Credit Points: 6 Contact Hours: 3 per week

**PHB111 PHYSICS 1B**
A course of lectures and laboratory work on AC and DC circuit theory, electronics, vibrations and waves, sound, geometrical optics.

Course: PH38
Prerequisites: SA – Senior Physics.
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: CH52, ED50, OP42, SC30
Prerequisites: SA Senior Physics.
Corequisites: PHB001 unless Senior Physics has been passed at SA or better.
Credit Points: 12 Contact Hours: 5 per week

**PHB134 ENGINEERING PHYSICS 1B**
A basic unit in the physics of waves and optics: moving and stationary waves in various media, interference of waves, beat acoustics and shock waves and measurement of sound; geometrical and physical optics including reflection, refraction, dispersion, interference and diffraction, polarisation, optical instruments, design and resolution, and photometry.

Courses: CE42, EE43, EE44, IF23, IF54, IF56, ME23, ME45, ME46
Credit Points: 8 Contact Hours: 3 per week

**PHB144 APPLIED SCIENCE FOR DESIGNERS 1**
Physics for environmental design: light and colour, heat and energy transfer, solar energy physics, sound and acoustics, electricity, magnetism and electronics for the built environment.

Courses: BN30, PU49
Credit Points: 6 Contact Hours: 3 per week

**PHB150 PHYSICS 1H**
Basic physical measurements, mechanics, heat, 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

**PHB172 PHYSICS FOR SURVEYORS**
Physics relating to modern surveying instrumentation; optics, physics of materials, physics of the atmosphere, electromagnetic and ultrasonic wave applications, topics in electronics.

Courses: IF54, IF55, PS47, PS48
Credit Points: 8 Contact Hours: 3 per week
PHB178 PRINCIPLES OF MEDICAL RADIATIONS
Principles of medical imaging and methods of detection, diagnosis and treatment of cancer.
Course: PH38
Credit Points: 12 Contact Hours: 6 per week

PHB222 PHYSICS 2
A course of lectures and laboratory work on mechanical properties of matter, fluids, electromagnetic fields, thermodynamics, quantum and radiation physics.
Courses: ED50, SC30
Prerequisites: SA – Senior Physics
Corequisites: PHB201 unless Senior Physics has been passed at SA or better.
Credit Points: 12 Contact Hours: 5 per week

PHB234 ENGINEERING PHYSICS 2B
The physics of heat and properties of matter, including the kinetic theory of gases, temperature scales and thermometers, heat and heat transfer, thermodynamics and the molecular properties of matter, electric charge and electric fields, Gauss's Law, electric potential, capacitance, magnetism and magnetic fields, electromagnetic induction, inductance.
Courses: EE43, EE44, IP23
Credit Points: 8 Contact Hours: 3 per week

PHB240 OPTICS
The principles of geometrical optics as they apply to rectilinear propagation, reflection and refraction for paraxial rays for monochromatic light for single surfaces, 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
Corequisite: 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 fluids, AC, DC circuit theory, with emphasis on electronics and instrumentation, fields, modern and nuclear physics.
Course: PU45
Credit Points: 8 Contact Hours: 4 per week

PHB263 PHYSICS 2E
Extension of PHB150 including fluids, AC, DC circuit theory, with emphasis on electronics and instrumentation, fields, modern and nuclear physics. Biomechanics.
Course: ED50, PU42, PU44, SC30
Credit Points: 12 Contact Hours: 6 per week

PHB272 RADIATION PHYSICS 1
Electrostatics, electromagnetism, the production of X-rays and their interaction with matter.
Course: PH38
Credit Points: 12 Contact Hours: 5 per week

PHB275 PROCESSING TECHNOLOGY
A study of the processes involved in the production of a visible image in radiography, including: latent image formation, processing, techniques and equipment relevant to radiography.
Course: PH38
Credit Points: 4 Contact Hours: 2 per week

PHB276 GENERAL RADIOGRAPHY 1
A program of lectures relating to radiography of the skeletal system.
Course: PH38
Prerequisites: LSB141, PHB178
Corequisites: LSB241, PHB278
Credit Points: 12 Contact Hours: 6 per week

PHB278 GENERAL RADIOGRAPHY PRACTICE 1
A program of practical sessions relating to radiography of the skeletal system.
Courses: PH38
Credit Points: 8 Contact Hours: 3 per week

PHB286 TREATMENT PLANNING 1
Introduction to the techniques of radiotherapy treatment planning.
Course: PH38
Prerequisite: PHB170
Credit Points: 12 Contact Hours: 6 per week

PHB287 MEGAVOLTAGE THERAPY 1
Introduction to the basic techniques of radiotherapy including beam direction and defining devices.
Course: PH38
Prerequisite: PHB178
Credit Points: 8 Contact Hours: 4 per week

PHB313 RADIOGRAPHIC IMAGE INTERPRETATION
Image formation in medical radiography, and the significance of diagnostic techniques and their image appearances in assessment of the lower extremity.
Course: PU45
Credit Points: 8 Contact Hours: 3 per week

PHB322 PHYSICS 3A
Laplace Transforms; SHM; damped harmonic motion, forced oscillations, coupled oscillations, wave transmission and reflection, wave systems, AC circuit analysis, power, network analysis, resonance, AC measurements.
Courses: ED50, SC30
Prerequisites: MAB222, PHB122, PHB222
Corequisite: MAB432
Credit Points: 12 Contact Hours: 5 per week

PHB332 PHYSICS 3B
Reviews two of the following: optics, electronics, materials, experimental method.
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: 7 per week

PHB342 PHYSICS 3C
See PHB332
Courses: ED50, SC30
Prerequisites: PHB122, PHB222 and (MAB212 or MAB222)
Credit Points: 12 Contact Hours: 5 per week

PHB373 NUCLEAR MEDICINE IMAGING 1
The principles, equipment and applications of nuclear medicine imaging.
Course: PH38
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: 4
  Contact Hours: 3 per week

- PHB376
  An extension of topics introduced in PHB276 to include more advanced techniques of skeletal radiography, ward and operating theatre radiography, and examinations using contrast media.
  Course: PH38
  Prerequisites: LSB241, PHB276, PHB278
  Corequisites: PHB376
  Credit Points: 8
  Contact Hours: 5 per week

- PHB378
  A program of practical sessions relating to topics introduced in PHB376.
  Course: PH38
  Prerequisites: LSB241, PHB276, PHB278
  Corequisites: PHB378
  Credit Points: 8
  Contact Hours: 5 per week

- PHB379 CLINICAL RADIOGRAPHY 1
  Clinical experiences in radiographic examinations introduced in PHB276 and PHB376. Experience is obtained in approved clinical departments.
  Course: PH38
  Prerequisites: LSB241, PHB276, PHB278
  Corequisites: PHB378
  Credit Points: 8
  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
  Prerequisites: LSB241, PHB276, PHB278
  Corequisites: PHB376
  Credit Points: 8
  Contact Hours: 2 per week

- PHB386 TREATMENT PLANNING 2
  An extension of the study of treatment planning introduced in PHB286 to the planning of complex techniques of photon therapy and electron therapy.
  Course: PH38
  Prerequisites: PHB286, PHB287, LSB241
  Credit Points: 12
  Contact Hours: 5 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: 12
  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, PHB286, PHB287
  Corequisite: PHB387
  Credit Points: 8
  Contact Hours: 4 per week

- PHB404 SAFETY TECHNOLOGY 2
  Vibration and noise, electrical hazards, sources and hazards of ionising and non-ionising radiation.
  Course: PU48
  Prerequisites: PHB263
  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, applied acoustics.
  Courses: ED50, SC30
  Prerequisites: PHB122, PHB222 and (MAB212 or MAB222)
  Credit Points: 12
  Contact Hours: 5 per week

- PHB432 PHYSICS 4B
  See PHB422.
  Courses: ED50, SC30
  Prerequisites: PHB122, PHB222 and (MAB212 or MAB222)
  Credit Points: 12
  Contact Hours: 5 per week

- PHB462 EXPERIMENTAL PHYSICS 4
  Experimental method and design; electronics; preparation and presentation of reports; group project.
  Course: SC30
  Prerequisites: At least two level 2 Physics units including electronics module.
  Credit Points: 12
  Contact Hours: 5 per week

- PHB471 RADIATION PHYSICS 2
  A study of the philosophy and protocol of radiation protection. The question of protection is treated in a manner which brings into perspective the details of protection dealt with in other units of the course.
  Courses: PH38, PH90
  Credit Points: 4
  Contact Hours: 2 per week

- PHB473 MEDICAL ULTRASOUND
  The physical principles and application of ultrasound.
  Courses: PH38, PH90
  Prerequisite: MAB151
  Credit Points: 8
  Contact Hours: 3 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
  Prerequisite: MAB151
  Credit Points: 8
  Contact Hours: 3 per week

- PHB476 SPECIAL PROCEDURES
  Specialised techniques of radiography: the skull, obstetrics, gynaecology, CNS and paediatrics.
  Course: PH38
  Prerequisites: PHB376, PHB378
  Credit Points: 12
  Contact Hours: 4 per week

- PHB479 CLINICAL RADIOGRAPHY 3
  Clinical experience in approved departments in radiographic examinations discussed in PHB376.
  Course: PH38
  Prerequisites: PHB379
  Corequisite: PHB476
  Credit Points: 8
  Contact Hours: 4 per week

- PHB485/1 PRINCIPLES OF TREATMENT 1
  The principles underlying the choice of treatment of cancer in specific sites including consideration of associated treatment.
  Course: PH38
  Prerequisites: PHB178, PHB389
  Credit Points: 4
  Contact Hours: 2 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
  Corequisite: PHB585
  Credit Points: 12
  Contact Hours: 5 per week

- PHB489 CLINICAL RADIOTHERAPY 3
  Clinical experiences in approved departments in techniques of megavoltage therapy.
  Course: PH38
  Prerequisites: PHB387, PHB389
  Corequisite: PHB487
  Credit Points: 8
  Contact Hours: 4 per week
• PHB500 ADVANCED IMAGING 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: 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, environmental and aerosol physics, and instrumentation, and may involve an extension of existing knowledge and technique or an introductory investigation into a new procedure.
Courses: ED50, SC30
Prerequisites: At least three third level Physics units.
Credit Points: 12 Contact Hours: 5 per week

• PHB522 APPLIED QUANTUM MECHANICS
Schrödinger equation, potential wells, hydrogen atom, angular momentum, perturbation theory, atomic and molecular spectra, Zeeman effects, line broadening phenomena, spectroscopy, lasers.
Course: SC30
Prerequisites: MAB432, MAB452, PHB322
Credit Points: 12 Contact Hours: 5 per week

• PHB532 ELECTROMAGNETIC FIELD THEORY
Course: SC30
Prerequisites: PHB322, MAB452
Credit Points: 12 Contact Hours: 5 per week

• PHB562 PHYSICAL METHODS OF ANALYSIS
X-ray diffraction; qualitative and quantitative analysis, texture and stress analysis. X-ray fluorescence. Electron microscopy; transmission electron microscopy, scanning electron microscopy, electron probe microanalysis. Theory, instrumentation and application of atomic emission and absorption spectroscopy, mass spectrometry and gas chromatography, infra-red and Raman spectroscopy, neutron activation analysis, nuclear magnetic resonance spectroscopy and surface analysis techniques (Auger electron spectroscopy, x-ray photoelectron spectroscopy, secondary ion mass spectrometry).
Courses: ED30, SC30
Prerequisite: PHB424 (Materials)
Credit Points: 12 Contact Hours: 5 per week

• PHB570 ADVANCED RADIOPHYSICS PRACTICE 1
The content of this unit includes topics from a number of areas and is designed to complement the particular background of persons undertaking the conversion program.
Course: PH90 Credit Points: 20

• PHB571 QUALITY ASSURANCE/IMAGE EVALUATION
The principles and techniques used in the quality assurance of medical imaging apparatus and ancillary equipment.
Course: PH90 Credit Points: 8 Contact Hours: 4 per week

• PHB572 IMAGE RECORDING & EVALUATION
Lectures and practical exercises on non-film image formation evaluation. Information theory.
Course: PH38 Credit Points: 4 Contact Hours: 2 per week

• PHB573 DIGITAL IMAGING MODALITIES
The principles, methods and applications of CT, digital radiography and MRI in medical imaging.
Courses: PH38, PH90
Credit Points: 8 Contact Hours: 2 per week

• PHB574 QUALITY ASSURANCE IN MEDICAL IMAGING
A study of the principles and techniques used in the quality assurance of medical imaging apparatus and ancillary equipment.
Course: PH38 Credit Points: 6 Contact Hours: 3 per week

• PHB575 MEDICAL RADIATION COMPUTING 2
Applications of computers in image processing and radiotherapy.
Course: PH38, PH90 Prerequisite: PHB475
Credit Points: 8 Contact Hours: 3 per week

• PHB576 ADVANCED RADIOPHYSICS 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
Corequisites: PHB578
Credit Points: 12 Contact Hours: 6 per week

• PHB578 IMAGE INTERPRETATION
Lectures and practical exercises on image interpretation including technical and diagnostic quality.
Courses: PH38, PH90 Credit Points: 4 Contact Hours: 2 per week

• 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, p-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 Prerequisite: PHB485
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
PHB587 ORTHOVOLTAGE & SUPPERFICIAL THERAPY

The specialised techniques of orthovoltage and superficial radiotherapy.

Course: PH38
Prerequisites: PHB487, PHB489, PHB482
Credit Points: 12 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
Corequisite: PHB587
Credit Points: 12 Contact Hours: 6 per week

PHB600 ADVANCED IMAGING PRACTICE 2

See PHB500
Course: PH90
Credit Points: 12 Contact Hours: 4 per week

PHB622 SOLID STATE PHYSICS

Crystal structures and bonding, reciprocal lattice, Brillouin zones; mechanical and thermal properties of solids; free electron and band theory; semiconductors; magnetic properties of solids; dielectric properties of materials; amorphous materials; superconductivity.

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 in recent years have been drawn from the following fields of interest: health and medical physics, optoelectronics, geophysics, environmental physics and materials science.

Courses: ED50, SC30
Prerequisites: At least 36 credit points in second level Physics units
Credit Points: 12 Contact Hours: 5 per week

PHB670 ADVANCED RADIOGRAPHIC PRACTICE 2

See PHB570
Course: PH90 Credit Points: 20

PHB671 RADIATION BIOLOGY

A study of the biological effects on ionising and 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: 12

PHB673 PROJECT

A supervised project involving either application of existing theoretical practical knowledge or a literature survey of a selected relevant topic.

Courses: PH38, PH90 Credit Points: 12

PHB674 RADIATION SAFETY & BIOLOGY

A study of the philosophy and protocol of radiation protection. The question of protection is treated in a manner which brings into perspective the details of protection dealt with in other units of the course. The biological effects of ionising and non-ionising radiation.

Courses: PH38, PH90 Credit Points: 8 Contact Hours: 4 per week

PHB676 ADVANCED RADIOGRAPHIC TECHNIQUE 2

An extension of topics in advanced radiographic technique introduced in PHB576 to include mammography, techniques for examination of the lymphatic system, and emerging techniques.

Course: PH38 Prerequisites: PHB576, PHB579
Credit Points: 8 Contact Hours: 5 per week

PHB679 CLINICAL RADIOGRAPHY 5

Clinical experience in advanced radiographic techniques.

Course: PH38, PH90 Prerequisites: PHB576, PHB579
Credit Points: 8 Contact Hours: 5 per week

PHB680 NUCLEAR MEDICINE IMAGING 2

Lectures, practical exercises and clinical experiences in nuclear medicine imaging. This unit expands on topics introduced in PHB573 and provides an in-depth study of nuclear medicine imaging techniques.

Courses: PH38, PH90 Prerequisite: PHB573
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 in-depth study of CT imaging techniques.

Courses: PH38, PH90 Prerequisite: PHB573
Credit Points: 10 Contact Hours: 5 per week

PHB683 ONCOLOGICAL IMAGING

Principles and techniques of medical imaging used in the detection of cancer: CT, MRI, U/S and NM.

Courses: PH38, PH90 Credit Points: 6 Contact Hours: 3 per week

PHB685 COMPUTER ASSISTED TREATMENT PLANNING 2

The use of computers in the planning of non-standard and complex radiotherapy treatment including arc and rotation techniques, irregular field techniques, three-dimensional plans.

Courses: PH38, PH90 Prerequisite: PHB585
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, and PHB685
Corequisite: PHB687  Credit Points: 8  Contact Hours: 4 per week

PHB705 PROJECT
A research project in which the student initiates and undertakes an investigation of some magnitude and originality. Topics are related to research interests in the Centre for Medical and Health Physics, or the School of Physics.
Course: SC60  Credit Points: 48

PHB706 QUANTUM MECHANICS
Linear vector space; operators; eigenvalues and eigenvectors; physical variables and Hermitian Operators; action principle; matrix mechanics; potential scattering; Born approximation; perturbation theory; many particle systems; introduction to superconductivity.
Course: SC60  Credit Points: 12  Contact Hours: 4 per week

PHB707 ADVANCED MATERIALS
Amorphous and nanocrystalline structures; ceramics; metastable interstitial nitrides; composites; superconducting ceramics; fabrication techniques; testing and analysis of advanced materials; shock processing.
Course: SC60  Credit Points: 12  Contact Hours: 4 per week

PHB708 ADVANCED TOPICS IN PHYSICS
No more than three topics are included. The content is determined by current research advances, availability of appropriate staff, visiting academics, etc. and may vary from year to year.
Course: SC60  Credit Points: 12  Contact Hours: 4 per week

PHB789 ADVANCED RADIOTHERAPEUTIC PRACTICE 1
The content of this unit includes topics from a number of areas and is designed to complement the particular background of persons undertaking the conversion program.
Course: PH90  Credit Points: 16

PHB889 ADVANCED RADIOTHERAPEUTIC PRACTICE 2
See PHB789
Course: PH90  Credit Points: 20

PHN112 MEDICAL IMAGING SCIENCE
Introduction to the ‘C’ programming language; programming techniques and algorithms; numerical analysis; and digital image processing.
Course: PH80, SC60  Credit Points: 12  Contact Hours: 4 per week

PHN113 RADIATION PHYSICS
Radioactivity and the interaction of ionising radiation with matter; applied radiation counting techniques; biological effects of ionising radiation.
Course: PH80, SC60  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; signal conditioning and signal conversion circuits for data acquisition.
Course: PH80, SC60  Credit Points: 12  Contact Hours: 4 per week

PHN155 ULTRASONIC EXAMINATION IN OBSTETRICS/GYNAECOLOGY
The normal and abnormal anatomy and functions related to gynaecology and obstetrics, the ultrasonic techniques used and the appearance of related images.

Course: PH80  Credit Points: 6  Contact Hours: 2 per week

PHN156 ULTRASONIC EXAMINATION OF THE ABDOMEN
A study of the techniques used in the ultrasonic examination of the abdomen including the appearance on the ultrasound image of normal abdominal anatomy and its alteration by pathological processes.
Course: PH80  Corequisite: PHN162  Credit Points: 6  Contact Hours: 2 per week

PHN162 PRINCIPLES OF MEDICAL ULTRASOUND
Principles of diagnostic ultrasound: physics of ultrasound; ultrasound equipment design and performance; image production and artefacts; general principles of scanning; patient and equipment care; use of coupling materials and acoustic windows and transducer selection.
Course: PH80  Credit Points: 12  Contact Hours: 4 per week

PHN171 ADVANCED ONCOLOGICAL IMAGING
Principles and applications of advanced imaging modalities applied to detect cancer; application of anatomic structures and tumour pathology to advanced imaging modalities; the principles and applications of portal imaging.
Course: PH80  Credit Points: 12  Contact Hours: 4 per week

PHN173 ADVANCED RADIOTHERAPY TECHNIQUE
Detailed study of brachytherapy equipment; technique and brachytherapy practice.
Course: PH80  Credit Points: 12  Contact Hours: 4 per week

PHN181 PRINCIPLES OF MEDICAL IMAGE PROCESSING
The principles of image data acquisition in digital imaging modalities including nuclear medicine; magnetic resonance; digital subtraction angiography and computed tomography; Convolution theorem; image enhancement techniques; image reconstruction; three-dimensional image presentation techniques.
Course: PH80  Credit Points: 6  Contact Hours: 2 per week

PHN182 COMPUTED TOMOGRAPHY
The principles of computed tomography including equipment and contrast media considerations; techniques of specific examination – head, neck, thorax, abdomen, pelvis, extremities, therapy considerations and new developments.
Course: PH80  Credit Points: 6  Contact Hours: 2 per week

PHN183 NUCLEAR MEDICINE
Preparation, dispensing and quality control of radiopharmaceuticals; legal requirements; structure and function of biochemicals; biorouting of radiopharmaceuticals; dose calculations; safety considerations.
Course: PH80  Credit Points: 12  Contact Hours: 4 per week

PHN184 BREAST IMAGING
Medical imaging of the breast; principles of mammographic and sonographic imaging; breast anatomy and physiology; pathological conditions affecting the breast and their mammographic and sonographic appearances; advanced mammographic techniques; mammographic and sonographic quality assurance.
Course: PH80  Credit Points: 12  Contact Hours: 4 per week
PHN197 CLINICAL ATTACHMENT 1
A supervised practical program carried out in an approved medical imaging department. Students are required to undertake specified clinical practice as applicable to their area of specialisation and meet minimum requirements of clinical hours and case scope and numbers.
Course: PH80  Credit Points: 12

PHN211 MEDICAL IMAGING
The physical principles involved in the production of the radiographic, ultrasonic, magnetic resonance and nuclear medicine images; quality control protocols.
Course: PH80, SC60  Credit Points: 12  Contact Hours: 4 per week

PHN212 RADIOThERAPY
Overview of the application of physics to radiotherapy; theoretical and practical aspects of the major topics in radiotherapy physics.
Course: PH80, SC60  Credit Points: 12  Contact Hours: 4 per week

PHN213 BIOMECHANICS/PHYSIOLOGICAL MEASUREMENT
The basic concepts and principles of measurement in dynamic physiological systems; principles of design, construction and operation of transducers, electrodes and other instrumentation.
Course: PH80  Credit Points: 12  Contact Hours: 4 per week

PHN214 HEALTH & OCCUPATIONAL PHYSICS
The philosophy, protocols and practices of safety in the medical and industrial fields; minimisation of hazards associated with radiation, electrical, mechanical and biological techniques.
Course: PH80, SC60  Credit Points: 12  Contact Hours: 4 per week

PHN216 MEDICAL & HEALTH TECHNOLOGY MANAGEMENT
The organisational culture and funding structures within the medical and health industry; basic management skills, the interface between health and technology management.
Course: PH80  Credit Points: 6  Contact Hours: 2 per week

PHN217 RESEARCH METHODOLOGY
Literature searches - manual and computer based; data collection; recording and analysis; introduction to medical statistics. Writing of research proposals, reports and scientific papers.
Course: PH80  Credit Points: 6  Contact Hours: 2 per week

PHN271 PRINCIPLES OF ONCOLOGY
Detailed study of radiation biology; principles of cancer treatment.
Course: PH80  Credit Points: 12  Contact Hours: 4 per week

PHN272 BRACHYThERAPY
Continuation of PHN173. The application of brachytherapy techniques to specific malignant disease sites.
Course: PH80  Prerequisite: PHN173  Corequisites: LSN159, PHN271  Credit Points: 6  Contact Hours: 2 per week

PHN273 ADVANCED COMPUTER PLANNING
Continuation of PHN173.
Course: PH80  Prerequisite: PHN173  Corequisites: PHN171, LSN159  Credit Points: 6  Contact Hours: 2 per week

PHN281 MAGNETIC RESONANCE IMAGING
Magnetic resonance imaging as applied to medical imaging; the principles, instrumentation and imaging sequencing parameters of MRI; image production, manipulation and storage; clinical MRI applications and techniques.
Course: PH80  Credit Points: 12  Contact Hours: 4 per week

PHN282 DIGITAL SUBTRACTION ANGIOGRAPHY
The principles, equipment and techniques used in digital subtraction angiography; use of contrast media; catheterisation techniques and immobilisation methods; specific examinations - cerebral, extra cerebral, cardiac, thoracic, abdominal, peripheral vessels.
Course: PH80  Credit Points: 6  Contact Hours: 2 per week

PHN301 MEDICAL DIAGNOSIS
The complementary nature of medical diagnostic techniques; the role, strengths and weaknesses of advanced medical imaging techniques in medical diagnosis.
Course: PH80  Credit Points: 6  Contact Hours: 2 per week

PHN302 CLINICAL ATTACHMENT 2
A period of additional supervised clinical practice designed to expand and refine skills acquired in PHN197.
Course: PH80  Prerequisite: PHN197  Credit Points: 12

PHN354 ULTRASONIC EXAMINATIONS OF THE HEAD, NECK & PERIPHERAL ORGANS
Ultrasound techniques used to examine the head, neck and peripheral organs and the ultrasonic appearance of normal and abnormal anatomy and pathology.
Course: PH80  Prerequisite: PHN197  Credit Points: 6  Contact Hours: 2 per week

PHN355 CARDIOVASCULAR ULTRASOUND
The principles and equipment requirements of ultrasound applications in the cardiovascular system; the clinical techniques and diagnostic criteria of such applications in particular those of the peripheral arterial and venous systems and the heart.
Course: PH80  Prerequisite: PHN197  Credit Points: 12  Contact Hours: 4 per week

PHN397 CLINICAL ATTACHMENT 3
A period of additional supervised clinical practice designed to expand and refine skills acquired in PHN197 and PHN297.
Course: PH80  Prerequisites: PHN197, PHN297  Credit Points: 12

PHN520 PROJECT (FT)
The project may take the form of research development, a design, a feasibility study, or the collation of scattered information on a given topic. The project can be undertaken externally under QUT supervision. Time spent on projects is one year for full-time and two years for part-time students.
Course: PH80  Credit Points: 96 (48 FT and 24 PT per semester)  Contact Hours: 18 (FT) and 9 (PT) per week

PHN540 PROJECT (PT)
The project may take the form of research development, a design, a feasibility study, or the collation of scattered information on a given topic. The project can be undertaken externally under QUT supervision. Time spent on projects is one year for full-time and two years for part-time students.
This unit provides a focused theoretical foundation for each student's research program and develops a high level of theoretical understanding of the physical principles underpinning the research.

