4

Subject Synopses
SUBJECT SYNOPSIS
Gardens Point campus

This section provides synopses of the subjects offered on the University’s Gardens Point campus. The synopses are presented in alpha-numeric order according to their codes.

Subject coding and numbering
The subject code is of the format XXX999. The first two characters indicate the Department, School or Faculty administering the subject. The third character indicates the level of the course in which the subject is normally taught.

Subject Coding
AC Accountancy
AR Architecture and Industrial Design
AS Science
BE Biology
BG Construction Management
BS Business
BT Built Environment
CE Civil Engineering
CH Chemistry
CM Communication
CS Computing Science
EE Electrical and Electronic Systems
EN Engineering
ES Applied Geology
HS Health Science
IN Information Technology
IS Information Systems
LP Planning and Landscape Architecture
MA Mathematics
ME Mechanical and Manufacturing
MN Management
MS Medical Laboratory Science
NS Nursing
OP Optometry
PH Physics
PN Public Health and Nutrition
SV Surveying
IF Interfaculty

Subject Numbering
N Masters Degree
P Graduate Diploma
B Bachelors Degree
D Diploma
A Associate Diploma (all schools except Information Systems)
T Associate Diploma in Engineering Faculty
S Special Subjects

Prerequisite and co-requisite subjects
For definitions of the terms prerequisite and co-requisite subject(s) refer to Rule 1.10.2 of the Student Rules, Policies and Procedures in this Handbook.

[R] = Repeat-requisite; the prerequisite or co-requisite requirements may be satisfied by attempting the subject – a passing grade is not essential. A student is deemed to have attempted the subject if all assessment requirements have been attempted when registered for the subject. If failed, the repeat-requisite must be repeated at the first opportunity.
ACB110 ACCOUNTING I
Introduction to accounting; recording business transactions; adjustments; preparing financial statements; merchandising operations; accounting systems; specialised journals; cash; internal control; non-current assets; receivables; payables; inventories; sources and applications of funds; analysis and interpretation of financial statements.
Credit Points: 12  Contact Hours: 4 per week

ACB115 ACCOUNTING II
Partnerships; cash flow statements; introduction to company accounting; introduction to tax-effect accounting; preparation of financial statements; alteration of share capital; issue and redemption of debentures; funds statements; investments; introduction to consolidations; analysis and interpretation of financial statements.
Prerequisite: ACB110
Credit Points: 12  Contact Hours: 4 per week

ACB140 BUSINESS LAW
The components of the Australian legal system and the judicial process; the way legal decisions are made; a study of contract law.
Credit Points: 12  Contact Hours: 4 per week

ACB180 ACCOUNTING FOR MANAGERS
Introduction to recording business transactions; preparation of financial statements; accounting for inventory control accounts and subsidiary ledgers; structure of organisations and company accounts, analysis and interpretation of financial statements; the managerial accounting costing process; cost accounting systems; standard costing and variance analysis; managerial accounting and decision making.
Credit Points: 12  Contact Hours: 3 per week

ACB181 ACCOUNTING INFORMATION SYSTEMS I
The functions, activities and structure of organisations and the basic concepts of information and decision making; examination of the nature and role of the two general accounting systems which are found in an organisation – the Financial Accounting Information System (F.A.I.S.) and the Managerial Accounting Information System (M.A.I.S.); the procedures and techniques involved in the F.A.I.S. and the management planning and control system.
Credit Points: 9  Contact Hours: 2 per week

ACB212 COMPANY ACCOUNTING
Company formation; accounting for company income tax (tax-effect accounting); liquidation; acquisition of assets (including companies); consolidated financial statements; equity accounting; and disclosure in company financial statements.
Prerequisite: ACB115
Credit Points: 12  Contact Hours: 4 per week

ACB220 COST ACCOUNTING
Cost accounting terminology; costing systems and cost estimation techniques.
Prerequisite: ACB110
Credit Points: 12  Contact Hours: 4 per week