Course: SC80
Credit Points: 8
Contact Hours: 18 (FT) and 9 (PT) per week

PHN715 ADVANCED TOPICS IN PHYSICS 1
This unit extends the student's understanding of advanced physical principles. Topics include: quantum mechanics, thermodynamics, and statistical mechanics. For students with a solid background in introductory physics.

Course: SC80
Credit Points: 8
Contact Hours: 18 (FT) and 9 (PT) per week

PHN716 ADVANCED TOPICS IN PHYSICS 2
This unit builds on the concepts developed in PHN715. It explores advanced topics in modern physics, including: solid state physics, nuclear physics, and quantum field theory. Prerequisite: PHN715.

Course: SC80
Credit Points: 8
Contact Hours: 18 (FT) and 9 (PT) per week

PHS021 INTRODUCTORY PHYSICS
This course provides an introduction to the basic principles of physics. Topics include: mechanics, electricity, magnetism, and wave phenomena. Prerequisite: HSC Physics or equivalent.

Course: SC80
Credit Points: 12
Contact Hours: 3 per week

PSB010 INTRODUCTORY DESIGN 1
This course introduces students to the fundamentals of design. It covers basic principles of design, including: form, function, and aesthetic considerations. Prerequisite: HSC Visual Arts or equivalent.

Course: SC80
Credit Points: 20
Contact Hours: 10 per week

PSB011 INTRODUCTORY DESIGN 2
This course builds on the concepts introduced in PSB010. It focuses on the development of design skills through project-based learning. Prerequisite: PSB010.

Course: SC80
Credit Points: 12
Contact Hours: 6 per week

PSB012 PLANNING & LANDSCAPE DESIGN 1
This course introduces students to the principles of planning and landscape design. It covers: site analysis, design concepts, and planning techniques. Prerequisite: PSB011.

Course: SC80
Credit Points: 20
Contact Hours: 10 per week

PSB013 PLANNING & LANDSCAPE DESIGN 2
This course continues the study of planning and landscape design. It explores: planning policies, land use strategies, and landscape design principles. Prerequisite: PSB012.

Course: SC80
Credit Points: 20
Contact Hours: 10 per week

PSB014 PLANNING & LANDSCAPE DESIGN 3
This course focuses on the design of urban areas. It covers: urban design principles, landscape architecture, and urban design software. Prerequisites: PSB012, PSB052.

Course: SC80
Credit Points: 20
Contact Hours: 6 per week

PSB015 PLANNING & LANDSCAPE DESIGN 4
This course expands on the skills developed in previous courses. It involves the design of complex urban environments, including: parks, gardens, and urban landscapes. Prerequisites: PSB013, PSB072, PSB058.

Course: SC80
Credit Points: 20
Contact Hours: 6 per week

PSB016 HISTORY OF THE BUILT ENVIRONMENT 1
This course introduces the development of the built environment from prehistory to the present. It covers: the evolution of urban settlements and their relationship to the natural environment.

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

PSB017 HISTORY OF THE BUILT ENVIRONMENT 2
This course continues the study of the history of the built environment. It explores: the development of urban landscapes and their impact on modern society.

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

PSB018 LAND USE GENERATION
This course examines the evolution of land use over time. It covers: the historical and contemporary issues surrounding land use planning.

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

PSB019 PLANTING DESIGN
This course focuses on the design of planting schemes. It covers: the selection and placement of plants, and the landscape design principles associated with planting.

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

PSB020 LAND USE POLICIES
This course introduces students to the principles of land use policy. It covers: the formulation and implementation of land use policies.

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

PSB021 CONSERVATION THEORY
This course covers the concepts of conservation and preservation. It explores: the principles of conservation and their application in the real world.

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

PSB032 ISSUES & ETHICS
This course explores the ethical and social issues surrounding environmental design. It covers: the role of design in shaping the built environment.

Course: BN30
Credit Points: 3
Contact Hours: 1 per week
application of major environmental problems and environmental awareness for urban form and policies. Environmental impacts of technological change. Contrasting attitudes towards conservation of natural, rural and urban environments. Concept of stewardship. Courses: BN30, PS47
Credit Points: 2 Contact Hours: 1 per week

■ PSB040 GRAPHIC COMMUNICATION
A practice-based program with specialisation, 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
Credit Points: 6 Contact Hours: 3 per week

■ PSB041 REPORT PREPARATION
Credit Points: 4 Contact Hours: 2 per week

■ PSB050 THE HUMAN ENVIRONMENT 1
See ARB141. Course: BN30
Credit Points: 2 Contact Hours: 1 per week

■ PSB051 THE HUMAN ENVIRONMENT 2
Basic research principles, perception, learning processes, motivation and problem solving. Communication, characteristics and dynamics of group and interpersonal interactions. Stress and anxiety management. The role of the self-concept and locus of control in transactions with the world in general. Course: BN30
Credit Points: 6 Contact Hours: 2 per week

■ PSB052 THE HUMAN ENVIRONMENT 3
Role of social, cultural, and historical variables in human-environment interactions. Social and cultural development of Australian urban environments. Theory: privacy, personal space, territoriality, environmental meaning and cognition, cognitive maps and wayfinding, intercultural and intracultural differences. Course: BN30
Credit Points: 6 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
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 phosphorous cycling. Introduction to human population and demographic trends. Distribution and trade in renewable and non-renewable resources; trends in the use of land; the city as an ecosystem; natural resource management and conservation. Courses: BN30, IF52, IF54, PS47
Credit Points: 4 Contact Hours: 2 per week

■ PSB056 APPLIED LAND SCIENCE FOR DESIGNERS
The foundations of a scientific understanding of the earth's surface. Topics include earth science and climatology for environmental design; land forms and their origins; introduction to the physical properties and behaviour of soils and rocks in relation to the design professions. Course: BN30
Credit Points: 4 Contact Hours: 1 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, and predict change and design form and function. Course: BN30
Credit Points: 8 Contact Hours: 2 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: 2 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 ur-
urban economics and the economic aspects of town planning issues; explores techniques for economic analysis suited to planning needs; illustrates interactions with employment, industry, population and urban studies at the economic interface.

Course: BN30
Credit Points: 5  Contact Hours: 2 per week

- **PSB063 HOUSING & COMMUNITY SERVICES**
  Population change and households formation; Housing conditions and preference surveys; housing issues and policies. The economics of the building and land development industries. The physical place of educational institutions in communities. Shared use of facilities. Location and space standards. Social and welfare services and their role in the community.
  
  Course: BN30, PS47
  Credit Points: 5  Contact Hours: 2 per week

- **PSB070 MAP & AIR PHOTO INTERPRETATION**
  Types, sources, uses and availability of maps and air photos; map reading, understanding of contours, land form and use of sections; methods and techniques of map production; introduction to photogrammetry and use of stereoscopes; introduction to remote sensing.
  
  Course: BN30
  Credit Points: 2  Contact Hours: 1 per week

- **PSB071 SITE MEASUREMENT**
  Introduction to basic equipment for site measurement: levels, staffs, chains and tapes, the prismatic compass, optical prism, clinometer, range poles and their use in horizontal and vertical measurement. Introduction to recording of field data and the preparation of measured site drawings from recorded data.
  
  Course: BN30
  Credit Points: 4  Contact Hours: 1 per week

- **PSB072 DESIGN SCIENCE**
  The quantity and quality of light and daylight in buildings; macro and micro climatic conditions; students are given the opportunity to conduct experiments and test models.
  
  Course: BN30
  Prerequisites: ARB140, CHB204, PHB144, PSB011, PSB056
  Credit Points: 4  Contact Hours: 2 per week

- **PSB073 COMPUTER TECHNIQUES**
  Development of understanding, awareness, and appreciation of computers as aids in data analysis and presentation, and of basic skills to input, manipulate and analyse output; for statistical analysis of data in decision making; the range of information systems; as a tool in landscape architecture and planning.
  
  Course: BN30
  Prerequisites: MAB195, MAB196
  Credit Points: 4  Contact Hours: 2 per week

- **PSB074 LAND DEVELOPMENT**
  The political, economic and physical contexts of land development; environmental services and utilities at the broad scale; the necessary design criteria for these services. Topics include: characteristics of land development projects; structure and operation of approval authorities; design considerations; impacts of electricity and gas systems on the natural environment; transport systems planning.
  
  Course: BN30
  Credit Points: 8  Contact Hours: 3 per week

- **PSB077 TRANSPORT PLANNING**
  Studies include alternative modes of transport; methods for predicting future urban transport patterns; techniques of transport planning and management. Movement and its alternative modes. The origin and destination approach to traffic management; interchange studies. Inter-urban traffic and regional transport planning. The relationship between land use and traffic generation.
  
  Courses: BN30
  Credit Points: 6  Contact Hours: 2 per week

- **PSB078 URBAN LAND DEVELOPMENT**
  Continuation of PLB456. 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  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

- **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**
  Management and cost of resources and materials for professional services, production of documents and implementation of projects. Techniques of land surface manipulation including construction of platforms for building, car parks, sports ovals, etc. and associated provision of surface drainage. Lectures are accompanied by skill development exercises in a grading workbook concluding with the preparation of two set grading plans.
  
  Course: BN30  Prerequisite: PSB071
  Credit Points: 4  Contact Hours: 2 per week

- **PSB280 ELECTIVE UNIT (LANDSCAPE ARCHITECTURE)**
  Final-year students are required to undertake a minimum of two hours of elective units. The elective unit may be taken in either semester or spread across both semesters depending on unit choice.
  
  Course: BN30  Prerequisites: Completion of years 1 and 2
  Credit Points: 4  Contact Hours: 2 per week

- **PSB303 ANALYSIS OF SPATIAL MEASUREMENT 1**
  Surveying measurements and their assessment, propagation of variances, pre-analysis of survey tasks, least squares adjustment methods for various functional and stochastic models.
  
  Courses: IF52, IF54, PS47
  Credit Points: 6  Contact Hours: 3 per week
PSB304 ANALYSIS OF SPATIAL MEASUREMENT 2
Generalised Least Squares, linearised observation equations approach to more extensive horizontal and 3-D networks including GPS data; reliability of solutions and design of networks; detection and treatment of systematic and gross errors.
Courses: IF54, PS47
Credit Points: 6 Contact Hours: 3 per week

PSB306 CARTOGRAPHY 1
Freehand drawing; field sketching; base materials; drawing instruments for survey drafting; 3-D representation; relief shading, contour interpolation, precision plotting; earth's coordinate system; construction of map projections; both manual and computer assisted; the 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 diazo.
Courses: IF54, PS47
Credit Points: 8 Contact Hours: 3 per week

PSB307 CARTOGRAPHY 2
Preparation of cadastral plans for survey actions over multiple amalgamations; building units and group titles; background tenures, mining tenures; detail survey plans; long and cross sections for engineering projects; digital data acquisition: types of digitisers and scanners; raster/vector conversions; digitising techniques; scanning problems; output devices; printers, plotters, scanner plotters, image setters.
Courses: IF52, IF54, PS47
Prerequisite: PSB306 Corequisites: PSB315, PSB327
Credit Points: 8 Contact Hours: 3 per week

PSB308 CARTOGRAPHY 3
Repographics: graphic arts photography; film characteristics; emulsion properties; printing methods: offset lithography; gravure letterpress; requirements of originals: type and typesetting layout design; paper technology: ink technology, colour separation techniques and procedures for map production; halftone photography for relief shading; desktop publishing; software capability and limitations.
Courses: IF52, IF54, PS47
Prerequisite: PSB307
Credit Points: 8 Contact Hours: 3 per week

PSB309 CARTOGRAPHY 4
Map design: map compilation, generalisation; compilation methods; data sources and evaluation; map design elements: composition; organisation; visual hierarchy; gestalt theory; thematic mapping; qualitative and quantitative pre-processing of spatial data; statistical methods; data classification: dot map; choropleth map; isarithmic mapping cartograms; colour and visual perception; colour systems; Munsell, Ostwald, CIE, colour in cartographic design.
Courses: IF54, PS47
Prerequisites: PSB308, PSB342
Credit Points: 8 Contact Hours: 3 per week

PSB310 GEODESY 1
Fundamentals of potential theory; the La Place operator and La Place equation; outline of spherical harmonics; the earth's gravity field, potential of the earth in spherical harmonics; Geometric and Physical of lower degree harmonics; mapping 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, ephemeris, error sources and error budgets; GPS receivers and software; GPS applications in point positioning, differential and kinematic mode; non-geodetic applications.
Courses: IF54, PS47
Prerequisites: PHB172, MEB221, PSB327, MAB498
Corequisites: PSB346, PSB329
Credit Points: 6 Contact Hours: 3 per week

PSB311 GEODESY 2
Further work on spherical and ellipsoidal harmonics; Gauss's and Green's formulae, Legendric's functions, Stokes' formula; determination of geoid and best fitting spheroids; satellite datum, transformation to geodetic datum; local and geocentric geodetic datum, mutual transformations; geodetic and satellite time systems; variations in gravity, gravity measurement, gravity and height anomalies; ocean and earth tides; other geodetic space techniques; VLBI, LRR, 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 Convention Terrestrial System.
Course: PS47
Prerequisite: PSB310
Credit Points: 6 Contact Hours: 3 per week

PSB315 LAND ADMINISTRATION 1
Introduction to the nature of politics, political concepts and culture, and public policy; constitutional development in terms of its English origins, evolution of colonial self-government, federalism and the Australian Constitution with particular reference to the effects on laws relating to land; the roles of parliament, executive government, the judiciary, the public service, local government; the exercise of political influence through pressure groups, political parties, the mass media, and issues of freedom of information; the purpose and aims of resource policy and the role of property rights in resource management.
Courses: IF54, PS47, SV34
Credit Points: 6 Contact Hours: 3 per week

PSB316 LAND ADMINISTRATION 2
An historical study of the development of land policy in Australia, highlighting the conflicts that have arisen from differing philosophies of land use and ownership; introduction to the elements of the law; the sources of the law, legal systems, the judicial hierarchy, rules of precedence, 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.
Courses: IF54, PS47
Credit Points: 8 Contact Hours: 3 per week

PSB317 LAND ADMINISTRATION 3
Courses: IF54, PS47
Prerequisite: PSB316
Credit Points: 8 Contact Hours: 3 per week

PSB318 LAND ADMINISTRATION 4
An introduction to rural and urban sociology; defining sociology, the ecological approach, urban social structure,
social patterns in urban society, deviance and urban living, rural social patterns and problems. Social aspects of land administration, the impact of industrialisation land urbanisation on rural societies, the country/city dichotomy; social problems of new town and large scale suburban subdivision and urban redevelopment.

Course: PS47  Prerequisites: PSB319, PSB323  Credit Points: 6  Contact Hours: 3 per week

PSB319 LAND ADMINISTRATION 5
The role of organisation, learning as a function of time, tendencies towards specialisation, the concept of synergy, problems of coordinating activities, the organisation of information and the significance of rule governed behaviour; economic, psychological, administrative, political and sociological perspectives on organisation; systems and cybernetic approaches to organisation; the individual as a system, social systems, and adaptive systems; applications in personal psychology and development, the business firm, professional and industry organisations, government and social controls, legal institutions and public policy, land information systems.

Course: PS47  Prerequisites: PSB315, PSB318, PSB323, PSB318  Credit Points: 6  Contact Hours: 3 per week

PSB320 LAND DEVELOPMENT PRACTICE 1
The history of land development, especially urban land development, in Australia and in Queensland. The effects of technology and social attitudes on urban land development; sustainable land development; the physical, economic and social determinants of land use; land development as an economic activity; economic and social benefits of land development controls; site analysis and assessment; opportunities and constraints, site evaluation, GIS application; the site in its broader context; spatial models; models for levels of activity and location of activities, optimising models.

Courses: PS47  Prerequisites: MAB498, PSB054, PSB324, PSB342  Corequisites: CEB464, PSB317  Credit Points: 8  Contact Hours: 3 per week

PSB321 LAND DEVELOPMENT PRACTICE 2
Elements of traffic planning, road capacities, road hierarchies; geometric layout of rural and urban roads; storm water and sewerage drainage for urban sub-divisions; subdivision design; lot geometry and orientation, road hierarchies and access; open space systems, radburn; provision and location of services; detailed treatment of development controls affecting subdivisions - negotiations, applications, appeals; preparations for Court, precedents.

Course: PS47  Prerequisites: CEB464, PSB317, PSB318 PSB320  Corequisite: CEB564  Credit Points: 8  Contact Hours: 3 per week

PSB322 LAND DEVELOPMENT PRACTICE 3
Further work on conventional and innovative subdivision design, integration of road and lot design with engineering works, especially drainage; subdivision designs and procedures for canal estates, industrial estates, group title, building units and other strata titles; costing and cash flow analysis for subdivision projects; feasibility studies, designing to a budget; preparation of a complete application for a local authority approval.

Course: PS47  Prerequisites: CEB564, PSB321, PSB324  Credit Points: 16  Contact Hours: 6 per week

PSB323 LAND STUDIES 1
Introduction to the nature and scope of economics as a discipline; analysis of factors affecting supply and demand for goods and services; market structure, market failure and rationale for government intervention into the operation of markets; land and natural resources, conservation and the environment, and the role of property rights and obligations; problems of industry location and spatial aspects of economics; consideration of economic efficiency, productivity, technological change and economic growth.

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

PSB324 LAND STUDIES 2
Concepts of value, purposes of valuation; general and statutory definitions; general principles of valuation: methods of valuation, preparation and presentation of valuation reports; valuation of improvements to land; valuation methods and techniques applicable to the valuation of residential, retail, commercial and industrial property; valuation of other rights in land, easements, licences, life interests, reversions, remainders and fractional interests; strata title; effect of statutory town planning schemes on land valuation; land valuation and land administration: legislation affecting land valuation practice including the Valuation of Land Acts, Valuers Registration Act, Auctioneer's Commission Agents Act, Sale of Land Act; Law reports on valuation cases; reports of recent Royal Commissions and Committees of Inquiry dealing with land valuation; duties and liabilities of a valuer.

Courses: IF54, PS47  Prerequisites: PSB316, PSB323, PSB328  Credit Points: 6  Contact Hours: 3 per week

PSB325 LAND SURVEYING 1
General introduction to the profession and to position fixing methods (absolute and relative). Elementary treatment of errors - systematic and random; accuracy and precision. Working from 'whole to part'; horizontal and vertical control, PSMs, level datum(s), BMs, MSL, AHD. Types and purposes of surveys; tapes and chains, formulae (sans derivations) for slope, temperature, sag and tension correction; chaining techniques; simple trigonometric and differential levelling; introductory principles and use of EDM; calculations; close and Bowditch adjustment; areas and volumes. Introduction to mapping; map numbering system used in Queensland; interpretation of cadastral and topographical maps; elementary aerial photography; simple geometry and stereoscopic measurement; interpretation and orientation in maps and field positions; outline of GPS and GIS technologies - opportunities and pitfalls.

Courses: IF54, PS47  Credit Points: 8  Contact Hours: 3 per week

PSB326 LAND SURVEYING 2
Calculations; missing element closes; horizontal curves (simple, compound, reverse); cutting off areas; 'Horner type' plane calculations; earth work estimation; errors; further work on random errors, measures of precision, errors and residuals; simple propagations; theory, tests and adjustments of optical theodolites; tacheometry, ODM, test and adjustments of tiling and automatic levels; reciprocal and precision levelling. Theory and practice of electronic theodolites and total stations; (Note: this requires coordination with Physics). Traversing and further non-Least Square adjustments; investigation and detail surveys. Longitudinal and cross-sections; theory and practice of barometric and hydrostatic levelling. Further work on contours and contouring.

Courses: IF54, PS47  Prerequisites: PSB325  Corequisites: 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. Courses: IF52, IF54, PS47
Credit Points: 10  Contact Hours: 3 per week

PSB328 LAND SURVEYING 4
Land Title Systems, Reimbursement: 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.
Courses: IF52, IF54, PS47
Prerequisites: PSB316, PSB325 Corequisite: PSB317
Credit Points: 6  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, trilateration and traversing. Precise levelling including the Princeton Test; satellite surveying using GPS technology; the undertaking of a geodetic survey in accordance with Surveyors Board requirements for Registration as a Surveyor.
Courses: IF54, PS47
Prerequisites: 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.
Courses: IF54, PS47
Credit Points: 8  Contact Hours: 3 per week

PSB331 LAND SURVEYING 7
The need for control in the use of resources; property rights as a method of resource control. Creating and maintaining knowledge of property rights; including issues concerned with parcel identifiers, land tenure, land boundaries, land subdivision, land registration, changing rights through statutory changes, attitudes and responses of the public; evidence of property rights, evolution from customary land tenures to land registration systems; factors leading to breakdown of systems. Effects of technological change on land use, evolving property rights and obligations, and on information technology on land use controls; the Mabo case.
Course: PS47
Credit Points: 8  Contact Hours: 3 per week

PSB332 LAND SURVEYING 8
Procedures of the various departments including but not confined to the Department of Lands, Resources Industries; plan registration, road closure, resumption surveys, conversion of mining tenure to freehold, conversion of pastoral tenures to freehold, exclusion 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. Tessel's Indicatrix Ellipses. Scale, scale in particular directions. Conditions for orthogonality, conformity, equivalence and equidistance. Selection of suitable projections; spherical projections. Principles for deriving projections on tangent and secant planes, conic and cylindrical surfaces in skew, normal or transverse aspects. The use of skew meridians; spheroidal projection. The polar stereographic, Lambert's polar conformal, Mercator and Transverse Mercator projections. The UTM system. Computations on the AMG line scale factor and (t-T) for short and long lines. Mutual transformation of polar and AMG coordinates.
Courses: IF54, PS47  Prerequisite: MAB497
Corequisites: PSB306, PSB346
Credit Points: 8  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 photogrammetric 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 description of sensors; processing of image grey levels; classification; mapping with space borne imagery.
Courses: IF54, PS47
Credit Points: 6  Contact Hours: 3 per week

PSB335 PHOTOGRAMMETRY 2
Basic mathematics of photogrammetry: coordinate systems; elements of interior and exterior orientation; image forming equations of the central projection; fundamental rotation matrices. Space resection of a single photograph; formation of a stereo model: on a stereoplotter; numerically; aerotriangulation: introduction; historical development; methods; instrumentation. Block triangulation with independent models: 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.
Courses: IF52, IF54, PS47
Prerequisites: MAB497, MAB498, PSB334
Prerequisites: MAB497, MAB498, PSB334
Corequisites: PSB304, MAB795
Credit Points: 8  Contact Hours: 3 per week

PSB336 PHOTOGRAMMETRY 3
Principles of plotting with a Stereoplotter: analogue plotters; analytical plotters. Rectification of photographs: perspective relationship between planes; differential rectification of photographs (orthophotos); data acquisition: digital elevation model; acquisition of height points; accuracy assessment; close range photogrammetry: introduction; overview; applications. Digital mapping and its relationship to geographic information systems and remote sensing: general process; attribute encoding of cartographic information; geographic information systems.
Courses: IF54, PS47
Prerequisites: MAB497, MAB498, PSB303, PSB334, PSB335
Credit Points: 8  Contact Hours: 3 per week

PSB337 PHOTOGRAMMETRY 4
Introduction to digital photogrammetry: digital photogrammetry; digital image fundamentals; all digital photogrammetry and remote sensing; image sam-
sampling and resampling; digital image correlation; theory of digital correlation; computational methods in digital correlation; some strategies of computation in correlation; correlation by least squares; multi-point and feature-based matching. Digital geometric processing of images: projective transformation equations; effect of terrain undulations; digital differential rectification; processing of image grey levels: image transformation; image enhancement; image restoration.

Course: PS47
Prerequisites: MAB498, MAB795, PSB303, PSB304, PSB335, PSB336
Credit Points: 6
Contact Hours: 3 per week

■ PSB339 PROFESSIONAL PRACTICE
Definitions and characteristics of a profession: principles of ethical behaviour, codes of ethics, the Code of Ethics of ISA; professionalism and statutory regulations; current issues in professionalism; professional organisations; professional heritage. The surveyor and statutory authorities. The Surveyors' Board, its purpose, powers, and functions; registration of surveyors. Business planning: market research and analysis, types of business structure, feasibility studies, cost-benefit analysis, financial requirements, business requirements: equipment insurance, staff recruitment, etc. Legal aspects of practice; contact; torts; business organisations: sole trader, partnership, company, joint venture, association and trusts, business names.

Course: IF54, PS47
Prerequisites: COB163, PSB317 and completion of at least 240 course credit points
Credit Points: 6
Contact Hours: 3 per week

■ 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; elements of image interpretation; image interpretation strategies; preparation for interpretation; satellite systems: history; current platforms. Image resolution: target variables; system variables; operating conditions; elementary image classification: informational classes and spectral classes; unsupervised classification; supervised classification; other classifications; applications in the earth sciences; land use and land cover remote sensing and geographic information systems.

Courses: IF54, PS47
Credit Points: 6
Contact Hours: 3 per week

■ PSB341 REMOTE SENSING 2
Review of aspects from PSB340; image interpretation: activities of image interpretation; elements of image interpretation: thematic and physical aspects of image interpretation; visual requirements of image interpretation; image processing and image classification; cartographic presentation of remote sensing data: fundamentals of cartographic presentation; approaches to cartographic presentation; rectification; applications environment; terrain and minerals: assessment and evaluation. Forest lands: inventory and assessment; water resources assessment; the marine environment. Weather and climate: measurement and analysis; crops and soils; urban environments: inventory and analysis; regional analysis.

Course: PS47
Prerequisite: PSB340
Credit Points: 8
Contact Hours: 3 per week

■ PSB342 SPATIAL INFORMATION SCIENCE 1
Introduction: what is spatial information science; maps and map analysis; raster SIS; vector SIS; digital elevation models; spatial data bases: spatial objects and data base models; relationships among spatial objects; data base concepts; data acquisition; sampling; data input; coordinate systems; map projections; transformations; georeferencing; Using spatial information systems: spatial analysis; output; graphic output design issues; modes of user/SIS interaction.

Courses: IF54, PS47
Credit Points: 8
Contact Hours: 3 per week

■ PSB343 SPATIAL INFORMATION SCIENCE 2
Coordinate systems and geocoding: common coordinate systems; map projections; transformations. Vector data structures and algorithms; storage of complex spatial objects; storage of lines; algorithms; polygon overlay operation; raster data structures and algorithms; raster storage; hierarchal data structures; quadtree algorithms and spatial indices; data structure and algorithms for surfaces, volumes and time; digital elevation models; spatial interpolation; temporal and 3-D data bases; data bases for spatial information systems; concepts; error modelling and data uncertainty; accuracy of spatial data bases; managing errors; line generalisation; visualisation: visualisation of spatial data; colour theory.

Course: IF54, PS47
Prerequisites: PSB306, PSB326, PSB334, PSB342
Credit Points: 8
Contact Hours: 3 per week

■ PSB344 SPATIAL INFORMATION SCIENCE 3
Spatial information science application areas: application areas; resource management; urban and rural planning; cadastral administration; facilities management; system planning; system planning overview; functional requirements analysis; system evaluation; benchmarking; system implementation: database creation; implementation issues; implementation strategies; other aspects: standards; legal issues; knowledge based techniques.

Course: IF54, PS47
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: IF54, PS47
Prerequisite: PSB344
Credit Points: 8
Contact Hours: 3 per week

■ PSB346 SPHEROIDAL COMPUTATIONS
Properties of the meridian ellipse. Radii of curvature, parallels and meridians. Spheroid as a geodetic reference surface, latitude, longitude, geoid separation and ellipsoidal height. Mutual conversion of geodetic and cartesian coordinates. Seven parameter coordinate transformations; least squares parameter estimation; Point-to-point computation on the spheroid, Robbin's long line and simplified formulae. Approximate methods; setting out parallels and meridians.

Course: IF54, PS47
Prerequisites: PSB340, PSB303
Credit Points: 6
Contact Hours: 3 per week

■ PSB347 TOPICS IN ENGINEERING SURVEYING
Deformation surveys, design and analysis for structures and subsidence. Large scale metrology, measurement
methods and geometric shape fitting; tunnelling surveys; high rise buildings.
Courses: PS47, SV34
Credit Points: 6 Contact Hours: 3 per week

■ PSB348 SEMINAR
Introduction to surveying, and the role of professional surveyors in society; the education and training process required for professional recognition; verbal and written communication; preparation of technical papers and reports in surveying and mapping; business correspondence; group work and study.
Courses: PS47, PS48
Credit Points: 8 Contact Hours: 3 per week

■ PSB902 URBAN PLANNING 1
Building upon preliminary economic knowledge, urban growth theory and constraints are outlined. Population and employment changes and their effect on employment, industry and residential location are identified together with relevant definition and analytical techniques. Introduction to economic base studies, activity rates and use of multipliers. The urban labour market, unemployment and labour supply are outlined. Theory and methods of industry location are developed: types and needs of industry, retailing, retail hierarchies; office activities, ten communication; preparation of technical papers and recording observations, 2-peg test. Linear measurement, bearings, traverses and traverse calculations. Setting out, correction to measurements. The theodolite, angles and bearings, traverses and traverse calculations. Setting out, contours and volumes. Maps. Cadastre. The practical sessions include levelling, measurement, traversing, setting out and use of construction instruments, checking verticality, etc.
Courses: CN41, CN43
Credit Points: 8 Contact Hours: 4 per week

■ PSN002 CONCENTRATION STUDIES A
Students, in conjunction with and with the approval of the Course Coordinator, elect studies to improve basic knowledge in identified areas of deficiency. Such study may be either in defined units offered outside the major or a specified reading/research program under tutorial guidance.
Courses: BN73, PS69
Credit Points: 4 Contact Hours: 2 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 or from other advanced studies in the University.
Courses: BN73, PS69
Credit Points: 8 Contact Hours: 4 per week

■ PSN004 APPLIED RESEARCH TECHNIQUES
Research techniques, including surveys of various types, statistical analysis, remote sensing and others.
Courses: BN73, PS69
Credit Points: 4 Contact Hours: 2 per week

■ PSN099 DISSERTATION
Provides the opportunity to pursue in depth and with innovation an issue or problem within the chosen focus of study. This may be achieved through emphasis on either design or process. The balance between theory and design application may vary; however, a dissertation which focuses on a specific design must be supported by a theoretical basis and analysis sufficient to define the problem and to explain how the design satisfies the conditions for a solution. Conversely, a dissertation which focuses on the development of a theory must illustrate the practical implications of the theory for the relevant classes of design.
Course: BN73
Credit Points: 24

■ PSN111 COMPARATIVE PLANNING THEORY
Roles of planners: statutory, pluralist, advocate, 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 and regional planning issues in Australia.
Courses: IF64, BN73
Credit Points: 6 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.
Courses: BN73, IF64
Credit Points: 12 Contact Hours: 3 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, gov-
expertise and the international community; the problems of rapid social and cultural change; the role of emigrants, expatriate urban and regional planners, local expertise and the international community; the problems of rapid social and cultural change; the role of emigrants, expatriate urban and regional planners, local

Seminar course focusing on the various social and economic contexts within which housing systems operate through a comparative transnational perspective of housing problems and the range and effectiveness of policies. The economic institutions, social goals, policy processes and actual outcomes of programs. The distribution of housing, the role of the market and the degree of intervention by public sector agencies. Case studies from free market environments, such as the USA; more regulated markets, such as those of Western Europe; and the rapidly changing circumstances of Eastern Europe.

Credit Points: 12 Contact Hours: 3 per week

PSN126 THE AUSTRALIAN HOUSING SYSTEM & POLICIES

Demographic, social and economic trends impacting housing markets in Australia, the evolution of post-World War II government housing policies, including public/social housing programs of states, the Commonwealth states Housing Agreement, and the community and local government programs. Access to affordable housing. Housing finance and subsidy schemes for home ownership, private rental and public housing. Housing management issues for public sector housing agencies and community housing schemes.

Credit Points: 12 Contact Hours: 3 per week

PSN201 MASTERS STUDIO

Students select a specific studio related to the proposed focus of study. Studios are organised on a thematic rather than a purely disciplinary basis and projects will involve members of several disciplines in schemes of varying scales. Advanced problem solving and interactive skills are required. Emphasis is placed on coordinated and managed group activity and resulting high levels of team output are expected. Professional aspects of project activities are supported by input on advanced aspects and concepts.

Course: IF64 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: 2 per week

PSN207 PREPARATORY SPECIALISATION 1

This unit will assist the student to explore their elected research area in greater breadth to assist the definition of the specialisation which will be developed in depth in the Specialisation and Research Project units; students will undertake study to develop a broad understanding of knowledge and skills related to the specific concentration and supporting the direction of the proposed Research Project topic. Study may be taken from professional level studies offered by the School, or units within the University or, where appropriate, through another university or through specialist studies offered by staff.

Course: PS71 Credit Points: 12 Contact Hours: 3 per week

PSN208 PREPARATORY SPECIALISATION 2

This unit will assist the student to explore their elected research area in greater breadth to assist the definition of the specialisation which will be developed in depth in the Specialisation and Research Project Units; students will undertake study to develop a broad understanding of knowledge and skills related to the specific concentration and supporting the direction of the proposed Research Project topic. Study may be taken from professional level studies offered by the School, or units within the University or, where appropriate, through another university or through specialist studies offered by staff.

Course: PS71 Credit Points: 12 Contact Hours: 3 per week

PSN209 PREPARATORY ELECTIVES 1

This unit allows development of understanding of the breadth of issues related to the elected specialisation; students will elect units from within professional level studies offered by the School, or the University or, where appropriate, from other universities and approved by the Head of School on the recommendation of the student's supervisor and which will give breadth within the student's specialisation.

Course: PS71 Credit Points: 12 Contact Hours: 3 per week

PSN210 PREPARATORY ELECTIVES 2

This unit allows development of understanding of the breadth of issues related to the elected specialisation; students will elect units from within professional level studies offered by the School, or the University or, where appropriate, from other universities and approved by the Head of School on the recommendation of the student's supervisor and which will give breadth within the student's specialisation.
This unit ensures the understanding and demonstration of relevant research skills and their effective application in a project of genuine substance and significance. Each student will undertake a Research Project in one of the elected specialisations: Landscape Design, Landscape Planning, Landscape Theory, Landscape Practice, Landscape Management. Each student will be assigned to a supervisor approved by the Course Coordinator. In general, the supervisor will provide guidance on the selection of topic, investigation and research, and preparation of the proposals and submission. Research Project I will incorporate advanced Information Retrieval Skills. The output will be a proposal for the specific Research Project which outlines the relevant base theory, and clearly communicates the potential extent of the Research Project.

Courses: PS70, PS71
Credit Points: 12
Contact Hours: 3 per week

- **PSN212 RESEARCH PROJECT 2**
  This unit ensures the understanding and demonstration of relevant research skills and their effective application in a project of genuine substance and significance. Each student will undertake a Research Project in one of the elected specialisations: Landscape Design, Landscape Planning, Landscape Theory, Landscape Practice, Landscape Management. Each student will be assigned to a supervisor approved by the Course Coordinator. In general, the supervisor will provide guidance on the selection of topic, investigation and research, and preparation of the proposals and submission. Research Project 2 requires the completion, communication and presentation of the research project to professional standard.

Courses: PS70, PS71
Credit Points: 12
Contact Hours: 3 per week

- **PSN213 SPECIALISATION**
  This unit ensures personalised study which will support the student's elected specialisation and contribute directly to the better understanding of the Research Project topic. Students will undertake study to develop specialisation knowledge and skills related to the specific concentration and supporting the direction of the proposed Research Project topic. Study may be taken from specific programs offered by the school or from advanced units within the University or, where appropriate, through another university or through specialist studies offered by staff.

Course: PS71
Credit Points: 12
Contact Hours: 4 per week

- **PSN214 ELECTIVE**
  This unit allows development of depth in understanding of issues related to the elected specialisation. The School may offer specific programs in areas of specialisation or students will elect units from within the University or, where appropriate, from other universities and approved by the Head of School on the recommendation of the student's supervisor and which will give breadth and/or depth within the student's specialisation.

Courses: PS70, PS71
Credit Points: 12
Contact Hours: 3 per week

- **PSN221 ADVANCED SPECIALISATION**
  The student develops further the approved specialised topic. Students may apply for approval for a specific Advanced Specialisation utilising units offered elsewhere in QUT or at another tertiary institution which must, for approval, be an extension of the specialisation studied in PS510 Specialisation in an earlier semester. The Advanced Specialisation is normally linked to the PSN212 Research Project II. Areas of specialisation are Regional and Local Development, Urban Housing and Community Development, Urban Design, Environmental and Resource Planning and Special Topic.

Course: PS70
Credit Points: 12
Contact Hours: 3 per week

- **PSN223 SPECIAL TOPICS IN PLANNING METHODS**
  The unit will offer support material appropriate to the specialisation the student is undertaking. For example, advanced computer models for economic and demographic forecasting; advanced Geographical Information Systems and advanced computer graphics; regional accounting and regional economic analysis; post-occupancy evaluation of the urban fabric; and possibly advanced presentation and communication techniques.

Course:
Credit Points: Contact Hours:

- **PS021 LANDSCAPE STUDIES 1**
  Landscape Graphics: presentation methods which reveal unique characteristics of particular design solution types; lettering and layout with particular reference to the variety of situations. These include perspective sketches, axonometric drawings, section and elevation drawings, quick model making. Introduction to Practice 1 (continues into Landscape Studies 3). The concept of professionalism and contemporary social expectation of the profession. Roles and ranges of employment in the profession, the professional institute, the powers, responsibilities, and activities of landscape architects in private and public employment, future directions, potential and job opportunities associated with landscape architecture. Written and oral communication techniques. Costing related to the professional services of promotion, obtaining commissions, allocating time and resources, and the use of consultants, including the techniques of cost control.

Courses: PS66, PS71
Credit Points: 12
Contact Hours: 6 per week

- **PS021 LANDSCAPE STUDIES 2**
  Landscape Heritage. History of form, content, influencing factors and implication of the creation and development of historically, regionally and religiously significant consciously designed landscapes throughout the world. Introduction to the concepts of conservation and preservation; structure of conservation legislation and responsibility in Australia. ICOMOS and the 'Burra' Charter. Landscape Ecology 1 surveys the plant kingdom, emphasising evolutionary trends and consideration of plant systematics and taxonomy as scientific approaches to coping with diversity; classification and the development and use of keys for identification. Life forms as an expression of environmental influences; ecological units in plants and animals; populations and population regulation; limiting factors; life cycles; pollination and dispersal.

Courses: PS66, PS71
Credit Points: 12
Contact Hours: 7 per week

- **PS022 LANDSCAPE STUDIES 3**
  Landscape Graphics 2: combined application of free-hand, drafting, monochromatic and colour techniques; selection of colour, theme and emphasis in graphic packages; realism, abstraction, and symbolism in landscape communication. Introduction to Practice 2: see Landscape Studies 1 for common synopsis.

Courses: PS66, PS71
Credit Points: 12
Contact Hours: 4 per week

- **PS023 LANDSCAPE STUDIES 4**
  Planting design: Introduces the operational influences on planting design (time and change, attitudes, and mean-
ings) plus design characteristics (structure and morphology) and criteria. Naturally and culturally derived methods and precedents will be studied. Horticultural issues of plant production and availability, industry standards, plant handling and establishment for all scales and types of planting, plant disorders and treatments, plant management and maintenance. Landscape ecology: the broad divisions of the earth in relation to climate and soils - biomes, formations, alliances, associations and societies; the ecosystem concept and its development and application historically and in Australia; biogeographic regions, provinces, land systems and land units; landscape structure and function; map air photo and remote sensed imagery; introduction to photogrammetry and use of stereoscopes.

Courses: PS66, PS71
Credit Points: 12
Contact Hours: 5 per week

Advanced Landscape Construction 1 (continues into Advanced Landscape Studies 3): theory and techniques for construction of platforms, land stabilisation, clearing and demolition, earth dams, lakes and flood levees, broadband stormwater drainage and control, sports facilities and swimming pools, irrigation systems. Associated engineering services and structures and the planning/schedule/control of civil engineering works. Types of documentation used for the implementation of landscape works including working drawings, specifications, bills and schedules of quantities, and methods of production. Emphasis is given to use of computer support to build graphical data and attribute data skills.

Landscape Management A: relationship between management and construction, management created/dependent landscapes and construction created landscapes.

Courses: PS66, PS71
Credit Points: 12
Contact Hours: 6 per week

Advanced Landscape Graphics: develop a variety of techniques of presentation graphics with particular reference to three-dimensional presentation in 'drawn' form. Quick techniques of animation additions to presentation drawings will be illustrated and emphasis on detail and understanding of design through section and perspective exploration will be encouraged.

Advanced Landscape Practice 1: introduction to research and quality control, principles of marketing, client analysis and promotion; forum discussions will be structured around topical issues as debates, panel discussions or seminars which may involve visiting specialist lecturers and/or participants.

Courses: PS66, PS71
Credit Points: 12
Contact Hours: 4 per week

Advanced Landscape Studies 2: see Advanced Landscape Construction 2. See Advanced Landscape Studies 3: Landscape Management: landscape assessment, including visual and scenic quality, environmental impact assessment components and an outline of current commonwealth, state and local government environmental assessment procedures and applications. Computer techniques: types of GIS, potential and problems, and current issues, computerised three-dimensional modelling. Advanced landscape ecology: structure of landscapes and impact of human settlement; interaction between adjacent elements, wind, soil and water; connectivity of habitats and the dispersal of plants and animals; landscape and vegetation dynamics, scales of change; wildlife and conservation strategies. Rural land use issues, systems, resource planning, rural land evaluation techniques, resource management issues and systems, resource inventories and evaluation techniques. Approaches to conflict resolution in resource management.

Courses: PS66, PS71
Credit Points: 12
Contact Hours: 7 per week


Courses: PS66, PS71
Credit Points: 12
Contact Hours: 7 per week

Advanced Landscape Studies 4: see Advanced Landscape Construction 2. See Advanced Landscape Studies 3: Landscape Management: landscape assessment, including visual and scenic quality, environmental impact assessment components and an outline of current commonwealth, state and local government environmental assessment procedures and applications. Computer techniques: types of GIS, potential and problems, and current issues, computerised three-dimensional modelling. Advanced landscape ecology: structure of landscapes and impact of human settlement; interaction between adjacent elements, wind, soil and water; connectivity of habitats and the dispersal of plants and animals; landscape and vegetation dynamics, scales of change; wildlife and conservation strategies. Rural land use issues, systems, resource planning, rural land evaluation techniques, resource management issues and systems, resource inventories and evaluation techniques. Approaches to conflict resolution in resource management.

Courses: PS66, PS71
Credit Points: 12
Contact Hours: 7 per week
and detailed design services, programming of implementation; user/function analysis and site capacity considerations and preparation of a project brief. A medium scale intensive/multiple use project which demands redesign and rehabilitation will be undertaken. Students will be expected to make time available outside studio hours to visit project site(s) and carry out such site surveys and such 'Client' interviews as are necessary to establish project briefs and carry out the design project.

Courses: PS66, PS71
Credit Points: 12 Contact Hours: 3 per week

■ PSP216 LANDSCAPE PLANNING
The theoretical framework of landscape planning: relevant theories and methods and techniques for application in the landscape planning process. Studies will include medium to large scale projects involving a range of biophysical, cultural and visual issues with a relatively high degree of complexity. The focus will be on assessment and evaluation of related landscape attributes and issues with emphasis on landscape management options in the form of policies, guidelines and implementation strategies.

Courses: PS66, PS71
Credit Points: 12 Contact Hours: 4 per week

■ PSP218 ADVANCED LANDSCAPE DESIGN
Landscape design problems of increased scope, complexity and constraint with particular reference to a specific and relevant site. Emphasis on resolution of design at a broad scale, contextual concept based on a chosen theme, through to a detailed resolution of a particular area.

Courses: PS66, PS71
Credit Points: 12 Contact Hours: 4 per week

■ PSP219 ADVANCED LANDSCAPE DESIGN
Landscape design problems of increased scope, complexity and constraint with particular reference to a specific and relevant site. Emphasis on resolution of design at a broad scale, contextual concept based on a chosen theme, through to a detailed resolution of a particular area.