ACB230 FINANCIAL MANAGEMENT I
Valuation; financial mathematics; capital budgeting; CAPM (Capital Asset Pricing Model); WACC (Weighted Average Cost of Capital) and introduction to the concept of risk; portfolio theory.
Prerequisite: ACB115 and MNB252
Credit Points: 12  Contact Hours: 4 per week

ACB231 AUSTRALIAN CAPITAL MARKETS
The Australian Capital Markets; institutions and behaviour; development of financial market mathematical skills.
Prerequisite: MNB251
Credit Points: 12  Contact Hours: 3 per week

ACB240 LAW OF BUSINESS ASSOCIATIONS
The law relating to the establishment, operation, and dissolution of business associations; the forms of business associations; partnerships, joint ventures, trusts, companies and voluntary associations.
Prerequisite: ACB140
Credit Points: 12  Contact Hours: 4 per week

ACB280 HEALTH ADMINISTRATION FINANCE
Fund/accrual accounting; financial administration in Commonwealth and State Government; financial management in the health industry; financial analysis; planning and budgeting, working capital management in the health industry; health care performance and evaluation.
Prerequisite: ACB383 or ACB110
Credit Points: 12  Contact Hours: 3 per week

ACB281 BUILDING FINANCIAL MANAGEMENT I
The accounting process and accounting systems in the Building Industry; the nature of accounts, liabilities, and proprietorship; the accounting equation and balance sheet, ledger accounts and the double entry system, the accounting period concept, and profit determination; different forms of ownership and the basic nature of taxation; budgeting.
Credit Points: 4  Contact Hours: 2 per week

ACB282 MANAGERIAL ACCOUNTING PRINCIPLES
Budgeting, standard costs and variance reporting for manufacturing and non-manufacturing firms; managerial performance reporting, decentralised business operation, and capital budgeting; inventory planning, control and valuation; relevant costs and decision making, project control.
Credit Points: 12  Contact Hours: 3 per week

ACB310 ACCOUNTING THEORY & PRACTICE
The evolution of accounting theory; profits (determination and disclosure; revenue and expense recognition); assets (definition, recognition, measurement and classification); extractive industries; liabilities (definition, recognition, measurement and classification); leases; foreign currency translation; and joint ventures.
Prerequisite: ACB212
Credit Points: 12  Contact Hours: 4 per week

ACB311 AUDITING
The audit environment; legal liability of auditors; professional ethics; study and evaluation of audit planning and programming, evidence, internal control theory and review techniques; audit program applications; revenue, receivables, cash, inventory; audit in EDP environment and evaluation of EDP controls; computer-assisted audit techniques; computer fraud, sampling techniques; the audit report.
Prerequisite: ACB212
Credit Points: 12  Contact Hours: 3 per week
ACB312 AUDITING & PROFESSIONAL PRACTICE
The audit approach; planning an audit; verification of the balance sheet and profit and loss statement trade debtors, inventory, non-current assets, cash, investments, taxation, capital and retained profits; audit sampling theory techniques and applications; and other issues of current professional interest.
Prerequisite: ACB311
Credit Points: 12 Contact Hours: 3 per week

ACB320 GOVERNMENT ACCOUNTING
Objectives, concepts and principles of government accounting, accountability, management control, budgeting; revenue and expenditure accounting; illustration of government accounting systems at all levels of government, comparative government budgeting and accounting systems; accounting information systems, internal audit and efficiency audit.
Prerequisite: ACB310
Credit Points: 12 Contact Hours: 4 per week

ACB321 MANAGERIAL ACCOUNTING
Development of budgets; responsibility accounting; special decision making; transfer pricing; VP Planner; case study exercises; variance analysis; investigation of variances; inventory planning and control; project planning and control and strategic management; agency theory.
Prerequisites: ACB220, ACB230
Credit Points: 12 Contact Hours: 4 per week

ACB322 FINANCIAL MODELLING
Supply and demand for financial information cross-sectional and time series analysis; bankruptcy prediction; empirical issues and evidence; debt ratings and financial information; financial analysis models; distress analysis and loan decision. An IFPS project is also included in the course.
Prerequisite: ACB230
Credit Points: 12 Contact Hours: 4 per week