Courses: PS66, PS71
Credit Points: 12 Contact Hours: 4 per week

■ PSP251 LANDSCAPE CONSTRUCTION 1
Reading: understanding of contours, landform and use of sections. Introduction to measurement, recording of field data and preparation of measured site drawings. Terms; types of structures and loadings. Land grading: manual techniques of land surface manipulation: design of platforms for buildings, car parks, sports ovals, and other features and the associated provision of surface drainage. Development of understanding of the properties of common construction materials and their application in landscape construction. Techniques for preparation of construction documents.

Courses: PS66, PS71
Credit Points: 12 Contact Hours: 4 per week

■ PSP252 LANDSCAPE CONSTRUCTION 2
Reading: understanding of contours, landform and use of sections. Introduction to measurement, recording of field data and preparation of measured site drawings. Terms; types of structures and loadings. Land grading: manual techniques of land surface manipulation: design of platforms for buildings, car parks, sports ovals and other features and the associated provision of surface drainage. Development of understanding of the properties of common construction materials and their application in landscape construction. Techniques for preparation of construction documents.

Courses: PS66, PS71
Credit Points: 12 Contact Hours: 3 per week

■ PSP311 PROFESSIONAL PRACTICE MANAGEMENT
Business communication; oral communication, interviews, meetings, workshops and seminar presentations; office management; small business law; trade practice, contract, taxation, employment; workplace and safety legislation; professional ethics, professional bodies, Surveyors Act and Regulations, disciplinary procedures, relationships, clients and marketing; survey integration; aspects of change; roles of barrister and solicitor; brief for court appearance; expert witness; government agencies.

Course: PS68
Credit Points: 12 Contact Hours: 9 per week

■ PSP312 SURVEY COMPUTING & PROCESSING
DOS operating system and computer programming; word processing, project management, spreadsheets; programmable calculators for field use; surveying and drafting packages; management and technical applications.

Course: PS68
Credit Points: 8 Contact Hours: 6 per week

■ PSP313 SURVEY PROJECT MANAGEMENT
Quality assurance; client requirements, submission, execution and wrap-up; complex projects, involving resources, costs and timing; network methods; project management software; time costing, hourly rates and chargeable time; involvement with clients and other consultants; project team building; project specifications; technical requirements field methods, booking forms and equipment; overseas projects.

Course: PS68
Credit Points: 8 Contact Hours: 6 per week

■ PSP314 BOUNDARY DEFINITION SURVEYS
1 Land registration requirements; cadastral history, field procedures and records; reinstatement theory and practice related to urban and rural boundaries; field survey work involving the redifinition of urban and rural boundaries; office reinstatement exercises of increasing complexity to develop the necessary skills in assessing various types of survey problems; office completion of project work, including plan preparation using appropriate computer technology.

Course: PS68
Credit Points: 12 Contact Hours: 9 per week

■ PSP315 PROPERTY DEVELOPMENT SURVEYS
Legislation; urban and rural subdivision design and requirements; procedures involved with rezoning and subdivision applications; building units and group titles developments; multiple use development.

Course: PS68
Credit Points: 8 Contact Hours: 6 per week

■ PSP321 SPATIAL INFORMATION SYSTEMS
Assessment of maps and aerial photographs as data sources; mapping specifications; planning mapping projects; aerial photography, flight planning and costing; ground control requirements, including placement of ground targets and photo identification of ground points; aerial triangulation, stereo plotting, map production and digital data aspects; planning, costing and preparation of specifications for comprehensive mapping task; GPS theory and practical application; 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 defi-
nition, preparation of specifications including field methodology, documentation requirements of field records, determination and assessment of results; management of engineering survey projects, including costing, submissions, working with other professionals, dealing with on-site variations; long-time 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**

  Details surveying; methods, equipment, data requirements and data transfer; specifications and estimate of costs; field detail survey; processing of field data, report and plan presentation; types of construction and building control surveys; preparation of plans and specifications; building construction site inspection; instructions, documentation and communication with contractors; high precision survey and error adjustment techniques involved with construction and building control surveys; construction site set out calculations.

  Course: PS68
  Credit Points: 8  Contact Hours: 6 per week

- **PSP324 BOUNDARY DEFINITION SURVEYS 2**

  Complex and difficult reinstatement exercises; field survey project work associated with difficult boundary definition; field survey project work associated with boundary definition for easement surveys and mining lease surveys.

  Course: PS68
  Credit Points: 12  Contact Hours: 9 per week

- **PSP325 PROPERTY MANAGEMENT SURVEYS**

  Requirements for survey and registration of plans in various government Acts relating to surveying; easements for transmission lines; easement surveys; dealing with client, proposal, costing and submission, field survey and plan preparation; road closures, location certificates and lease surveys; cadastral survey problem areas.

  Course: PS68
  Credit Points: 8  Contact Hours: 6 per week

- **PSP401 URBAN DESIGN ANALYSIS STUDIO**

  This unit emphasises the development of skills in analysis related to the urban design process and adequate communication of the results.

  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 is 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 is incorporated into this unit.

  Courses: BN73, PS69
  Credit Points: 12  Contact Hours: 3 per week

- **PSP405 URBAN DESIGN FIELD STUDIES**

  This unit consists of a field trip of approximately ten days' duration. Visits to successful and unsuccessful examples of urban design and to design offices in the eastern states and the Australian Capital Territory. Students analyse existing and proposed examples in the context of their original design criteria including cultural, social, political, economic and physical aspects to understand the applicable design rules. Examples are reviewed through site visits, discussion and seminars with designers and users.

  Courses: BN73, PS69
  Credit Points: 4  Contact Hours: 10 days

- **PSP411 ENVIRONMENTAL PSYCHOLOGY**

  The social and cultural development of Australian urban environments, with particular reference to the local built environment. The study of human functioning in urban environments. Theory: privacy, person space, territoriality, environmental meaning and cognition, cognitive ways and wayfinding, intercultural and intracultural differences. Application via examination and analysis of an urban environment or an artefact with respect to its sociocultural function.

  Courses: BN73, PS69
  Credit Points: 4  Contact Hours: 2 per week

- **PSP416 COMPUTER-AIDED DATA ANALYSIS**

  The development of skills and application of computer aided data analysis in design. 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 writers and schools.

  Courses: BN73, PS69
  Credit Points: 4  Contact Hours: 1 per week

- **PSP432 URBAN LANDSCAPE**

  The city as a landscape unit, examples of city/site relat-
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

■ 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 systems. 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 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 (e.g. Group Title, Heritage Acts, pedestrian malls) on the urban design process.

Courses: BN73, PS69
Credit Points: 4
Contact Hours: 1 per week

■ PSP501 ENVIRONMENTAL PLANNING & ASSESSMENT
Applied studies in geology and geomorphology, climate, soils and hydrology, the broad soil and plant community associations. Sustainability and urban planning. Environmental economics. Land capability. Environmental ethics. Environmental impact studies and assessment techniques, including social impact assessment. Public and environmental policy. Approaches to land tenure and beliefs about land. Relevant environmental policy development and alternative strategies at national, state and local levels.

Courses: PS67, PS70
Credit Points: 12
Contact Hours: 3 per week

■ PSP502 ECONOMIC & SOCIAL FOUNDATIONS OF PLANNING
The historical development of planning in a social context. Introduction to social theory. Planning for social benefit. Urban economics; the economics of community and local development. Local labour markets. Structural economic change and the global economy. Public interest and individual preferences. Australian government and urban policy development and alternatives at national, state and local level.

Courses: PS67, PS70
Credit Points: 12
Contact Hours: 3 per week

■ PSP503 PLANNING & RESEARCH METHODS
The structure, methodological context and elements of the planning process. The role of objectives, information, interpretation, policy formulation, generation of alternatives, evaluation and monitoring. The use of quantitative methods and reasoning. Qualitative research, including case studies. Survey design, administration and analysis. Use of maps and other cartographic resources. Computer-based methods of analysis and presentation of data. Research design, including writing of research proposals, oral and written presentation.

Courses: PS67, PS70
Credit Points: 12
Contact Hours: 3 per week

■ PSP504 URBAN SYSTEMS & INFRASTRUCTURE

Courses: PS67, PS70
Credit Points: 12
Contact Hours: 3 per week

■ PSP505 PLANNING IN SOCIETY
Major issues in contemporary society, including gender, multiculturalism, etc.; public policies in Australia, relating to employment, housing, urban and regional development, health, income and education. Public participation and community action; planning aid and advocacy planning. Conflict management, resolution and negotiation. Social impact assessment.

Courses: PS67, PS70
Credit Points: 12
Contact Hours: 3 per week

■ PSP506 PLANNING THEORY & ETHICS
Major contributions to planning and decision-making theory, including the rational comprehensive, incrementalist, mixed scanning and other models. Critical and political economy theory and other theories for planning. The nature and role of a professional and professionalism; codes of practice and ethics; the role of the professional planner in the private and public practice; situations of professional conflict; the role of the expert witness.

Courses: PS67, PS70
Credit Points: 12
Contact Hours: 3 per week

■ PSP507 PLANNING PROCEDURES & LAW
Planning law and administration in Queensland and Australia, with international comparisons. Corporate and...
strategic planning, project management. Planning communication and negotiation skills, particularly in implementing planning proposals. Evaluation of planning projects and their outcomes. Community and local economic development.

Courses: PS67, PS70
Credit Points: 12
Contact Hours: 3 per week

PS508 PLANNING PRACTICE I
The core of this unit is a problem-solving group project set in an inner metropolitan or small town location, normally undertaken in conjunction with local communities and councils. The subdivision exercise may be included as part of the major project or as a separate scheme. This unit offers scope for the application of knowledge and skills in the fields of site analysis and planning and land development. Lectures on these and other related topics provide relevant inputs to this practice-oriented unit. Lectures will include relevant aspects of planning legislation. The unit will include examples of recent best practice in the planning field (e.g. through the Commonwealth Local Approval Review Process review or related programs).

Courses: PS67, PS70
Credit Points: 12
Contact Hours: 3 per week

PS509 REGIONAL & METROPOLITAN POLICY
Theories of regional and metropolitan development. Regional analysis methods, including input-output models, economic base studies and the like. The impact of the Australian federal system and inter-governmental relations on the ways in which metropolitan and other regions are planned and governed. Regional and metropolitan policies and management, including coordinating mechanisms. Regional and metropolitan management models and comparisons. The role of statutory authorities. Planning for rural and regional areas. Principles of regional environmental and land use planning and approaches such as integrated catchment management.

Courses: PS67, PS70
Credit Points: 12
Contact Hours: 3 per week

PS510 SPECIALISATION
The student undertakes a supervised program of study in an approved selected field. The student may choose from a limited list of approved fields, depending on staff expertise and availability. Students may apply for approval for a specific specialisation utilising units offered elsewhere in the QUT or at another tertiary institution which must, for approval, also lead on to an Advanced Specialisation in a later semester. Students will normally choose a specialisation which relates to their intended Research Project. Areas of Specialisation are Regional and Local Development, Urban Housing and Community Development, Urban Design, Environmental and Resource Planning, and Special Topic.

Courses: PS67, PS70
Credit Points: 12
Contact Hours: 3 per week

PS512 PLANNING PRACTICE II
The core of this unit is a problem-solving group project focusing on a planning region which is generally larger and more complex than a single town, such as a town and its hinterland, a metropolitan region or a functional rural region. This unit offers scope for the application of knowledge and skills gained in other units, including PS509 Regional and Metropolitan Policy. Relevant aspects of planning legislation will be included.

Courses: PS67, PS70
Credit Points: 12
Contact Hours: 3 per week

PS513 FIELD TRIP
The field trip will consist of a structured, staff-guided visit of about one week to one or more of a number of appropriate locations, including non-metropolitan areas of Queensland, other metropolitan centres in Australia, and possibly overseas.

Courses: PS67, PS70
Credit Points: 0
Contact Hours: 1 week

PST901 ENGINEERING SURVEYING
Fundamental survey concepts, coordinate systems, differential and simple ingometric levelling, angular measurements; bearing and azimuth; linear measurements by steel tape and stadia.

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

PUB109 INTRODUCTION TO ENVIRONMENTAL HEALTH
Students are introduced to a brief history of environmental health in Queensland. The current issues of environmental health within the public health agencies at all levels of government and the principal public health legislation in this state are reviewed. Students develop an understanding of the complexity of environmental systems, the effects of pollutants on such systems and the interdisciplinary approaches needed to address these problems.

Courses: NS40, NS48
Credit Points: 8
Contact Hours: 3 per week

PUB130 AUSTRALIAN HEALTH INDUSTRY
A broad overview of the systems of health care in Australia and their methods of operation. The public and private health and medical care sectors are discussed. The political environment, health care institutions, community health, public health, and the problems of coordination and integration of health services are also studied.

Course: PU48
Credit Points: 12
Contact Hours: 3 per week

PUB207 INTRODUCTION TO ENVIRONMENTAL HEALTH
A brief history of environmental health in Queensland; the current role of environmental health officers within the public health agencies at all levels of government and the principal public health legislation in this state; development of an understanding of introductory law and environmental law, the complexity of environmental systems, the effects of pollutants on such systems and the interdisciplinary approaches needed to address these problems; aspects of professional communications and report writing.

Course: PU42
Credit Points: 12
Contact Hours: 4 per week

PUB210 OCCUPATIONAL HEALTH & SAFETY I
The basic concepts of occupational health and safety, such that they can identify health and safety problems in the workplace; strategies for dealing with such problems, and the legislation, government agencies and health personnel associated with the working environment. Topics covered include the physical, chemical and biological working environments and temporal work patterns.

Courses: ME46, PU42
Credit Points: 8
Contact Hours: 4 per week

PUB211 OCCUPATIONAL HEALTH & SAFETY 2
Develops further the principles covered in PUB210 and PUB212 and highlights their practical application to the workplace. Students also develop knowledge and skills associated with the actual measurement of the physical and chemical working environment, physiological effects on humans in the workplace and evaluation of the data collected.
COURSES: ME46, PU42, PU44
Prerequisite: PUB210 or PUB212
Credit Points: 8  Contact Hours: 4 per week

■ PUB212 OCCUPATIONAL HEALTH & SAFETY I
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: 5 per week

■ PUB220 MEDICAL TERMINOLOGY
Exploration of the language of medicine; analyses medical terms into Latin and Greek word roots, prefixes, suffixes and combining forms. Medical terms which relate to specific body systems are defined, spelled and pronounced accurately; common abbreviations and symbols used in medicine are identified; abstracts from patient records are explained and interpreted in non-technical language.
Course: PU48
Credit Points: 12  Contact Hours: 3 per week

■ PUB233 INFORMATION, EDUCATION & COMMUNICATION FOR HEALTH
A study of the processes of communication in the health fields. It covers person-to-person communication such as patient-professional communication; communication in small groups; public education for health; diffusion and adoption of new health-related behaviours; the role of information; the use of mass media; communication within health organisations.
Courses: HM42, PU48
Credit Points: 12  Contact Hours: 3 per week

■ PUB241 HEALTH STUDIES I
Overview of 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. These include addressing prevention of major risk factors and developing a commitment to promoting healthy lifestyles.
Course: ED41
Credit Points: 8  Contact Hours: 3 per week

■ PUB251 INTRODUCTION TO PUBLIC HEALTH
Introduction to the philosophy and approach of public health; the traditional public health process; the multidisciplinary nature of public health; health policy and its impact on public health; some recent reformulations of traditional public health approaches including: health promotion, intersectoral action for health and healthy public policy. The role of public health in Australia and overseas, its main components and some of the constraints faced by public health.
Course: PU48
Credit Points: 12  Contact Hours: 3 per week

■ PUB276 HOME ECONOMICS I
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: ME49
Credit Points: 12  Contact Hours: 4 per week

■ PUB299 HEALTH INFORMATION MANAGEMENT I
An introduction to the principles of health record management and their application in hospitals; presents an overview of the interrelationships between the various processes of the medical record department and functionally related areas in health care facilities. Topics include: the structure, format and use of medical records, the function of medical record departments, quantitative analysis of medical records, and health information collection and retrieval systems, both manual and computerised.
Course: PU48
Credit Points: 12  Contact Hours: 4 per week

■ PUB300 POLLUTION SCIENCE I
The causes, effects, control measures, standards and legislation relating to land contamination and solid waste management.
Course: PUB42  Prerequisites: CHB242, PHB250
Credit Points: 8  Contact Hours: 4 per week

■ PUB301 ENVIRONMENT PROTECTION 2
The causes, effects, control measures, standards, legislation and management strategies relating to pollution and environmental protection.
Course: PUB42  Prerequisites: PUB207, CHB242, PHB263
Credit Points: 8  Contact Hours: 4 per week

■ PUB302 PODIATRIC MEDICINE I
The health, social and economic implications of podiatric care in the general population with particular reference to specialised groups, e.g. children, diabetics, the aged and sports patients. It also provides foundation studies essential to the preclinical student in the diagnosis and treatment of conditions commonly manifest in the foot.
Course: PU45  Corequisite: 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: PUB302
Corequisite: PUB303
Credit Points: 12  Contact Hours: 6 per week

■ PUB304 PHYSICAL MEDICINE
Introduction to a wide range of diagnostic and physical treatment modalities used in modern podiatric practice. On completion, students should be able to understand the uses, applications, contraindications and limitations of each modality studied in direct connection with ongoing clinical studies and the theoretical component of podiatric medicine lectures.
Course: PU45  Prerequisite: LSB451
Corequisite: PUB410, PUB504
Credit Points: 8  Contact Hours: 3 per week

■ PUB306 PHARMACOLOGY
Designed to ensure that students understand basic drug therapies their patients may be using, the groups of drugs used for specific diseases and their application and rel-
evance to podiatry and clinical podiatry. Emphasis is placed on drug groups and their use for specific disease, rather than proprietary brands. Students learn to recognise the drug groups and know the system they are acting on in the body. In addition, differentiation between the different groups within one group of systemic drugs and why they are used for a condition is emphasised.

Course: PU45  Prerequisites: CHB242 or CHB289  Corequisite: LSB371  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 is examined.

Courses: EDS0, EDS1  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: EDS0  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 optimisation of well-being.

Course: EDS0  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: EDS0  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: EDS0  Credit Points: 12  Contact Hours: 6 per week

■ PUB322 HOME ECONOMICS CURRICULUM STUDIES 2
Encourages students to make independent judgements about home economics curriculum decision-making, within syllabus guidelines and broader systems policies concomitant with national and international trends in education and society. Students are given the opportunity to explore current issues and emerging and future trends in home economics and to develop a confident approach to school-based curriculum development. Advanced teaching strategies and current assessment procedures are developed.

Courses: EDS0, EDS4  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: EDS0  Credit Points: 12  Contact Hours: 4 per week

■ PUB325 SHELTER STUDIES
Critical aspects of shelter as a fulfilment of people’s basic needs; design, technology and legislation linked to decisions affecting provision of shelter for the differing needs of individuals and families.

Course: EDS0  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: EDS0, EDS1  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: EDS0  Prerequisites: SSB922, PUB327  Corequisite: HMB305  Credit Points: 12  Contact Hours: 3 per week

■ PUB331 SHELTER STUDIES 2
The linking of human physical and psychosocial needs, environmental and technological issues and design aspects to the effective provision of shelter, with emphasis being placed on the development of advanced skills and knowledge; environmental and technological aspects which have implications on shelter design for the wellbeing of the individual and families; effective design to accommodate changing family structures; legislative updates.

Courses: PUB49, EDS0  Prerequisites: PUB325 or PUB372  Credit Points: 12  Contact Hours: 4 per week

■ PUB334 FOOD FOR HEALTH
Exploration of concepts which impinge on food-related behaviours and develop concomitant cognitive competencies. Students are encouraged to recognise that their own personal pro-active stance in relation to food-related health issues can contribute to better health for all Australians.

Course: EDS0  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: EDS0  Credit Points: 12  Contact Hours: 3 per week

■ PUB336 WOMEN’S HEALTH
Exploration of the data and health issues related to women’s health; critically evaluates health-related policies, systems and practices in terms of their impact on women's health.

Course: EDS0  Prerequisite: PUB327  Credit Points: 12  Contact Hours: 3 per week
■ PUB337 HEALTH NEEDS OF SPECIFIC POPULATIONS
The health needs of a range of specific population groups; 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; examines models and strategies to address these issues.
Course: ED50
Credit Points: 12  Contact Hours: 3 per week

■ PUB349 CONSUMER FOOD
Credit Points: 12  Contact Hours: 4 per week

■ PUB350 FAMILIES & HOUSEHOLDS IN AUSTRALIA
Examination of the emphasis on the family in home economics. Perspectives considered include: structural functionalist, symbolic interactionist, conflict and feminist, whether the family provides an appropriate orientation for home economics.
Course: ED50
Credit Points: 12  Contact Hours: 4 per week

■ PUB351 CONSUMER FOOD
The role of the food industry in relation to lifestyles in modern societies; the scientific principles and operations involved in the production and manufacture of foods; the composition, the ingredients, the labelling and marketing methods of a representative range of commercial foods; current consumer issues such as the safety of food additives, food irradiation, consumer protection, new product development, food regulations and future trends in our food supply.
Courses: ED50, SC30
Credit Points: 12  Contact Hours: 4 per week

■ PUB352 FOOD SERVICE: PRINCIPLES & PRACTICES
The use of relevant management principles, safe and hygienic work practices, effective communication skills, sound nutrition and mastery of techniques in food production and presentation.
Courses: ED50, PU49  Prerequisite: PUB474
Credit Points: 12  Contact Hours: 4 per week

■ PUB353 CLINICAL CLASSIFICATION
Development of skills in one of the major specialities of health information management; clinical classification 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.
Course: PU48  Prerequisite: PUB220, LSB142
Corequisite: LSB361
Credit Points: 12  Contact Hours: 4 per week

■ PUB354 NUTRITION ISSUES IN AUSTRALIA
A background study into the nutritional issues which are impacting on the quality of Australian lives. These issues are explored in two broad frameworks: (1) the nutritional needs throughout the life cycle 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, PUB474
Corequisite: PUB334
Credit Points: 12  Contact Hours: 4 per week

■ PUB355 FOOD SERVICE
Credit Points: 12  Contact Hours: 4 per week

■ PUB356 TEXTILES 1
Credit Points: 12  Contact Hours: 4 per week

■ PUB357 TEXTILES 2
Continuation of PUB356. An understanding of textile consumer issues is developed by a study of relevant commercial enterprises and the implications for the consumer. Creativity is encouraged by students combining skills in pattern development with advanced techniques in constructing textile articles.
Course: ED50  Prerequisite: PUB321
Credit Points: 12  Contact Hours: 4 per week

■ PUB361 TEXTILES 3
Credit Points: 12  Contact Hours: 4 per week

■ PUB362 TEXTILES: SUPERVISED PROJECT
Students select and complete an in-depth study in one or more methods of creating with textiles. The study includes the development of advanced technical skills and an investigation and evaluation of the corresponding commercial production.
Courses: ED50, PU49  Prerequisite: PUB321 or PUB472 or equivalent
Credit Points: 12  Contact Hours: 3 per week

■ PUB363 SHELTER STUDIES
Credit Points: 12  Contact Hours: 3 per week

■ PUB364 FAMILY STUDIES
Definitions of the family; the family and society; social and geographical differences in family patterns; influence of changing social conditions; socialisation and child rearing patterns; families in a multicultural society.
Course: PU47
Credit Points: 12  Contact Hours: 4 per week

■ PUB365 EVOLUTION OF WESTERN DRESS
Evaluation of Western fashionable dress from ancient times to the present; the relationship between costume and the environment; influencing factors: social, aesthetic, political, economic, geographic, spiritual, technological; emphasis on primary sources from the fourteenth and twentieth centuries; teaching strategies and resources.
Courses: ED26, ED50
Credit Points: 12  Contact Hours: 3 per week

■ PUB366 SHELTER STUDIES
Credit Points: 12  Contact Hours: 4 per week

■ PUB367 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

■ PUB368 NUTRITION ISSUES IN AUSTRALIA
Continuation of PUB299. There is an emphasis on analysis and improvement of health information management throughout hospitals. The examination of health information services will move outside the medical record department of hospitals to wards, bed allocation and admission offices; accident and emergency departments; outpatient and allied health services and other specialised hospital services such as radiology, pharmacy and pathology. Skills in health data management, forms design and statistical presentation of hospital or health service activities are developed.
Course: PU48  Prerequisite: PUB299 and a one-week practicum
Credit Points: 12  Contact Hours: 4 per week
PUB404 CLINICAL SCIENCE 2
At this stage students are able to follow cases through to observe the short-term effect of therapy and are expected to commence case studies to develop comparative and recording skills. Students should now be adopting the standard medical terminology and abbreviations used in clinical situations.
Course: PUB404
Prerequisite: PUB403
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. Topics include the science of nutrients, applied nutrition and introduces tools used in basic nutritional assessment.
Course: PUB405
Prerequisite: LSB305 or LSB308
Credit Points: 12
Contact Hours: 5 per week

PUB410 MEDICINE
Following completion of this unit, students should be able to recognise and understand the clinical features, pathogenesis and significance of common conditions affecting the lower limbs and the surgical treatment of systemic conditions as seen by the podiatrist, i.e. 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: PUB410
Prerequisite: PUB503
Credit Points: 8
Contact Hours: 3 per week

PUB411 ORTHOPAEDICS
Emphasis on orthopaedic surgery; develops a detailed knowledge of general and specific orthopaedic conditions which have an effect on the lower limbs and the surgical treatment of systemic conditions as seen by the podiatrist, i.e. 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: PUB411
Prerequisite: PUB505
Credit Points: 8
Contact Hours: 3 per week

PUB414 HOME ECONOMICS APPLIED CURRICULUM
Issues relating to home economics education; bases for curriculum decision making; nature and structure of home economics; syllabus implementation; innovation; issues that affect home economics.
Course: PUB414
Prerequisites: PUB360, PUB410, PUB412
Credit Points: 12
Contact Hours: 4 per week

PUB421 PODIATRIC ANAESTHESIOLOGY
Provides a sound understanding of the science of anaesthetics as applicable to the practice of podiatry. Students are required to understand the pharmacology of local anaesthetics and their clinical usage, and be competent in injection techniques, including local infiltration and local nerve block in the lower limbs.
Course: PUB421
Prerequisite: PUB423
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 and principles 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 food groups; food selection for a healthy diet; nutrient requirements in particular clinical situations.
Course: PUB423
Prerequisite: PUB421
Credit Points: 8
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. Not offered in 1996.
Course: PUB431
Prerequisite: PUB423
Credit Points: 12
Contact Hours: 3 per week

PUB440 CLOTHING DESIGN
This unit provides 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: PUB440
Prerequisite: PUB431
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.
Course: PUB441
Prerequisite: PUB423
Credit Points: 12
Contact Hours: 3 per week

PUB456 CLINICAL CLASSIFICATION 2
Students will learn to abstract and interpret the information recorded in client/patient medical records. Develop an understanding of the clinician's response to various disease processes and how this information presents in the medical record. A significant component of the unit will involve coding from hospital medical records on-site in an acute care setting. Students become proficient in the art of clinical classification using ICD-9-CM.
Course: PUB456
Prerequisite: PUB414
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
Prerequisite: PUB405
Credit Points: 12
Contact Hours: 4 per week
■ PUB474 FOOD STUDIES
The behaviour of foods; nature, properties and behaviour of major nutrients in food; interaction between major ingredients in certain foods.
Courses: PU49, ED50  Corequisite: CHB259  Credit Points: 12  Contact Hours: 6 per week

■ PUB478 FOOD SCIENCE & TECHNOLOGY
The role of the food industry in modern society; issues and problems facing consumers and the food industry; food preservation principles; unit processes in the food industry; commercially available food; product development; food technology workshop.
Courses: PU42, PU49  Prerequisites: LSB301, LSB405 or equivalent  Credit Points: 12  Contact Hours: 5 per week

■ PUB481 POLLUTION SCIENCE 2
The causes, effects, control measures, standards and legislation relating to water, air and noise pollution.
Course: PU42  Prerequisites: CHB242, PHB263  Credit Points: 12  Contact Hours: 5 per week

■ PUB482 OCCUPATIONAL HEALTH
Basic concepts of toxicology and the body’s responses to toxic substances; basic disease processes in humans and the various agents in the workplace adversely affecting the health of workers.
Course: PU44  Prerequisite: 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 influence on normal functions; occupational biomechanics; biomechanical modelling; anthropometry; manual handling; tool and equipment design; the effects of physical factors such as lighting, temperature and humidity on human performance; ergonomics methodologies.
Course: PU44  Prerequisite: MEB035  Credit Points: 8  Contact Hours: 3 per week

■ PUB485 OCCUPATIONAL HYGIENE 1
The field of occupational hygiene and the theory of occupational hygiene in the management of hazardous substances; the uses and limitations of a range of sampling and analytical equipment in the measurement and assessment of workplace particulates.
Course: PU44  Prerequisite: CHB242  Credit Points: 12  Contact Hours: 4 per week

■ PUB499 HEALTH INFORMATION MANAGEMENT 3
Health information systems outside acute care hospitals; special purpose health record systems, ambulatory health record systems, and those used in health care facilities other than acute care hospitals, systems for the registration and notification of disease and health problems, clinical classification systems other than ICD-9-CM and nomenclatures, which may be used in specialised health settings; concepts and processes of quality assurance in health (e.g. accreditation, criteria audits, etc.).
Course: PU48  Prerequisite: PUB399  Credit Points: 12  Contact Hours: 4 per week

■ PUB502 DERMATOLOGY
An appreciation of the many varieties of skin lesions and their particular relevance when found in the lower limbs. The lecture program consists of classification of skin disease, vascular proliferation, vasculitis, ulcers, peripheral vascular disease, tumours, eczema, dermatitis, allergy, immunity, infections, pustulence, squamous eruptions, nails and hair, skin manifestations of internal disease, pharmacology and general therapeutics. The clinical sessions utilise this information in allowing students the opportunity to see and diagnose many of these conditions.
Course: PU45  Prerequisites: PUB410, PUB421, PUB503  Credit Points: 8  Contact Hours: 3 per week

■ PUB503 PODIATRIC MEDICINE 3
Develops professional understanding of the general and specific effects of medical and surgical conditions on the human foot. Also expands the concept of total case management in terms of the interdisciplinary approach, including physical, mechanical and surgical techniques. Completion of this unit should enable students to consolidate the podiatrist’s role in the health care team across the spectrum of practice.
Course: PU45  Prerequisite: PUB421  Credit Points: 8  Contact Hours: 3 per week

■ PUB504 CLINICAL SCIENCE 3
On completion, the student should be able to consolidate skills acquired in operative mechanical, chemical and physical therapy and to demonstrate expertise in the treatment of the diabetic arthritic foot, and related circulatory and neurological disorders. Diagnostic skills are also developed with the wider range of patients being treated and the specialised study of disciplines such as dermatology and radiology, further integrating academic and clinical studies.
Course: PU45  Prerequisites: PUB404, PUB421  Credit Points: 8  Contact Hours: 3 per week

■ PUB505 PODIATRIC SURGERY
Implementation of pediatric surgical techniques based on strong theoretical knowledge. On completion, students should understand the principles and techniques of lower limb surgery.
Course: PU45  Prerequisites: PUB422, PUB410  Corequisite: PUB603  Credit Points: 8  Contact Hours: 3 per week

■ PUB512 ERGONOMICS 2
Application of industrial and organisational psychology to the industrial environment; examination of key individual, social and organisational factors contributing to health and safety at work; an appreciation of the interface between humans, machines and the environment, information processing and learning, stress, job design, job satisfaction and work schedules.
Course: PU44  Prerequisites: PUB483, SSB914  Credit Points: 12  Contact Hours: 4 per week

■ PUB513 EPIDEMIOLOGY & DISEASES
Enables students to become familiar with the terminology used in the epidemiology and the study of diseases; includes the conducting of various types of study including the analysis of data in the workplace; topics include: the causes and preventative factors of the most common non-infectious diseases, their incubation periods, modes of infection and transmission of infectious diseases, and the principles and applications of vaccination.
Course: PU42, PU44, PU48  Credit Points: 12  Contact Hours: 4 per week

■ PUB516 OCCUPATIONAL HEALTH & SAFETY PRACTICE 1
Investigation of management principles and practices as they may be applied to resolve occupational health and safety problems; an examination of industrial relations processes and the legal framework within which occupational health and safety is addressed; field studies are used to provide students with a practical insight into the application of the principles to which they have been introduced.
Course: PUB518 FOOD HYGIENE STUDIES
The various types of food poisoning; food poisoning investigation techniques; laboratory procedures and interpretation of results.
Course: PUB520 ENVIRONMENTAL HEALTH MANAGEMENT
Management of an environmental health unit; legal and professional procedures associated with the duties of environmental health officers.
Course: 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 are 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: PUB529 HEALTH PLANNING & EVALUATION
The concept and processes of program management; health planning in a program management context; issues relating to community participation in health planning, planning for accountability, planning for future evaluation, as well as the steps in program planning; resources management and health resource inventories; the judgments of evaluation research applied to health programs.
Course: PUB530 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, e.g., 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. Not offered in 1996.
Course: PUB531 HEALTH CARE ECONOMICS
Application of economic analysis to the health care industry; an examination of the demand for health care, the supply of and market for health care.
Course: PUB532 APPAREL DESIGN 1
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: PUB533 OCCUPATIONAL HYGIENE 2
Continuation of PUB585; concentrates on the application of the principles to which the student has already been introduced; extends the student's ability to recog-
environment; evaluates the elements of successful strategies for physical and chemical hazards in the working environment, examining the elements of successful monitoring programs in the workplace.

Course: PUB44
Prerequisites: CHB411, LSB431, PUB482, PUB485
Credit Points: 12 Contact Hours: 4 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: PUB49 
Prerequisites: PUB478 or equivalent
Credit Points: 12 Contact Hours: 3 per week

**PUB592 HOME ECONOMICS INDEPENDENT STUDY 1**
Self-initiated and self-directed academic study in an interest area consistent with the course's overall aims.

Course: PUB49 
Credit Points: 12 Contact Hours: 1 per week

**PUB594 HOME ECONOMICS INDEPENDENT STUDY 2**
Self-initiated and self-directed academic study in an interest area consistent with the course's overall aims.

Course: PUB49 
Credit Points: 12 Contact Hours: 1 per week

**PUB600 HEALTH MANAGEMENT 1**
A problem-solving approach which relates the science of management to decision making and control in health services administration. Management science (operations research) techniques are learned and applied in case studies from the health industry.

Course: PUB48 
Prerequisites: 16 units in PUB48
Credit Points: 12 Contact Hours: 3 per week

**PUB602 SPORTS MEDICINE**
The importance of a multidisciplinary approach to the diagnosis, evaluation and treatment of sports injuries. Students study the symptomology of lower limb functional pathologies as related to specific sports and devise treatment programs. An understanding of the principles of human fitness and potential in relation to athletic injuries and expectations forms the foundation for further studies.

Course: PUB45 
Prerequisites: PUB503, PUB410
Credit Points: 8 Contact Hours: 3 per week

**PUB603 CLINICAL SCIENCE 4**
Prepares the student for the transition to private practice. Students are introduced to the sports medicine patient in terms of the range of injuries which occur affecting the lower back, hip, knee, ankle and foot. Case presentations are an integral part of clinical learning and sessions conclude with exchange between students and staff over case management.

Course: PUB45 
Prerequisite: PUB504
Credit Points: 8 Contact Hours: 12 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. Second, the development of an interest in podiatry research using scientific methods of investigation and presentation. Students are encouraged to publish these projects as original material in related professional journals.

Course: 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: 4 per week

**PUB612 HEALTH PROMOTION & EDUCATION**
The scope and nature of health promotion; use of resources for such activities; planning, conduct and evaluation of health promotion programs; adult learning principles; training needs analysis; training program development and evaluation; specific training methods.

Courses: PUB44, PUB42 
Prerequisite: SSB914 
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: 2 per week

**PUB614 INDUSTRY SPECIALISATION**
The hazards associated with particular industries including construction, manufacturing, chemical and mining; 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: 8 Contact Hours: 4 per week

**PUB617 OCCUPATIONAL HEALTH & SAFETY PROJECT**
Through independent work under the guidance of supervisors, students learn to appreciate the connection between their theoretical studies and practical aspects of environmental health. Practice is gained in research techniques, logical reasoning and presentation of research findings.

Course: PUB44 
Prerequisites: PUB512, PUB513, PUB585 
Credit Points: 12 Contact Hours: 3 per fortnight

**PUB618 HEALTH COMPUTER SYSTEMS**
Principles and applications of electronic data processing in health care settings. Computerised health information systems are studied 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 operational, the data base, and the various ways information is transferred and used in health facilities.

Course: PUB44 
Prerequisite: BSB112, BSB112 
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: PUB342  |  Prerequisites: PUB520, PUB481  
Corequisite: 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: PUB621  |  Prerequisites: PUB481, PUB520  
Corequisite: 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: PUB622  |  Prerequisites: PUB520, LSB408  
Credit Points: 8  |  Contact Hours: 4 per week  

- PUB631 NUTRITIONAL BIOCHEMISTRY
  The digestion, absorption and metabolic assimilation of nutrients; hormonal control of metabolism; the role of drugs; genetic and environmental influences; significant parameters measured in clinical laboratories examined in a variety of health and disease states; diet and exercise for health; starvation; obesity; diabetes mellitus; cardiovascular disease; renal disease; liver disease; alcohol consumption; physiological and traumatic stress.
  
Course: PUB631  |  Prerequisites: PUB520, PUB485  
Credit Points: 12  |  Contact Hours: 5 per week  

- PUB634 HEALTH SERVICES EVALUATION
  A study of process evaluation, program evaluation and evaluation research with applications to the health field; designed for health professionals in both the administration and practice areas. Theory, practice, the utilisation of evaluation results and the administration of evaluation studies are emphasised in this unit. Addresses topics such as quality assurance, utilisation, review and accreditation. This unit has been superceded but may be offered for the last time in 1996, subject to student numbers.
  
Course: PUB634  |  Prerequisites: PUB646  
Credit Points: 12  |  Contact Hours: 3 per week  

- PUB651 CASEMIX MANAGEMENT
  History and development of case mix classification systems; structure of AN-DRGs; casemix applications in quality improvement, utilisation review, costing, planning and management; casemix and funding health care services; casemix classification systems for acute inpatients; data quality issues; casemix grouping software; current casemix initiatives and applications.
  
Course: PUB651  |  Prerequisites: PUB654  
Credit Points: 12  |  Contact Hours: 3 per week  

- PUB653 PROFESSIONAL EXPERIENCE
  This unit provides an opportunity to 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: PUB653  |  Prerequisites: PUB356, PUB399, PUB456  
Corequisite: PUB499  
Credit Points: 12  |  Contact Hours: 6 per week  

- PUB655 HEALTH POLICY AND PLANNING
  How health policy is created; the role of vested interests; the role of the mass media; an appreciation of the difference between policy in use and espoused policy; analysis of health policy using analytical frameworks; health policy impact; policies pertaining to special groups.
  
Course: PUB655  |  Contact Hours: 3 per week  

- PUB657 HUMAN RESOURCES IN HEALTH
  The development of skills in human resource management in the health care industry. Topics include: human resource needs analysis; human resource planning; supply and demand of health personnel; recruitment, selection and training of health personnel; job descriptions; industrial relations in the health industry; health worker performance and job satisfaction; health teams and multi-skilling; leadership and management in the health industry. Not offered in 1996.
  
Course: PUB657  |  Prerequisite: HBB131 or MGB207  
Credit Points: 12  |  Contact Hours: 3 per week  

- PUB659 MANAGEMENT OF HEALTH SERVICES
  This unit represents the capstone core unit for both the Health Administration and Health Information Management majors. This unit will exercise the 'manager' in the student and prepare them for middle and senior level management positions. Topics include: SWOT analysis; vision, mission and culture; stakeholder analysis and achieving win-win negotiations; thinking strategically; best practice and benchmarking in health.
  
Course: PUB659  |  Prerequisites: 16 units in the Health Administration or HIM major  
Credit Points: 12  |  Contact Hours: 3 per week  

- PUB674 BUSINESS ORGANISATIONS
  The structure of business organisations; types of organisations; business objectives, strategies and policies; functions within business organisations; the role of unions and the nature of industrial relations in Australia; women's issues.
  
Course: PUB674  |  Prerequisites: PUB272 or equivalent  
Credit Points: 12  |  Contact Hours: 3 per week  

- PUB675 HOME ECONOMICS 4
  The conceptual, theoretical and philosophical foundations of home economics; societal issues relating to the provision of food, textiles and shelter; a critical examination of social, economic, technological and ethical issues on individual and family wellbeing.
  
Course: PUB675  |  Prerequisites: PUB574  
Credit Points: 12  |  Contact Hours: 3 per week  

- PUB695 INDUSTRIAL TRAINING EXPERIENCE
  Ten to twelve-month placement in paid employment related to the Bachelor of Applied Science (Occupational Health and Safety) under the joint supervision of an industry supervisor and an academic adviser. The academic adviser obtains reports from the student and their work supervisor at regular intervals. The student is required to complete a progressive assessment program. Results are determined on the basis of reports, continuous assessment and the employer's report.
  
Course: PUB695  |  Prerequisites: Satisfactory completion of the first two years (96 credit points) of the Bachelor of Applied Science (Occupational Health & Safety), normally with a GPA of not less than 4.5 overall  
Credit Points: 20  

- PUN600 DISSERTATION
  Undertaken by full-time Master of Public Health students
following successful completion of coursework. This unit is intended as a practicum, offering experience in investigating and/or solving a public health problem.

**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:** HLSS, IF64, LS85, NS62, NS85

**Credit Points:** 12

**Contact Hours:** 3 per week

**PUN602 HEALTH PLANNING, MANAGEMENT & EVALUATION**

Application of the theory and principles of planning, management and evaluation to health services; a detailed analysis of health services planning techniques; information requirements and decision making for the strategic management of health services; the principles of financial and personnel management required for the effective development and utilisation of health care; process and program evaluation in health services; the appreciation of evaluation research and cost-effectiveness.

**Courses:** HLSS, 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

**Contact Hours:** 3 per week

**PUN608 HEALTH ECONOMICS & FINANCE**

This subject is designed to introduce students to some elementary microeconomic theory and its application to economic issues in the health sector. Aspects of health care, financing are discussed in the context of their impact upon the market for health care services in Australia and abroad. Some fundamental principles of public finance are also addressed.

**Courses:** HLSS, IP64, PU85, PU60, HL68

**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, HL88, IP64

**Credit Points:** 12

**Contact Hours:** 3 per week

**PUN610 HEALTH SERVICES MANAGEMENT**

This subject is designed to assist health service managers to understand their roles, duties and responsibilities and to investigate relevant rules, principles, models, or modus operandi that may be available to guide their actions. It reviews some of the classical and more modern approaches to management and examines their relevance and application in the management of health services. In this way the health service manager’s role and responsibility should become clear. Some guiding principles will emerge from which the manager can select, depending on the circumstances and type of the decision required.

**Courses:** HL88, IP64, NS85, PU85, PU60, HL68

**Credit Points:** 12

**Contact Hours:** 3 per week

**PUN611 COMMUNITY HEALTH PLANNING**

This subject deals with the principles and methods of planning for health development in the community. It explores a number of models of health planning and the role of key groups and decision-makers in developing plans. Community participation and empowerment is discussed together with constraints and feasibility associated with health planning. The subject examines, using a social and economic development perspective, the complex relationships between communities, health, planning and evaluation. The contribution of a range of disciplines is explored, as well as the importance of resources and information. It is essentially a practical course which introduces principles and theory at appropriate points. Students are required to produce a Health Plan which is applicable to the health related organisations and structures in Queensland.

**Courses:** PU85, PU60

**Credit Points:** 12

**Contact Hours:** 3 per week

**PUN612 ADVANCED HEALTH EVALUATION**

This subject deals with the principles, methods and problems of evaluation in the health sector, and in particular as they apply to public health programs and to the effectiveness of the health services generally. It is designed to equip the public health worker with the knowledge, confidence and skills to initiate a piece of evaluation research. A problem solving approach is adopted throughout the course.

**Courses:** IF64, PU85, PU60

**Credit Points:** 12

**Contact Hours:** 3 per week

**PUN613 HEALTH PROMOTION PLANNING & EVALUATION**

This subject covers the nature and the scope of health promotion planning and evaluation from an examination of international and national public health and health promotion policy guidelines and frameworks, including National Goals and Targets for Health, as well as regional and local government initiatives to promote the health of the population. Public health practitioners are likely to be engaged in the development, implementation and evaluation of health promotion programs to meet the needs of a diverse range of population groups. This subject engages practitioners in an analysis of the theoretical principles of program planning and evaluation, and their application in practice. It is designed to enhance student skills in the development, implementation and evaluation of health promotion programs.

**Courses:** IF64, HL88, PU85, PU60

**Credit Points:** 12

**Contact Hours:** 3 per week

**PUN617 ENVIRONMENTAL HEALTH MANAGEMENT I**

This subject 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 to preventive health including the 'old' and 'new' public health; the concepts 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 of 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.

**Courses:** HL88, PU85, PU60, HL68

**Credit Points:** 12

**Contact Hours:** 3 per week
This unit builds on PUB617 and considers other relevant environmental health management issues which are an important component in resolving health threatening hazards in the community. Topics include: management principles, including the functions of planning, leading, controlling and coordinating in the environmental health setting; budgeting formats at all levels of government, including fiscal arrangements for public health policy initiatives; assessment of risk and environmental health policy delivery; modelling processes to calculate the best alternative for policy delivery; survey methodology and data collection and presentation to improve decision making in environmental health; a review of computer software to enhance decision making and office management systems and record and monitor legislative requirements in environmental health.

**Courses**: HL88, HL68  
**Credit Points**: 12  
**Contact Hours**: 3 per week

**PUN619 ENVIRONMENTAL HEALTH 2**

This unit 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.

**Courses**: HL88, HL68  
**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. 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.

**Courses**: HL88, HL68  
**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 normal forms, the physically handicapped, the chronically ill, the mentally handicapped, the visually impaired, and those with extreme problems of weight and stature, these connotations become more important. In this unit of study the requirements of specific target groups are investigated and students will then be challenged to meet their needs through functional clothing design.

**Courses**: HL88, HL68  
**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?; society of the family; the family in Australia; history of feminist thought and current feminist thinking; feminism in Australia; critique of feminism; which way feminism?; feminism and the family; feminism and home economics; well-being of individuals and families - what does it mean?  

**Courses**: ED13, HL88, HL68  
**Credit Points**: 12  
**Contact Hours**: 3 per week

**PUN624 HOME ECONOMICS FOOD & NUTRITION**

A significant factor influencing food patterns is the changing food market with concomitant political, psychosocial, economic, technical and ethical aspects affecting the supply of food to the consumer. Students are directed to research nutritional practices, and to uncover the factors influencing such practices. This research will then form the basis for not only 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.

**Courses**: HL88, HL68  
**Credit Points**: 12  
**Contact Hours**: 3 per week

**PUN625 HOME ECONOMICS PHILOSOPHICAL FOUNDATIONS**

An examination of relevant political, social, economic, technological and ethical issues which influence the well-being of individuals and families. Topics include: what is home economics?; societal issues; implications for home economics praxis; developing a personal philosophy of home economics.

**Courses**: ED13, HL88, HL68  
**Credit Points**: 12  
**Contact Hours**: 3 per week

**PUN626 HOME ECONOMICS FIELD STUDY**

Enables students to develop an area of their own choosing and to explore this in depth. The format and content of the program are negotiated between student and lecturer. However it is intended that the focus of the study be investigating home economics theory and practice within the school and/or community setting. Possible areas of study might include: education issues for home economics; home economics and feminism; family studies; human development; human relationships; food and nutrition; textiles; shelter; consumerism; management; design; environmental issues; technology. Areas available are determined by the expertise and research interests of the staff.

**Courses**: HL88, HL68  
**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, contraindications, adverse reactions, drug interactions and dosages; indications and contraindications and adverse effects of the use of antibiotics, sedatives, NSAIDs analoges, corticosteroids, epinephrine in relevant local anaesthetics; the actions of systemic drugs on the nervous system, cardiovascular, endocrine and musculo skeletal systems; prescription writing and drug regulations.

**Courses**: HL88, HL68  
**Credit Points**: 12  
**Contact Hours**: 3 per week

**PUN628 CLINICAL PATHOLOGY & DIAGNOSIS**

Provides students with advanced clinical management skills commensurate with the Master's Degree level of education: an important practical adjunct to the theoretical concepts of clinical pathology and associated diagnostic techniques; gives the podiatrist the opportunity to apply acquired knowledge in a supervised clinical environment facilitating a comprehensive approach to the evaluation and treatment of foot pathology in the community; students undertake the management of patients attending the QUT clinical facility.

**Courses**: HL88, HL68  
**Credit Points**: 12  
**Contact Hours**: 3 per week
PUN629 GENERAL MEDICINE
Provides an advanced level of knowledge necessary for an holistic medical approach to the management of disease processes. The relationship between pathogenesis and advanced therapeutic treatment is explored; designed to enhance the theoretical and clinical knowledge gained from the advanced pharmacology and clinical pathology/diagnosis units. Topics include: haematopoietic and lymphoid system; immune system; endocrine system; musculoskeletal system; hereditary and genetic; nervous system; cardiovascular system; gastrointestinal system; the liver, the biliary tract and the pancreas; respiratory system; the renal system.
Courses: HL88, HL68
Credit Points: 12
Contact Hours: 3 per week

PUN630 COMPUTERISED GAIT ANALYSIS
Students have the opportunity to further their study and understanding of human movement and gait analysis; and to enhance their clinical biomechanical assessment of a patient, thus allowing for better evaluation and treatment regimes. This is achieved using computerised video motion assessment and foot force assessment systems. Particular emphasis is directed to providing the student with the opportunity of applying this information to specialised areas of podiatric sports medicine.
Courses: HL88, HL68
Credit Points: 12
Contact Hours: 3 per week

PUN631 PODIATRIC SURGERY
Introduces professionals to the more technical aspects of foot surgery. It deals with pre-operative planning of procedures as well as post-operative complications. By the end of the unit students will gain sufficient knowledge to be able to make informed referrals to those qualified to perform appropriate procedures.
Courses: HL88, HL68
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. Offered in 1996 subject to sufficient student numbers.
Courses: HL88, HL68
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. Offered in 1996 subject to sufficient student numbers.
Courses: HL88, NS64, NS85, HL68
Credit Points: 12
Contact Hours: 3 per week

PUN643 HEALTH INFORMATICS
The use of information technology in health services; computers, telecommunications and electronic storage systems (such as optical disk); technical, financial, human resource management and legal issues associated with the use of health informatics; applications for health authorities, hospitals, other health institutions and private practice. Field trips are included. Offered in 1996 subject to sufficient student numbers.
Courses: HL88, NS64, NS85, HL68
Credit Points: 12
Contact Hours: 3 per week

PUN644 CASE STUDIES IN HEALTH INFORMATION MANAGEMENT
Either individually or in groups, students analyse case studies, assess the situation and propose a solution or alternative solutions. The case studies are based on recent or current situations in local health care settings. Offered in 1996 subject to sufficient student numbers.
Courses: HL88, HL68
Credit Points: 12
Contact Hours: 3 per week

PUN649 HEALTH CARE DELIVERY SYSTEMS
This subject offers an overview of health care delivery systems, examining the context in which public health operates in Australia. It is an introduction to the health administration branch of public health, being concerned with the coordination of human, physical, financial and information resources at all levels, including international, national, state, regional, community, facility and program levels. Health care delivery is examined from an organisational perspective in its ability to solve exiting problems, to prevent future problems, and to promote good health.
Courses: IF64, PU60
Credit Points: 12
Contact Hours: 3 per week

PUN696 AN INTRODUCTION TO HEALTH PROMOTION
This subject introduces students to the discipline of health promotion, an essential component of study for students of public health. It places health promotion, and provides an overview of its role, within the context of public health. Provides a critique of the relationship between health promotion and contemporary public health, including health policy formation. Outlines the theories and principles underlying health promotion, enabling students to evaluate the relationship between theory and practice. Provides a broad overview to policy formation, placing it within the social, environmental and economic policy context, and introducing students to health public policies advocacy and lobbying, as well as to social and organisational concepts and strategies. Overviews health promotion planning, implementation and evaluation, and enables students to critique the processes concerned through case study analysis.
Courses: PU85, PU60

PUP007 SOCIAL & BEHAVIOURAL EPIDEMIOLOGY
This subject focuses on the relationship between the determinants of health risk behaviour and health or disease outcomes.
Knowledge and skills of descriptive and analytical methodological approach gained in the Core subject "An Introduction to Epidemiology & Biostatistics" will be developed further in this subject to provide an understanding of the social and behavioural factors influencing health status and the risk of disease an understanding of theoretical models which may be used to describe both the development of and changes in health behaviours; and a framework for population health interventions. It will also enable students to become familiar with national and international population research studies and interventions which focus on the relationship between social factors and health and disease outcomes; to develop critical and objective analytical skills in relation to social and behavioural epidemiology data and its application to processes of prevention of health and disease; and to utilize both epidemiological information and appropriate models of intervention in

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the development of health promotion interventions. Skills enabling critical and objective analysis of social and behavioural epidemiological data and its application to the process of promotion of health and preventing disease will be developed as will be the ability to utilise both epidemiological information and appropriate models of intervention in the development of health interventions.

Courses: HL88, PU69, PU85, PU60
Credit Points: 12
Contact Hours: 3 per week

• PUP010 HEALTH IN AUSTRALIAN SOCIETY

Addresses significant issues associated with the multifactorial relationships between health and social, economic, political and lifestyle factors. Examination of the structure of Australian society as it impacts on health; patterns of mortality and morbidity and the nature and extent of health care delivery systems.

Courses: HL88, IF64, PU65, PU69, HL68
Credit Points: 12
Contact Hours: 3 per week

• PUP012 PROGRAM EVALUATION

An introduction to the role of evaluation in a broad range of health education and promotion contexts. The unit focuses on the development of skills in program evaluation and interpretation and application of evaluation literature and the development of evaluation 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 strategies for promoting health; a broad range of theories, methods and strategies focusing on promoting health across a range of settings.

Courses: HL88, PU69, NS64, NS85
Credit Points: 12
Contact Hours: 3 per week

• PUP021 CASE STUDIES ON CONTEMPORARY HEALTH ISSUES

Focuses on current issues facing practitioners in health education and promotion. Includes critical analysis of strategies and policies designed to address contemporary health issues and encourages students to become informed and critical practitioners.

Courses: HL88, NS64, NS85, PU69
Credit Points: 12
Contact Hours: 3 per week

• PUP022 HEALTH PROMOTION CONCEPTS & POLICY: A CRITICAL ANALYSIS

Essential advanced study for practitioners engaged in the application of health promotion strategies. Acknowledges the importance of knowledge and skills to reduce behavioural risks; however, it emphasises the significant strategies and policies of health promotion including healthy public policy, social selection of health, laws and regulations and leadership and advocacy.

Courses: HL88, IF64, PU69
Credit Points: 12
Contact Hours: 3 per week

• PUP023 PROGRAM PLANNING IN SCHOOL & COMMUNITY HEALTH

Major components of health education and health promotion: the planning and implementation of intervention strategies and comprehensive programs. Provides a conceptual synthesis of the foundation of health education and promotion and analyses models of program planning and evaluation.

Courses: HL88, PU69
Credit Points: 12
Contact Hours: 3 per week

• PUP024 FOUNDATIONS OF HEALTH EDUCATION

Introduction to the theoretical and practical dimensions of health education as a major component of the process of health promotion. This unit introduces knowledge, skills and practices necessary to implement health education strategies.

Courses: HL88, PU62, 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 and environment promotion; examines the environmental, social and educational elements supporting and encouraging behaviours conducive to health.

Courses: HL88, PU69, NS85
Credit Points: 12
Contact Hours: 3 per week

• PUP027 INDEPENDENT STUDY

Research work in an area of personal or professional interest to the student in the health sciences. The focus may be one of specific content area or process in health education or health promotion. Involves liaison with academic advisor.

Course: PU69
Credit Points: 12

• PUP109 NUTRITION

A comprehensive study of the nutritional sciences building on students' backgrounds in physiology, biochemistry and nutrition. Topics include: food composition databases; food commodities; factors affecting food choice; factors affecting access to food; barriers within Australia; public health nutrition; food grouping systems; dietary guidelines and the food needs of various groups in the community.

Course: PU62
Credit Points: 12
Contact Hours: 5 per week

• PUP110 NUTRITIONAL EPIDEMIOLOGY

Statistics; validity; reliability; assessing nutritional studies; data management; interpretation of results. During the semester students have the opportunity to gather data, statistically analyse and assess the data, draw conclusions and construct a written report of the results. Students also learn to use computers to carry out basic statistical and dietary analyses.

Course: PU62
Credit Points: 12
Contact Hours: 5 per week

• PUP115 OCCUPATIONAL HEALTH & SAFETY LAW & MANAGEMENT I

Introduces students to basic concepts in occupational health and safety; develops an understanding of and skills not only in basic management principles as they apply to this discipline but also in the development and delivery of health education and promotion. This unit introduces knowledge, skills and practices necessary to implement health promotion.

Courses: PU65
Credit Points: 12
Contact Hours: 3 per week

• PUP116 ERGONOMICS

The relationship between the worker, the work environment and the workspace. Occupational ill-health and injury arise from a lack of fit between the capabilities of workers and the design of the working environment, the work processes and the physical and mental demands of
the task. Insight into ergonomics can assist practitioners to enhance the worker's safety and comfort, improve work efficiency and performance, and optimise work performance. Topics include: basic anatomy and physiology of body systems; occupational biomechanics; psychology.

**Course:** PUP126  
**Credit Points:** 12  
**Contact Hours:** 3 per week

**PUP123 PRACTICE IN CLINICAL DIETETICS**

Practical experience and seminar presentations relevant to clinical dietetics 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

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

**PUP128 PRACTICAL DIETETICS**

Provides an opportunity to experiment with food commodities and to practise service planning and food presentation. Examines the ingredient content of commercial foodstuffs. Examines the role of individual ingredients of foodstuffs in the determination of food structure and organoleptic properties.

**Course:** PU62  
**Prerequisite:** 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; organisational 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 total quality management. 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, NS85  
**Credit Points:** 12  
**Contact Hours:** 3 per week

**PUP215 OCCUPATIONAL HEALTH & SAFETY LAW & MANAGEMENT 2**

Students develop an understanding of both the legal framework within which the discipline operates and industrial relations concepts and practices insofar 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, 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; safety audits; fire and explosion prevention; quantitative hazard analysis, risk management, accident investigation and analysis.

**Courses:** HL88, PU65  
**Credit Points:** 12  
**Contact Hours:** 3 per week

**PUP415 OCCUPATIONAL HEALTH**

Exploration of chemical hazards in the working environment, epidemiological principles and practice, and identification of special risk groups in the workforce. Topics include: the pathological bases of disease in humans; chronic occupational diseases; occupational skin conditions; respiratory diseases; biological hazards in the work environment (bacteria, parasites, viruses, rickettsia and fungi); chemical and physical stresses and their physiological responses; physiological monitoring - principles and practice; special risk groups; epidemiological principles and practice.

**Courses:** HL88, PU65  
**Credit Points:** 12  
**Contact Hours:** 3 per week

**PUP430 HOME ECONOMICS CURRICULUM STUDIES 1**

The bases for making decisions about home economics
curriculum design and implementation are explored in order for participants to appreciate the complexity of this process and the necessity to clarify their own philosophical base for teaching in the area. The skills appropriate for preparing and implementing sequenced units of work are developed.

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

PUP431 HOME ECONOMICS CURRICULUM STUDIES 1

Development of further skills in writing programs of work with an emphasis on advanced teaching/learning strategies, assessment and evaluation and the processes of accreditation and certification concomitant with BOSSESS 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

SBB325 ACCOUNTING/BUSINESS MANAGEMENT CURRICULUM STUDIES 1

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

Courses: ED50, ED54
Credit Points: 12  Contact Hours: 3 per week

SBB326 ACCOUNTING/BUSINESS MANAGEMENT CURRICULUM STUDIES 2

Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Courses: ED50, ED54
Credit Points: 12  Contact Hours: 3 per week

SBB327 OFFICE COMMUNICATIONS TECHNOLOGY CURRICULUM STUDIES 1

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

Courses: ED50, ED54
Credit Points: 12  Contact Hours: 3 per week

SBB328 OFFICE COMMUNICATIONS TECHNOLOGY CURRICULUM STUDIES 2

Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Courses: ED50, ED54  Prerequisite: SBB327
Credit Points: 12  Contact Hours: 3 per week

SBB329 ECONOMICS CURRICULUM STUDIES 1

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

Courses: ED50, ED54  Prerequisite: SBB327
Credit Points: 12  Contact Hours: 3 per week

SBB330 ECONOMICS CURRICULUM STUDIES 2

Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Courses: ED50, ED54
Credit Points: 12  Contact Hours: 3 per week

SBB331 GEOGRAPHY CURRICULUM STUDIES I

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

Courses: ED50, ED54
Credit Points: 12  Contact Hours: 3 per week

SBB332 GEOGRAPHY CURRICULUM STUDIES 2

Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Courses: ED50, ED54
Credit Points: 12  Contact Hours: 3 per week

SBB333 HISTORY CURRICULUM STUDIES 1

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

Courses: ED50, ED54
Credit Points: 12  Contact Hours: 3 per week

SBB334 HISTORY CURRICULUM STUDIES 2

Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Courses: ED50, ED54  Prerequisite: SBB333
Credit Points: 12  Contact Hours: 3 per week

SBB335 LEGAL STUDIES CURRICULUM STUDIES 1

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

Courses: ED50, ED54
Credit Points: 12  Contact Hours: 3 per week

SBB336 LEGAL STUDIES CURRICULUM STUDIES 2

Curriculum development within the context of contemporary policies, frameworks and agencies; general prin-
principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Courses: ED50, ED54  
Prerequisite: SBB335  
Credit Points: 12  
Contact Hours: 3 per week

■ SBB337 SOCIAL SCIENCE CURRICULUM STUDIES 1  
This unit assists students to develop those competencies needed for planning and teaching in selected curriculum areas. Content includes: the nature of the curriculum area/discipline and its role and contribution as a medium for education; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning activities; and teaching strategies designed to promote a range of learning experiences in selected curriculum areas.

Courses: ED50, ED54  
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  
Curriculum development within the context of contemporary policies, frameworks and agencies; general principles of measurement, assessment and evaluation; teaching and learning strategies; and issues and directions in curriculum development.

Courses: ED50, ED54  
Prerequisite: SBB337  
Credit Points: 12  
Contact Hours: 3 per week

■ SBB339 CURRICULUM IN SOCIAL EDUCATION  
Builds on SBB330 to develop a coherent and balanced understanding of the nature and role of Social Education, the Queensland Primary Schools Social Studies Syllabus and P-10 Social Education Framework and introduces other national and international syllabuses and programs. Investigates some of the more recent significant initiatives in Social Education, such as Aboriginal and Torres Strait Island Education, Environmental Education and Global Education. Students design an innovative curriculum program for the classroom and clarify their own philosophy and degree of commitment to Social Education teaching.

Prerequisite: SBB340  
Credit Points: 12  
Contact Hours: 3 per week

■ SBB340 TEACHING SOCIAL EDUCATION  
Develops an introductory understanding of the nature and role of Social Education and Queensland Primary Schools Social Studies Syllabus and Guidelines, Workbooks, and the P-10 Social Education Framework. Investigates the various learning styles in the classroom and appropriate teaching strategies to cater for these, especially 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  
Explores from an interdisciplinary perspective a number of thematic questions about teaching: the historical development of social and environmental foundations in the study of society; the current socio-cultural context of social and environmental education; culture and beliefs as an influence on social and environmental activity; the quality of natural and social systems in the world; resources: conservation and development; place and space, continuity and change, key skills and competencies, creative and critical thinking, perceptions, attitudes and values in social and environmental studies.

Course: ED51, ED52  
Credit Points: 12  
Contact Hours: 3 per week

■ SBB343 THE AUSTRALIAN LEGACY  
Examination of those forces which have shaped contemporary Australia. Through a consideration of this historical legacy, a better understanding of those social, economic and constitutional developments which are currently taking place in Australia can be achieved.

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

■ SBB344 CONSUMER EDUCATION IN PRIMARY SCHOOLS  
This unit provides opportunities for primary school teachers to gain an awareness of the role and functions of consumers in the Australian economy, and the interrelationship between consumers, business and the government. It discusses consumer protection laws and the need for consumer protection. An examination of various teaching strategies and teaching resources and assists teachers to plan Consumer Education teaching programs for implementation in primary schools.

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

■ SBB345 AUSTRALIA, ASIA AND THE PACIFIC: A FUTURES APPROACH  
An introduction to the study of futures is attempted through an analysis of principal methods and contemporary eminent contributors. Methods and models are applied to the development of future scenarios and contemporary issues relevant to the region, e.g. population and migration, political institutions and systems, resource allocation and utilisation, sustainable development, environmental issues and structural change. Using understandings from the above, teaching methods and techniques are developed for the P-10 Social Education Curriculum.

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

■ SBB346 ENVIRONMENTAL EDUCATION  
This unit is designed to assist the beginning teacher to implement the Queensland Department of Education's environmental policy in primary schools. The major goal is to develop expertise in the design and delivery of class programs and activities.

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

■ SBB347 ORGANISATION AND ADMINISTRATION OF ADULT AND WORKPLACE EDUCATION  
Explores and analyses organisational structures and administrative practices found to be successful in adult and workplace education settings. Special attention is given to the impact of organisational form and function, financial provision and organisational policy on servicing the needs of clients. The effect of national and international policies and current legislative requirements on organisational and administrative design and processes is examined closely.

Course: ED54  
Credit Points: 12  
Contact Hours: 3 per week
- SBB348 IMPLICATIONS OF THE NATIONAL TRAINING REFORM AGENDA
  The National Standards and competency based training; occupational health and safety; access and equity in workplace and community settings; principles and practices of recognizing prior learning.
  
  Course: ED53, ED54
  Credit Points: 12
  Contact Hours: 3 per week

- SBB349 STUDIES OF SOCIETIES AND ENVIRONMENT/HEALTH AND PHYSICAL EDUCATION
  This unit develops an introductory understanding of the nature and purpose of the Wiltshire Report's Studies of Society and Environment at the primary level. Current curriculum documents are analysed and teaching and learning strategies for their implementation are developed. The health section content includes: concepts and content incorporated in the philosophy of health education, the structure, management and evaluation of lessons in the school environment; planning learning experiences and developing health and physical education program modules.
  
  Course: ED52, ED51
  Credit Points: 12
  Contact Hours: 3 per week

- SBB371 KNOWING YOUR ENVIRONMENT
  This unit uses an interdisciplinary social science approach to explore the origins, nature and impact of various environmental issues which threaten the continuing viability of our planet. Its aim is to develop a sound skills and knowledge base enabling students to analyse, synthesise and respond positively to many of the controversial and vital environmental problems at a local, national and global level.
  
  Course: ED52, ED51
  Credit Points: 12
  Contact Hours: 3 per week

- SBB372 THE CONSUMER, SOCIETY AND THE ENVIRONMENT
  This unit is designed to enhance the knowledge and skills of the individual in one of the most important roles in a market oriented economy. Content includes: the role and functions of consumers in the Australian economy; the interrelationship between consumers, business and government; consumer protection laws and the need for them; ways of developing pro-active consumerism; and consuming for the environment – the 'green' consumer.
  
  Course: ED52, ED51
  Credit Points: 12
  Contact Hours: 3 per week

- SBB373 FUTURE SOCIETIES AND ENVIRONMENTS – AUSTRALIA, ASIA AND THE PACIFIC
  This unit provided a futures approach in the study of the rapidly changing Asia-Pacific region. An introduction to the study of the future is made through an analysis of principal methods and contemporary contributors such as Toffler and Jones. Methods and models that are applied are relevant to Australia, Asia and the Pacific, involving such themes as: population and migration; international relations; political institutions and systems; resource allocation and utilisation; sustainable development; environment issues and structural change.
  
  Course: ED52, ED51
  Credit Points: 12
  Contact Hours: 3 per week

- SBB410 CONSUMER EDUCATION
  Preparation of teachers to teach consumer education at various school levels either as a subject in its own right or as aspects of consumer education within other disciplines. Topics include: consumer education in the school curriculum; content in consumer education; teaching consumer education; curriculum development and innovation.
  
  Courses: ED26, ED69, NS48
  Credit Points: 12
  Contact Hours: 3 per week

- SBB414 STUDIES OF SOCIETY AND ENVIRONMENT
  An investigation of the Key Learning Area of Studies of Society and Environment disciplinary versus interdisciplinary approaches; analysis of key strands; values; curriculum perspectives including gender perspectives; Aboriginal and Torres Strait Islander perspectives, multicultural perspectives, global perspectives, futures perspectives, technology and VET perspectives.
  
  Course: ED50
  Credit Points: 12
  Contact Hours: 3 per week

- SBB440 ENVIRONMENTAL EDUCATION
  Valuable for all educators concerned with communicating environmental knowledge, concepts, skills, attitudes and values in formal and informal learning situations. Participants are encouraged to pursue the objectives of environmental education within their own subject specialisations.
  
  Courses: ED26, ED54, NS48
  Credit Points: 12
  Contact Hours: 3 per week

- SBB441 BUSINESS ORGANISATION AND MANAGEMENT EDUCATION
  This unit is designed to assist teachers to teach Business Organisation and Management in secondary schools and other educational and training settings. It examines the philosophy of such courses, typical content, and appropriate teaching and assessment strategies.
  
  Course: ED26
  Credit Points: 12
  Contact Hours: 3 per week

- SBB442 ENVIRONMENTAL FIELD STUDIES
  This unit is designed to identify and value a wide range of field study resources and venues. Extensive involvement with field study experiences will assist students in developing appropriate skills for investigating environmental issues and concerns as well as helping students reflect and refine the usefulness and value of field experience in developing effective environmental education programs.
  
  Course: ED51
  Credit Points: 12
  Contact Hours: 3 per week

- SBN603 CRITICAL APPROACHES IN SOCIAL AND ENVIRONMENTAL EDUCATION
  The most exciting initiatives in social and environmental education over the past two decades have reflected visions of a world that is more peaceful, just and ecologically sustainable. These initiatives have been in areas including Development Education, Environmental Education, Global Education and Futures Education. All of these fields encompass critical pedagogical approaches. In this unit, students initially explore the philosophical assumptions of critical pedagogies, and then investigate their practical applications in major fields of social and environmental education. As well, students analyse current national and state educational policies, to evaluate the support they offer for critical approaches in social and environmental education. Students are able
to base their assignment work on their own areas of expert interest.

Courses: ED13, ED11  Credit Points: 12

■ SBN604 ENVIRONMENTAL EDUCATION & INTERPRETATION

This unit provides the opportunity for students to investigate approaches to social education which are based on significant disciplines within the field – for example, history, geography and economics. There is scope for students to focus their work in this unit on one selected disciplinary area. Students critically evaluate current literature, controversial pedagogical debates about the nature and value of disciplinary approaches to social education. Students analyse the ways those debates are reflected in policy formulation and curriculum practice in schools.

Courses: ED13  Credit Points: 12

■ SBN605 CURRICULUM ISSUES IN SOCIAL AND ENVIRONMENTAL EDUCATION

Some of the most enduring debates in social and environmental education focus on the role of disciplinary knowledge. For most of this century, educators in major Western countries have argued the merits of curricula based on single-disciplinary, multidisciplinary and interdisciplinary approaches. This unit provides opportunities for students to explore these issues in theoretical and practical curricular contexts.

Courses: ED13, ED11  Credit Points: 12

■ SBN606 ISSUES IN ENVIRONMENT EDUCATION AND INTERPRETATION

The development of research skills in students and providing them with the opportunity to critically explore issues in environmental education and make interpretations of personal professional relevance. Students undertake reading and research in an area of their choice and produce their findings in a seminar. In these seminars students critically evaluate current literature, controversial issues and debates in their area of study as well as present their findings in the form of a research report.

Courses: ED13  Credit Points: 12

■ SBN607 BUSINESS ADMINISTRATION/COMMUNICATIONS EDUCATION

Business educators and trainers working in the clerical-administrative fields are faced with continuous opportunities and challenge, due to changes in the social, cultural, technological, economic and political environments. An opportunity is provided for students to develop the necessary research skills and learning strategies, and competence in advanced training strategies in order to take advantage of these opportunities and challenges.

Courses: ED13, ED11  Credit Points: 12

■ SBN608 STRATEGIES FOR BUSINESS EDUCATORS AND TRAINERS

This unit addresses major themes revolving around the workplace of the 1990s and beyond: preparation, planning, operation and management of training; evaluating, marketing and delivering training; and consulting. An opportunity is provided for students to study and critically examine advanced training and consulting methods, and then apply them to developing a training program and a consulting and marketing proposal relevant to their area of work within the field of business education and training. Teaching approaches are based on the principles of adult learning theory and practice.

Courses: ED13, ED11  Credit Points: 12

■ SBN609 STRATEGIES IN ACCOUNTING AND BUSINESS MANAGEMENT EDUCATION

This unit provides the opportunity for students to study and analyse important issues and trends relating to Accounting and Business Management Education, and then to apply their knowledge to investigating an issue or trend in their own work context. The unit also focuses on the training and curriculum development of Accounting and Business Management subjects.

Courses: ED13, ED11  Credit Points: 12

■ SBN610 TRENDS AND ISSUES IN BUSINESS EDUCATION AND TRAINING

This unit provides the opportunity for students to study and analyse current issues and trends, and then to apply their knowledge to investigating an issue or trend in their own work context. The major themes to be covered in the unit relate to the identification and impact of international and national trends on the field of business education and training. Teaching approaches are based on the principles of adult learning and practice.

Courses: ED13, ED11  Credit Points: 12

■ SBP401 ACCOUNTING CURRICULUM STUDIES 1

The nature of Accounting/Business Management education and its role and contribution as a medium for education; introduction to the relevant syllabuses and curriculum documents; lesson and curriculum planning activities; teaching strategies designed to promote a range of learning experiences in the Accounting/Business Education areas.

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

Prerequisite: SBP401

■ SBP402 ACCOUNTING CURRICULUM STUDIES 2

Consideration and practical application of curricular and teaching principles in the Accounting/Business Management area, emphasis on the use of computers; development of work programs, assessment programs and teaching packages in Accounting/Business Management areas. Establishment of principles which are used to guide school experience during teaching practice and also as a beginning teacher; contemporary issues and emerging trends in Accounting/Business Management education curriculum development.

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

Prerequisite: SBP403

■ SBP403 ECONOMICS CURRICULUM STUDIES 1

The nature of Economics and its role in the general curriculum; introduction to relevant syllabuses and curriculum documents; lesson and curriculum unit planning applied to Economics; teaching strategies and resources designed to motivate students and promote a range of interactive learning experiences.

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

■ SBP404 ECONOMICS CURRICULUM STUDIES 2

Continuation of SBP403. Curriculum development within the context of contemporary policies, frameworks and agencies; advanced teaching strategies and the use of computers in teaching Economics; unit development; assessment and evaluation in Economics; issues and directions in curriculum development.

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

Prerequisite: SBP403

■ 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
UNIT SYNOPSIS

■ SBP405 GEOGRAPHY CURRICULUM STUDIES 2
Continuation of SBP405. Examination of the broader issues of geographical education and the roles of geography teachers in the community and the profession.
Course: ED37
Prerequisite: SBP405
Credit Points: 12
Contact Hours: 3 per week

■ SBP406 HISTORY CURRICULUM STUDIES 1
Continuation of SBP405. Development of basic teaching skills related to the teaching of History focused on the role of History in contemporary education and the potential for History to contribute to emerging fields of social education, including global education and development education.
Course: ED37
Prerequisite: SBP405
Credit Points: 12
Contact Hours: 3 per week

■ SBP407 HISTORY CURRICULUM STUDIES 2
Continuation of SBP406. Examination of the broader issues of History to promote a range of learning experiences through the development of active learning strategies effective in the study of History. The content is closely allied to other first year units. Classes have an interactive format which require active student involvement.
Course: ED23, ED26
Credit Points: 2
Contact Hours: 1 per week

■ SBP408 HISTORY CURRICULUM STUDIES 3
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 a teaching career.
Course: ED37
Prerequisite: SBP411
Credit Points: 12
Contact Hours: 3 per week

■ SBP502 ETHICS & ECONOMICS IN ENVIRONMENTAL EDUCATION
Development of an understanding of the nature of environmental economics and different philosophies, ideologies and cultural views towards the environment; development of teaching strategies and resources for teaching environmental economics and ethics.
Courses: ED22, ED26
Credit Points: 12
Contact Hours: 3 per week

■ SBP517 FINANCIAL MANAGEMENT IN EDUCATION SETTINGS
The financial aspect of managing an educational setting; various financial management control problems; the basic accounting principles and skills used in the recording and management of school financial transactions; guidelines for the efficient and effective use of limited school financial resources.
Course: ED23, ED26
Credit Points: 12
Contact Hours: 3 per week

■ SCB101 LEARNING AT UNIVERSITY
Aims to develop students' awareness and use of learning strategies necessary for quality learning at university. It encourages a more meaningful approach to learning through the development of active learning strategies in the study of university. The content is closely allied to other first year units. Classes have an interactive format which require active student involvement.
Course: SC30
Credit Points: 2
Contact Hours: 1 per week

■ SCB102 SCIENCE, TECHNOLOGY & SOCIETY
The origins of modern science and technology in a social and historical context leading to the study of their role and impact in contemporary society; includes case studies of the development of particular concepts, issues and science and technology based industries. Topics include: the study of the nature of science and technology; the sociological functioning of the scientific enterprise - its norms and values; the nature of scientific knowledge - objectivity and epistemological issues; the future of science and technology - policy and influences.
Course: ED50
Credit Points: 12
Contact Hours: 4 per week

■ SCB222 EXPLORATION OF THE UNIVERSE
Introduction to optical observational astronomy; instrumentation; celestial sphere and astronomical coordinates, observations of constellations, stars, planets, clusters and other interesting celestial objects. Theory: physical geology of the planets and formation of the solar system, gravitation, optics of telescopes, spectra and their measurement, phenomena of astronomical origin, brief introduction to stars and galaxies. Practical exercises and field trips.
Courses: ED50, SC30
Credit Points: 12
Contact Hours: 5 per week

■ SCB246 ENGINEERING PHYSICS & CHEMISTRY
The physics of heat and properties of matter; including heat, energy transfer, heat engines, thermodynamics, entropy and order. The chemistry of materials including such topics as PH control; polymers and composites and
corrosion and its prevention.

Note: Students must pass both Physics and Chemistry modules to obtain credit in this unit.

Course: CE42  Prerequisites: CHB002 or equivalent
Credit Points: 8  Contact Hours: 3 per week

■ SSB016 INTRODUCTION TO QUALITY MANAGEMENT
Management: concepts, systems, costs and total quality management. Improvement: techniques and procedures. Courses: SC30, MA34
Prerequisites: MAB237 or MAB347 and successful completion of at least 192 credit points.
Credit Points: 12  Contact Hours: 4 per week

■ SSB004 SOCIAL INEQUALITY IN AUSTRALIA
This unit explores the nature of social inequality exemplified in approaches to the construction and explanation of 'inequality'. The subject outlines the way notions such as inequality are constructed and explained with reference to sociological perspectives. Both nineteenth century and contemporary approaches are examined in relation to dimensions of inequality such as power, class, status, gender, race and ethnicity. These perspectives are then applied to fields such as the State, Economics, Politics and Culture in contemporary Australia. Students will be encouraged to look critically at the usefulness of the concept of inequality.
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
This unit continues the social science tradition of inquiry into situations of disadvantage and disempowerment. It examines social differentiation, and applies a human rights perspective to discrimination on the grounds of gender, race, religion, linguistic heritage and age. It analyses the human rights of selected vulnerable individuals and groups including children, young people, juvenile offenders, prisoners, refugees and persons with psychiatric, physical or intellectual disability. Emphasis is placed on evaluating the adequacy of legal, administrative, and advocacy procedures.
Course: SS07
Credit Points: 12  Contact Hours: 3 per week

■ SSB007 INTERPERSONAL PROCESSES & SKILLS
Examine complex communication skills and understandings; communication as a change process and as narrative; awareness and skills with regard to social style, assertion, confrontation and other influencing skills; conflict; stress and burnout; gender and cross-cultural issues in communication; interviewing skills.
Course: SS07
Credit Points: 12  Contact Hours: 3 per week

■ SSB008 COUNSELLING THEORY & PRACTICE 1
Analyses and develops skills associated with the nature of counselling process and helping relationship; theoretical bases of major counselling approaches; counselling skills of major approaches; 're-authoring' and deconstructionist perspectives; ethical, gender and cultural issues in counselling; counselling applied in particular situations; group counselling; change processes in counselling; sociological analysis of the role and function of counselling.
Course: SS07  Prerequisites: SSB007
Credit Points: 12  Contact Hours: 3 per week

■ SSB009 THE AUSTRALIAN WELFARE STATE
The origins and contemporary nature of the Australian welfare state are explored. Historical data on the antecedents to and stages of welfare state development is presented. The major debates and controversies are explored. An overview is given of the structural arrangements of the Australian welfare state.
Course: SS07
Credit Points: 12  Contact Hours: 3 per week

■ SSB010 PROFESSIONAL RESOURCES 1
Develops two key themes: 'worker as a resource' theme introduces students to frameworks for practice; human
service worker roles and interventions; notions of need and assessment; 'government and non-government services as resources' theme 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

- **SSB010 CHILD & FAMILY SERVICES I**  
  Introduction to child and family welfare theory and practice and contemporary services, particularly family violence; successful family functioning and adaptation through the life span; basic needs and rights of families; developmental stages and transitions of the family life cycle; family relationship dynamics, causes of family dysfunction, crises and disruption; theoretical approaches working with families, family assessments, planning interventions and recording data; legislation, ethical and practice standards.

**Course:** SS07

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

- **SSB012 DISABILITY SERVICES I**  
  History and attitudes to disability; impact of disability upon individuals and their families; critical review of the principles and theoretical frameworks (normalisation, social role valorisation, least restrictive alternative, dignity of risk, self advocacy) which underpin services; planning around individuals, personal futures planning.

**Course:** SS07

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

- **SSB013 CORRECTIVE SERVICES I**  
  An introduction to the criminal justice system; the relationship between the criminal justice system and the offender; social control and social order; the impact of incarceration on offenders, their families and the wider community; women and Aborigines in the criminal justice system; victims of crime.

**Course:** SS07

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

- **SSB014 AGED SERVICES I**  
  Physiological, psychological, social and cultural aspects of ageing; theories of ageing; ageism, an introduction to ageing research; quality of life issues; common transitions and ageing; communication with the aged.

**Course:** SS07

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

- **SSB015 MULTICULTURAL SERVICES I**  
  The unit aims to provide a basic orientation to the context, options and difficulties associated with human service practice for multicultural Australia. It introduces the policies, concepts and issues surrounding multicultural services. Students will gain understanding of the experiences of immigration and resettlement.

**Course:** SS07

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

- **SSB016 YOUTH SERVICES I**  
  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**  
  This unit provides an intensive group experience in either a camp, weekend residential or two single day program and examines types of groups and varieties of 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; establishment of planned group approaches; the group as a therapeutic community; evaluating group work; ethical issues.

**Course:** SS07

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

- **SSB018 PROFESSIONAL RESOURCES 1**  
  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

- **SSB019 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

- **SSB020 CORRECTIVE SERVICES 2**  
  Criminological theory and research; correctional policy and practice; empirical data on criminality; major theoretical paradigms of criminality; social location and extent of crime; the costs of crime; individual and community attitudes towards crime and criminals.

**Course:** SS07  
**Prerequisite:** SSB013

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

- **SSB021 AGED SERVICES 2**  
  Services available to the aged within the community and institutions; policy issues and assessment procedures; special interest groups; ethnic aged, Aboriginal and Torres Strait Islander aged, rural aged, aged carers.

**Course:** SS07  
**Prerequisite:** SSB014

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

- **SSB022 MULTICULTURAL SERVICES 2**  
  This unit aims to increase the knowledge and understanding of the characteristics and circumstances of Australia's ethnic minorities and their implications in the use of welfare intervention techniques. The needs and issues of specific interest groups are explored. The unit promotes cultural sensitivity by exploring the social mores of Australia's ethnic minorities.

**Course:** SS07  
**Prerequisite:** SSB015

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

- **SSB023 YOUTH SERVICES 2**  
  Young people: their experiences,... practice responses. Particular attention will be given to 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 will be identified and the assumptions, strengths, and limitations of them explored.

**Course:** SS07  
**Prerequisite:** SSB016

**Credit Points:** 12  
**Contact Hours:** 3 per week
SSB026 FIELDWORK PRACTICE 1
A two-stage program of pre-placement tutorials and a ten-week block placement (or negotiated equivalent) in a human service setting (offering a professionally supervised, contracted learning experience of human service work). Challenges students to acquire and integrate critical human service competencies, attitudes and knowledge.
Course: SS07
Prerequisite: Enrolment in the Bachelor of Social Science (Human Services). All preceding units are prerequisites/corequisites at the discretion of the Course Coordinator and Field Education Coordinator.
Credit Points: Not applicable
Note: Students who fail to achieve a satisfactory standard of performance on placement are liable to exclusion from the course.

SSB027 COMMUNITY WORK
Community work as a distinct intervention skill is defined. The background to community work in Australia. Models of community work are introduced and analysed. Basic skills and techniques are developed: entering a community; building community involvement; developing community action; managing common problems.
Course: SS07
Credit Points: 12 Contact Hours: 3 per week

SSB028 AUSTRALIAN POLITICAL STRUCTURES & INSTITUTIONS
Introduction to the Australian political system; examination of the Constitution and federal and state structures, institutions and processes, with particular reference to human services; analysis of the ideologies, structures, decision-making and policy-making of political parties; review of the bureaucracy and public policy development; aspects of the Australian economy and individual system.
Course: SS07
Prerequisite: SSB004 Credit Points: 12 Contact Hours: 3 per week

SSB030 CHILD & FAMILY SERVICES 3
Work with disadvantaged parents, foster parents and adoptive parents; human services responses by women for women; parents' and women's participation in services. Main characteristics consistent with user rights, empowerment and social justice; parents and families involuntarily receiving services; application of skills in ethical decision-making, policy development, interpersonal processes and group work.
Course: SS07
Prerequisite: SSB020 Credit Points: 12 Contact Hours: 3 per week

SSB031 DISABILITY SERVICES 3
Policies, legislation and programs which impact upon people with a disability reviewed at federal, state and local government levels; analysis of international influences on the Australian scene; policy areas of disability, income maintenance, housing, education, transport, employment, etc.
Course: SS07
Credit Points: 12 Contact Hours: 3 per week

SSB032 CORRECTIONAL SERVICES 3
The functioning of the Queensland Corrective Services Commission: social and political influences on correctional policy; statutory responsibilities and limitations of corrections; issues of communication and organisational change.
Course: SS07
Prerequisite: SSB022 Credit Points: 12 Contact Hours: 3 per week

SSB033 AGED SERVICES 3
International trends in aged care; environmental issues and ageing; mental health and ageing; sexuality and ageing; ageing, work and retirement.
Course: SS07
Credit Points: 12 Contact Hours: 3 per week

SSB034 MULTICULTURAL SERVICES 3
This unit aims to develop the students' ability to critically evaluate Australia's social institutions for their relevance and fairness to ethnic minorities. Explores contemporary principles which direct service delivery as it relates to ethnic minorities and evaluate current promotion methods employed.
Prerequisite: SSB024 Credit Points: 12 Contact Hours: 3 per week

SSB035 YOUTH SERVICES 3
This unit will explore the nature and implications of 'youth work' within various contexts. Different settings (e.g. statutory and non-statutory, government and non-government) will be examined. Within this framework the unit will focus on youth policy development and analysis, and contemporary policy and practice issues in relation to the juvenile justice system.
Course: SS07
Prerequisite: SSB025 Credit Points: 12 Contact Hours: 3 per week

SSB036 FIELDWORK PRACTICE 2
A two-stage program of pre-placement tutorials and a ten-week block placement (or negotiated equivalent) in a human service setting (offering a professionally supervised, contracted learning experience of human service work). Challenges students to consolidate and extend critical human service competencies, attitudes and knowledge.
Course: SS07
Prerequisite: Enrolment in the Bachelor of Social Science (Human Services). All preceding units are prerequisites/corequisites at the discretion of the Course Coordinator and Field Education Coordinator.
Credit Points: Not applicable
Note: Students who fail to achieve a satisfactory standard of performance on placement are liable to exclusion from the course.

SSB037 STUDIES IN HUMAN RIGHTS 3
This is the third unit dedicated to studies in human rights. It maintains and expands the human rights framework by examining notions of collective or solidarity rights. It applies such a framework to linguistic, religious, legal, social and political issues relating to ethnic minorities and indigenous peoples. It uses a collective rights framework to explore the inter-relationship between human rights and global issues including peace, international security, sustainable development, environmental degradation and the national rights to economic, social and cultural development.
Course: SS07
Prerequisite: Course: SSB006 Credit Points: 12 Contact Hours: 3 per week

SSB038 SOCIAL POLICY & SOCIAL CHANGE
Conceptualising economic, population and structural change in Australia; understanding emergent ideas about state and society; identifying and contrasting alternative social policies and strategies.
Course: SS07
Credit Points: 12 Contact Hours: 3 per week

SSB039 CONTEMPORARY SOCIAL POLICIES
Major debates in social policy will be explored. Analyses of Australia's response and the impact on redistribution in the Welfare State. Current analyses of health, housing, income security, legal, immigration and family policies at federal, state and local government level.
Course: SS07
Credit Points: 12 Contact Hours: 3 per week
SSB046 DIRECTED STUDIES IN HUMAN SERVICE PRACTICE & THEORIES
This unit will provide an opportunity for students to undertake a directed reading and study project within their chosen service area. Students will undertake study which has a high level of specificity within an area or areas of practice identified by each Service Coordinator. Contents will be tailored to the specific service area.
Course: SSB046
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: SSB047
Prerequisites: SSB007
Credit Points: 12
Contact Hours: 3 per week

SSB048 ORGANISATIONAL SKILLS 2
The managerial task in human service organisations; managerial paradigms and an empowering managerial framework; developing collaborative work environments; recruitment, selection and development of workers; managing disagreement and conflict; introducing change.
Course: SSB048
Prerequisites: SSB047
Credit Points: 12
Contact Hours: 3 per week

SSB101 INTRODUCTION TO PSYCHOLOGY AND HEALTH CARE
An introduction to the principal content areas and methodology of psychology. Topics include: developmental theory; perception and cognition; personality; emotions, stress, anxiety and coping; self-esteem and self-identity and learning.
Course: NS40
Credit Points: 12
Contact Hours: 3 per week

SSB02 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: ED50
Credit Points: 12
Contact Hours: 3 per week

SSB03 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

SSB04 PSYCHOLOGY & GENDER
What is gender?; theories of gender; male and female; masculine and feminine; roles versus power; counseling 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: SSB04
Prerequisites: SSB003 or SSB012
Credit Points: 12
Contact Hours: 3 per week

SSB06 INTERPERSONAL & GROUP PROCESSES
Understanding relationships and small group dynamics with emphasis on skill development in listening, helping, 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

SSB07 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

SSB09 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 minimize misperception; use of effective social skills in interpersonal and group settings; understand theories of attitude, change and know implications of changing the behaviour of others; use skills necessary for starting a successful small business.
Course: PU47
Credit Points: 8
Contact Hours: 3 per week

SSB03 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

SSB04 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: SSB003
Credit Points: 6
Contact Hours: 3 per week

SSB05 PSYCHOLOGY FOR HEALTH PROFESSIONALS
Presents particular aspects of the theories, skills and approaches of interpersonal, social and organisational psychology which are relevant to nursing practice. Topics include: humanistic, cognitive, behavioural and social models for understanding the individual; communication processes; self-concept and self-esteem; protection of the ego; the impact of emotions and beliefs on health behaviour; and interpersonal communication skills.
Courses: NS40, NS48
Credit Points: 8
Contact Hours: 3 per week

SSB06 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 eth-
nicity, 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 workplace.

Courses: ME44, ME45
Credit Points: 4
Contact Hours: 2 per week

■ SSB908 BEHAVIOURAL SCIENCE
An introduction to perception, motivation, individual personality, social attitudes, group interaction and dynamics; social motives and the sources and resolution of conflict; the practical application and limitations of behavioural studies; readings and case studies drawn from the building industry; the job and responsibilities of management; the functions and role of the manager including planning, organisation, control, budgeting and decision-making; styles of leadership; employee selection, training, appraising and promotion; worker efficiency and working conditions.

Courses: CN31, CN32
Credit Points: 6
Contact Hours: 3 per week

■ SSB910 INTRODUCTORY PSYCHOLOGY FOR HEALTH PROFESSIONALS
A course of lectures and tutorials on psychology as a science and interpersonal behaviour and skills and its relevance to the radiographer.

Course: PH38
Credit Points: 4
Contact Hours: 2 per week

■ SSB911 GENERAL PSYCHOLOGY
This course is designed to give optometry students an ability to demonstrate effective interpersonal skills in relation to patients and other health professionals; indicate bases of individual differences; diagnose patient needs and respond appropriately; state causes of stress, effects on health, and indicate appropriate techniques to reduce stress; indicate techniques that may be used to modify patient attitudes.

Course: QP42
Credit Points: 4
Contact Hours: 3 per week

■ SSB912 PSYCHOLOGY
An introduction to general psychology to give a base for subsequent studies in the various fields of psychology and to provide limited skills training in some areas for personal development; research approaches; learning and motivation; individuals and groups; the development of groups and the assessment of individuals within groups; perception, human development, and stress management, individual differences, psychological testing and personality.

Courses: HM42, PU49
Credit Points: 12
Contact Hours: 3 per week

■ SSB913 DEVELOPMENTAL PSYCHOLOGY
A basis for the study of the promotion of psychological health of individuals at differing developmental stages. The content includes psychological adjustment, developmental theories, developmental aspects of childhood, adolescence, middle and old age and specific areas such as sexual development, death and dying; relationships to work and professional environments.

Course: SS07
Prerequisite: SSB903 or SSB912 or SSB932
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 and groups; research methodology; stereotypes and prejudice; conformity; persuasion; attraction and intimacy; help seeking and giving; aggression; leadership.

Course: SS07
Prerequisite: SSB903 or SSB912 or SSB932
Credit Points: 12
Contact Hours: 3 per week

■ SSB916 BEHAVIOURAL & HEALTH PSYCHOLOGY
The physiological and cognitive bases to human behaviour; the nervous and endocrine systems of the body, the brain and its functioning; learning, information processing, memory and problem solving; consciousness and altered states of consciousness; hormones and drugs and their effects on emotional expression; the development of intelligence; the relation of physiological and cognitive factors to motivation and behaviour.

Course: SS07
Prerequisite: SSB912 or 96 credit points of approved study
Credit Points: 12
Contact Hours: 3 per week

Incompatible with: SSB934

■ SSB917 COUNSELLING FOR HEALTH PROFESSIONALS
A study of the psychology of illness and the counselling process for advanced radiographers.

Course: PH38
Credit Points: 4
Contact Hours: 2 per week

■ SSB918 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

■ SSB919 SOCIAL & CULTURAL ASPECTS OF HEALTH
A broad overview of the key theoretical and practical questions currently being addressed in the field of the sociology of health and illness providing a framework for individuals wishing to develop professional skills in health education.

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

■ SSB920 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; introduction to the use of SPSS.

Course: SSB07
Credit Points: 12  Contact Hours: 3 per week

■ SSB931 HUMAN LEARNING AND MOTIVATION
This course examines the origins of Learning Theorists, the development of Classical, Operant and Social Learning Theory and their application in both adult and childhood settings. It investigates in some detail Social Cognitive theories of learning, focussing on Bandura's theories of modelling, expectations and reciprocal causation. Motivation is explored through an outline of historical approaches, biological and personality theories of motivation.

Course: SSB07
Prerequisites: SSB003 or SSB912 or SSB932
Credit Points: 12  Contact Hours: 3 per week

■ SSB932 INTRODUCTION TO PSYCHOLOGY IB
Introduction to physiological, cognitive and developmental bases to human behaviour. An overview of biology and behaviour: the brain, neurons and neurotransmitters; alcohol and other drugs and neurotransmitters; sensation and perception; memory and cognition; human motivation and emotion; personality: an overview of human development; theoretical and research approaches to human development; research questions about adulthood.

Course: SSB07
Prerequisites: SSB003, or SSB912
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: SSB07
Prerequisite: SSB003 or SSB912
Credit Points: 12  Contact Hours: 3 per week

Incompatible with: SSB937

■ SSB934 PHYSIOLOGICAL PSYCHOLOGY
The physiological and cognitive bases to human behaviour: the nervous and endocrine systems of the body, the brain and its functioning; learning, information processing, memory and problem solving; consciousness and altered states of consciousness; hormones and drugs and their effects on emotional expression; the development of intelligence; 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
Prerequisites: SSB003, or SSB912
Credit Points: 12  Contact Hours: 3 per week

■ SSB936 PERSONALITY & PSYCHOPATHOLOGY
The concept of personality and individual differences from the viewpoint of theory, research and assessment/application; functional and dysfunctional aspects of personality; the integration of traditional theoretical perspectives - psychodynamic, 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, lifestyle 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 intelligence application of cognitive psychology. Artificial intelligence, ergonomics and job design are also included as topics.

Courses: IF52, IF54, IS43, IT20
Prerequisites: SSB912 or 96 credit points of approved study
Credit Points: 12  Contact Hours: 3 per week
Incompatible with: SSB933

■ SSB939 ALCOHOL & OTHER DRUG STUDIES
An advanced unit giving special attention to the following: what is a drug?; an overview of licit and illicit drugs; states of consciousness; models of use; assessment; and referral practices, theories and research into dependency, historical examples of drug use; Australian drug use; social reinforcement of drug use; gender issues; cultural issues; physiology of drug use; power issues; crisis intervention; legal issues; mythology and drug use.

Courses: SSB07
Prerequisite: SSB934
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
Prerequisites: 36 credit points of second or third year psychology units
Credit Points: 12  Contact Hours: 3 per week

■ SSB942 INDEPENDENT STUDY (PSYCHOLOGY)
Individual students 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
Prerequisites: 36 credit points of second or third year psychology units
Credit Points: 12  Contact Hours: 3 per week

■ SSB943 OCCUPATIONAL & VOCATIONAL PSYCHOLOGY
The well-being and productivity of individuals and groups in the workforce; 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
Prerequisites: 36 credit points of second or third year psychology units
Credit Points: 12  Contact Hours: 3 per week

■ SSB944 INDUSTRIAL & ORGANISATIONAL PSYCHOLOGY
This unit examines human factors in job design, occupational health and safety, work and personal motiva-
tion, the assessment of suitability and/or of performance, and the qualities needed in career advancement.

Course: SSB07
Prerequisites: SSB920 and at least one of SSB017 or SSB015
Credit Points: 12  Contact Hours: 3 per week

■ SSB946 COUNSELLING THEORY & PRACTICE
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, language and the construction of problems; group therapy; group counselling; analytic psychotherapy; ethical, social and moral issues in counselling.
Course: SSB07  Prerequisite: SSB008
Credit Points: 12  Contact Hours: 3 per week

■ SSB948 ADVANCED DEVELOPMENTAL PSYCHOLOGY
Primary attention is given to research methods in developmental psychology and major issues in life development will be covered including infant development, cognitive development, social development, ageing, parenthood and marriage. Students will be asked to carry out a major class research project. The primary aim is to promote the necessary to critically evaluate and carry out solid research in developmental psychology.
Course: SSB07  Prerequisites: 36 credit points of second level psychology units including SSB005 or SSB913 as one of the units.
Credit Points: 12  Contact Hours: 3 per week

■ SSB949 INTRODUCTION TO FAMILY THERAPY
Major concepts of systemic theory as applied to families; major models of family therapy, e.g. structural, strategic, systemic, solution focused; assessment of family structures and dynamics; using therapeutic teams, e.g. reflecting team; contemporary issues in family work, e.g. gender, ethnicity, changing family foundations; specific ethical issues, e.g. 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; t 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 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

■ SSB953 SPECIAL TOPIC
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 unit focuses on a sustained treatment of the concept of globalisation and the theories that it has provoked in contemporary sociological debates. This will entail a look at processes of globalisation in contemporary societies and state-systems. We shall look, therefore, at the new world order/disorder.
Course: SSB07  Prerequisite: SSB000
Credit Points: 12  Contact Hours: 3 per week

■ SSB961 AUSTRALIAN SOCIETY: INTRODUCTION TO SOCIOLOGY
Placing sociology in its own socio-historical context, tracing the origins and development of the discipline and identifying the forces that shaped the various perspectives and theories of sociology and the associated research methodologies. Major theoretical perspectives are introduced, compared and contrasted, and sociological concepts, theories and debates are discussed within the context of the analysis of contemporary Australia. A particular emphasis in the course is directed towards those factors that appear to promote, constrain or influence social stability, social change and social inequality.
Course: PU49  Credit Points: 12  Contact Hours: 3 per week

■ SSB962 SURVEY METHODS
This unit introduces students to the use of social surveys in sociological research. Students will be asked to design and conduct a survey using basic statistical techniques and the SPSS computer package designed for social scientists.
Course: SSB07  Credit Points: 12  Contact Hours: 3 per week

■ SSB964 SEX, GENDER & SOCIETY
This unit focuses on the history of feminist thought and contemporary perspectives with reference to issues of sociological inquiry. It examines the significance of perspectives from critical theory, structuralism, post-structuralism and action approaches in the development of feminist theory. The implications of feminist perspectives for research strategies will be considered with reference to feminist philosophers of science and metaphysicists such as Sandra Harding and Dorothy Smith.
Course: SSB07  Credit Points: 12  Contact Hours: 3 per week

■ SSB965 CULTURAL STUDIES
This unit will focus on culture and its role in the construction of the person and of social life. Much of the emphasis of this unit is on historical sociology and cross-cultural sociology; this strategic emphasis is taken in order to throw modern experiences into relief. We shall study a series of experiences which have only recently made their way into the sociological mainstream: the 'limit experiences' of madness, death, sexuality and criminality; and the 'miscellany' of social life - those experiences that were once thought too unimportant to study, such as swimming, walking, spitting and eating.
Credit Points: 12  Contact Hours: 3 per week
This unit gives students the opportunity to work on their own research programs under supervision. Students will, either individually or in small groups, undertake a reading program in an approved content area leading to written work of around 4,000 words.

Prerequisites: 60 credit points in sociology
Credit Points: 12
Contact Hours:

SSB966 INDEPENDENT STUDY (SOCIOLoGY)

This unit examines major perspectives in the study of work and organisations and their implications for research strategies. Specifically, it looks at the development of an orthodoxy in industrial sociology, and challenges to this orthodoxy with reference to Taylorist, Fordist and Post-Fordist accounts of work organisation. The relevance of this ‘discourse on industry’ is examined in the light of contemporary perspectives such as feminism, poststructuralism and ethnemethodology. These approaches are also explored with reference to their relationship to research strategies.
Course: SSB07
Credit Points: 12
Contact Hours: 3 per week

SSB970 ECONOMIC SOCIOLOGY

This unit examines major perspectives in the study of work and organisations and their implications for research strategies. Specifically, it looks at the development of an orthodoxy in industrial sociology, and challenges to this orthodoxy with reference to Taylorist, Fordist and Post-Fordist accounts of work organisation. The relevance of this ‘discourse on industry’ is examined in the light of contemporary perspectives such as feminism, poststructuralism and ethnemethodology. These approaches are also explored with reference to their relationship to research strategies.
Course: SSB07
Credit Points: 12
Contact Hours: 3 per week

SSB971 POLITICAL SOCIOLOGY

This unit examines major perspectives in the study of work and organisations and their implications for research strategies. Specifically, it looks at the development of an orthodoxy in industrial sociology, and challenges to this orthodoxy with reference to Taylorist, Fordist and Post-Fordist accounts of work organisation. The relevance of this ‘discourse on industry’ is examined in the light of contemporary perspectives such as feminism, poststructuralism and ethnemethodology. These approaches are also explored with reference to their relationship to research strategies.
Course: SSB07
Credit Points: 12
Contact Hours: 3 per week

SSB972 ETHNICITY, NATIONALISM AND CULTURAL DIVERSITY IN THE CONTEMPORARY WORLD

Ethnicity and nationalism appear to play the central role in shaping the contemporary condition in many different parts of the globe. After clarifying definitional problems, students will be given comprehensive overviews of different theories in the field of ethnicity and nationalism. The main emphasis will be placed on ‘institutitional’, ‘primordial’ and ‘modernist’ approaches and the sorts of explanations they offer for the powerlessness and persistence of the phenomenon. Finally, we shall look at how nationalism influences the construction of individual and collective identities by examining myths, ideology and symbols employed by nationalist discourses.
Credit Points: 12
Contact Hours: 3 per week

SSB973 SOCIAL THEORY AND SOCIAL CHANGE IN CONTEMPORARY EUROPE

This unit will address contemporary European social theory and the way it reflects upon societal change. The focus will be placed on three major changes that occurred since the 1960s: firstly, the emergence of new social movements; secondly, the end of the Cold War which brought about rapid change in Eastern Europe; and thirdly, the formation of the European Union. Historical and social theoretical perspectives will be used simultaneously. It will be shown how new social movements in Eastern Europe contributed to the collapse of imposed rationality and the existing order. The end of the Cold War and the subsequent ideological and political fragmentation of Eastern Europe have profoundly affected the European landscape. The ideology of the New World Order was quickly to hand to legitimize these contemporary European as well as global events. Theory developed both fatalistic as well as critical and modest accounts of this change.
Credit Points: 12
Contact Hours: 3 per week

SSB974 SOCIOLOGY OF SCIENTIFIC KNOWLEDGE

In recent years, sociologists have come to see the value of studying the construction of scientific knowledge, overcoming a vague distaste for scientific activity and recognising the importance of understanding the major truth-providing discourse of our age. This unit will introduce students to the various methodological approaches used in the study of scientific knowledge; go through a variety of case studies which will demonstrate the ‘constructedness’ of such knowledge; and demonstrate the implications of such study for an understanding of our changing society.
Credit Points: 12
Contact Hours: 3 per week

SSB975 HISTORY OF THE HUMAN SCIENCES

Since the nineteenth century, a variety of sciences have emerged which have taken the activities of ‘man’ as their object. Economics, biology and linguistics were radically reformed, and a variety of new sciences such as sociology, psychology and anthropology joined in the attempt to make the human body and soul ‘calculable’, as Nietzsche put it, to translate human life into a register of numbers, graphs, and dossiers. This unit will examine the conditions which allowed for the genesis of these human sciences; examine how these sciences transformed their putative object of study; and assess the interconnection between these new forms of knowledge and new ways of administering the conduct of life.
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
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
Credit Points: 12
Contact Hours: 3 per week

SSB989 HEALTH & THE LIFE CYCLE

An examination of changing patterns of individual wellness, illness and mortality and the influence of the life cycle on or vice versa; the social, cultural, anthropological and technological aspects of the prebirth and post-death phases; analysis of the cyclical process; compared and contrasted with a psychological human development approach.
Courses: ED26, ED50
Credit Points: 12
Contact Hours: 3 per week
The unit provides a critical review of the scientific methods as used in psychological research, and other issues in experimental and non-experimental research design. In addition there will be continued exposure to advanced quantitative statistical analysis techniques, including multivariate analysis of variance, multiple regression, discriminant analysis, multidimensional scaling and factor analysis. Qualitative research issues and techniques will also be considered.

Course: SS09  Prerequisite: SSB931 or equivalent
Credit Points: 12  Contact Hours: 3 per week

SSB991 ADVANCED RESEARCH METHODS
This unit provides a critical review of the scientific methods as used in psychological research, and other issues in experimental and non-experimental research design. In addition there will be continued exposure to advanced quantitative statistical analysis techniques, including multivariate analysis of variance, multiple regression, discriminant analysis, multidimensional scaling and factor analysis. Qualitative research issues and techniques will also be considered.

Course: SS09  Prerequisite: SSB931 or equivalent
Credit Points: 12  Contact Hours: 3 per week

SSB992 COUNSELLING PSYCHOLOGY
This unit builds on the major undergraduate specialisation in counselling and examines professional practice issues in counselling, such as supervision and ethical practice and critical integration of theory, research and practice. Assessment by literature review and demonstration of skills.

Course: SS09  Prerequisite: SSB008 and either SSB946 or SSB949
Credit Points: 12  Contact Hours: 3 per week

SSB993 COGNITIVE NEUROPSYCHOLOGY
This unit helps develop an understanding of the nature and behavioural consequences of neuropsychology with respect to the various stages of cognitive processing: perception and attention; learning and memory; language and concept formation; and higher-order intellectual and executive functions. The role of neuropsychological assessment in differential diagnosis is emphasised. Assessment involves evaluations of case study material, an essay and examination including multiple-choice and short-answer questions.

Course: SS09  Prerequisite: SSB933 and SSB934 and SSB941
Credit Points: 12  Contact Hours: 3 per week

SSB994 ADVANCED SOCIAL AND DEVELOPMENTAL PSYCHOLOGY
The unit addresses issues in developmental and social psychology in a multicultural context. Students are required to investigate in depth one of four broad areas: gender issues; temporal perspectives; the construction and impact of bias; and themes in adult development. The course proceeds through introductory lectures to student presentations on topics of interest chosen from the four broad areas above. Assessment is by the development of a research proposal, a literature review and presentation.

Course: SS09  Prerequisite: SSB913, SSB915, SSB948
Credit Points: 12  Contact Hours: 3 per week

SSB995 ADVANCED ORGANISATIONAL PSYCHOLOGY
This unit builds on studies in SSB944 Industrial and Organisational Psychology or its equivalent at advanced undergraduate level. Special attention will be given to human interactions at work, including concepts and issues relating to selection and assessment, work design, team development, performance measures and management, management theory and practice, role of change agents, competency-based assessment and training, community and environmental factors, the effects of organisational structure and group dynamics, including conflict analysis and resolution.

Course: SS09  Prerequisites: SSB915 and SSB944
Credit Points: 12  Contact Hours: 3 per week

SSB996 THESIS
Continuation of SSB990.
Course: SS09  Prerequisite: SSB990
Credit Points: 12  Contact Hours: 3 per week

SSB997 RESEARCH & PROFESSIONAL DEVELOPMENT SEMINAR
This unit will be conducted in association with SSB996. Presentation of research data, analysis and associated psychological research issue will be discussed. In addition, the unit will give attention to all aspects of the Code of Professional Conduct including the provision of psychological services, legal and ethical responsibility and interaction with other professional and personnel responsible for ongoing training. Assessment will be on a presentation of a written paper covering the above areas.

Course: SS09  Prerequisite: SSB991
Credit Points: 12  Contact Hours: 3 per week

SSN000 COUNSELLING STUDIES 1
Provides a conceptual overview of the history of counselling and the most significant contemporary developments in the field; selected models of brief problem-oriented and solution-focused therapies, and their application across a variety of counselling contexts; the analysis of human problems in lifespan developmental and social contexts, and on the conceptual understanding, practical skills, and critical evaluation of the above therapeutic approaches.

Course: SS12  Credit Points: 12  Contact Hours: 3 per week

SSN001 PROFESSIONAL STUDIES 1
The development of foundational interpersonal and relationship-building skills which are viewed as relevant to the counselling process regardless of theoretical orientation. Interpersonal skills and insights are developed through an introduction to groupwork, together with micro-skills workshops involving interpersonal process recall. The development of ethical practices in counselling and an ongoing commitment to critical reflection on counselling (e.g. the ideology of counselling, the status of counselling knowledge, and issues relating to gender, ethnicity and class).

Course: SS12  Credit Points: 12  Contact Hours: 3 per week

SSN002 COUNSELLING STUDIES 2
The historical development of psychoanalysis; psychodynamics in counselling practice; hypnotism and unconscious phenomena in counselling; scientific credibility of psychoanalytic psychotherapy; assessment of neurosis and psychosis in counselling.

Course: SS12  Prerequisite: SSN000
Credit Points: 12  Contact Hours: 3 per week

SSN003 GROUP STUDIES
The development of skills and experience in organising and facilitating group work, in the context of personal support and therapeutic groups. Establishing group norms; facilitating stages of group development; responding to member behaviour and facilitator interventions; planning, implementing and evaluating ethical group work practices; dealing with defensiveness and hidden agendas; applying brief solutions-focused and other counselling theory to groups; examining the motion of the therapeutic milieu.

Course: SS12  Prerequisite: SSN001
Credit Points: 12  Contact Hours: 3 per week
SSN004 COUNSELLING STUDIES 3
The theory and research relating to family/marital developmental transitions, contemporary changes to family life, and the field of relational or systemic therapies. A selective emphasis is made on models which build on the knowledge and skills developed in SSN001 and SSN002. Thus major emphases will include solution-oriented and psychodynamic approaches to relationship counselling.
Course: SS12  
Prerequisite: SSN002  
Credit Points: 12  
Contact Hours: 3 per week

SSN005 RESEARCH METHODS AND ISSUES
Different approaches to, and perspectives on, research used across the disciplines of social science. Philosophical and ethical issues will be related to questions of methodology. The unit consists of formal teaching input from lecturers, together with a seminar component in which students will present preliminary proposals for their independent project for group discussion and feedback.
Prerequisite: SSN002 (for Counselling major only)  
Credit Points: 12  
Contact Hours: 3 per week

SSN006 PROFESSIONAL STUDIES 2
This unit continues the themes of integration and reflection introduced in SSN001. It has two related parts: (a) The experience of group supervision is used as a context for reflection, critical analysis and integration in relation to both specific counselling skills and broader issues of professional practice (e.g. professional ethics, case management, assessment and referral). (b) As well as meeting fortnightly for group supervision, students attend seminars on selected topics and issues relating to the theme of critical reflection on counselling practice. This will involve perspectives from outside traditional counselling discourse (e.g. sociology, history, political theory, gender studies) and will focus on their relevance and implications for counselling practice. The student's experience of ongoing casework and the supervisory process will be used to focus critical reflection in these areas.
Course: SS12  
Prerequisite: SSN001  
Credit Points: 12  
Contact Hours: 3 per week

SSN007 PROFESSIONAL STUDIES 3
Continuation of SSN006. Additionally, however, there is an emphasis on students learning and demonstrating supervision skills. The other major aspect of the subject consists of a graduate seminar in which students will present work based on their research projects.
Prerequisite: SSN005  
Credit Points: 12  
Contact Hours: 3 per week

SSN008 PROJECT
Students undertake an individual project of theoretical and/or empirical research in a selected area of counselling. The project is supervised by a member of the teaching staff. The completed project is to be presented in the form of a dissertation of not more than 15,000 words.
Course: SS12  
Prerequisite: SSN006  
Credit Points: 36

SSN009 FAMILY THERAPY PRACTICE
This unit builds upon and extends the family therapy concepts and skills provided in SSN004. Greater emphasis is placed on tailoring a family therapy role to the needs of the student's individual work context. Where practicable, students will also have the opportunity to participate in the actual practice of family therapy sessions in the School's Family Therapy and Counselling Clinic. Students will either conduct therapy sessions under supervision, or participate as members of consulting teams.
Course: SS12  
Prerequisite: SSN004  
Credit Points: 12  
Contact Hours: 3 per week

SSN010 CAREER COUNSELLING
Theoretical approaches to career guidance; resources and information for career guidance; the development and implementation of career education programs; and specific counselling skills related to career guidance. Major areas of study will include developmental theory, contemporary changes to the world of work (e.g. industrial relations, workplace changes) and computer applications (e.g. the Job and Course Explorer Program).
Course: SS12  
Prerequisite: SSN000  
Credit Points: 12  
Contact Hours: 3 per week

SSN011 INDEPENDENT STUDY
Students may elect to undertake an individual reading or research studies in an area of counselling which is of personal or professional interest, and which is not covered in other parts of the course. The project must be approved by the Course Coordinator, and will be supervised by a member of staff, with whom the student will negotiate the precise topic and mode of assessment.
Course: SS12  
Prerequisite: SSN000  
Credit Points: 12

SSN012 COUNSELLING AND ORGANISATIONS
Examination of helping organisations as bureaucracies; organisational responses to social change; stress within helping organisations; issues of teamwork among professional helpers; and the negotiation of effective counselling roles within organisations.
Course: SS12  
Prerequisite: SSN000  
Credit Points: 12  
Contact Hours: 3 per week

SSN013 ADVANCED COUNSELLING STUDIES
This unit provides for advanced studies in a chosen area of counselling theory and practice. It is designed to either provide a greater depth of study in one of the major theoretical covered in the course (e.g. brief therapy, psychodynamic therapy, group work) or to allow specialised studies in orientations which are not heavily emphasised in the course. Such areas could include experiential therapies (e.g. Gestalt, Process-Oriented Psychotherapy, Psychodrama, Art Therapy, Couples Therapy, etc. The particular focus of this elective in any year would depend upon student interest plus the availability of suitable staff and resources.
Course: SS12  
Prerequisite: SSN004  
Credit Points: 12  
Contact Hours: 3 per week

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

SVB688 PROFESSIONAL PRACTICE A
Preparing surveyors for professional practice either as employer or employee.
Course: 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