ACB330 GOVERNMENT FINANCE
An introduction to government finance, sources of public income, public expenditures, investment and debt; taxation objectives principles and Australian practices; instrumentality of economic accountability, intergovernmental financial relations, government finance and economic policy, new financial legislation and institutions.
Prerequisites: ACB230, MNN106
Credit Points: 12 Contact Hours: 3 per week

ACB331 FINANCIAL MANAGEMENT II
Firm decisions regarding dividends; capital structure; working capital and leasing; market efficiency; portfolio management; the nature and applications of options; takeovers and international finance.
Prerequisite: ACB230
Credit Points: 12 Contact Hours: 4 per week

ACB332 PORTFOLIO & SECURITY ANALYSIS
The operation of Australia's financial markets; use of Stock Exchange data, to calculate betas and form investment portfolios.
Prerequisite: ACB230
Credit Points: 12 Contact Hours: 3 per week

ACB335 INSURANCE RISK MANAGEMENT
Risk classification; measurement and analyses of risk; types of insurance policies available; the evaluations of an insurance program.
Prerequisites: ACB110, ACB230
Credit Points: 12 Contact Hours: 3 per week

ACB336 INTERNATIONAL FINANCE
International financial markets; overseas finance; exchange rate; risk management; international investment; legislation.
Prerequisites: ACB230, ACB231
Credit Points: 12 Contact Hours: 3 per week

ACB340 TAXATION LAW AND PRACTICE
Introduction to the Australian taxation system; the elements in calculating taxable income-acceptable income and allowable deductions; the treatment of eligible termination payments, capital gains tax, trading stock and specific allowance deduction provisions (including substantiation); calculation of tax payable; and fringe benefit tax.
Prerequisite: ACB240
Credit Points: 12 Contact Hours: 3 per week

ACB341 COMMERCIAL & SECURITIES LAW
Specific types of contract - sale of goods, hire purchase and agency etc; bailment.
Prerequisite: ACB140
Credit Points: 12 Contact Hours: 4 per week

ACB342 COMPANY LAW & PRACTICE
The practical implementation of the accounting, auditing, meeting and managerial requirements of the Corporations Code; the outworking of the law relating to insolvent and financially troubled companies; and the peculiar difficulties of the takeover provisions and the protection of minority interests.
Prerequisite: ACB240
Credit Points: 12 Contact Hours: 4 per week

ACB343 TAXATION OF BUSINESS ENTITIES
The income tax treatment of the various business entities and classes of taxpayer; the principles governing the taxation of international transactions; the administration of taxation legislation; the imposition of non-income business taxes.
Prerequisite: ACB340
Credit Points: 12 Contact Hours: 4 per week

ACB344 TAXATION & PROFESSIONAL PRACTICE
Indirect and related business taxes; tax planning and client relationships; sales tax, stamp duty, payroll tax, workers' compensation and land tax, tax planning, and client relationships.
Prerequisite: ACB340 Co-requisite: ACB343
Credit Points: 12 Contact Hours: 3 per week

ACB345 FINANCIAL INSTITUTIONS - LAW
The general processes of the legal system: legal structures of financial institutions, bank-customer relationship; Cheque Act, negligent advice; Credit Act.
Prerequisite: ACB140
Credit Points: 12 Contact Hours: 3 per week

ACB350 FINANCIAL INSTITUTIONS - LENDING
The principles and practice of lending; how loans are analysed in a banking environment; the legal relationship...
ship between financial institutions and their customers.

**Prerequisite:** ACB230
**Credit Points:** 12  **Contact Hours:** 3 per week

**ACB351 FINANCIAL INSTITUTIONS - MANAGEMENT**
Strategic planning; managing interest rate risk; liquidity; capital structure costing services; performance measurement; responsibility accounting; motivation; management of funding decision; management of the loan portfolio and liquidity; differential cost analysis and transfer pricing.

**Prerequisites:** ACB230, ACB220
**Credit Points:** 12  **Contact Hours:** 4 per week

**ACB352 COMPARATIVE FINANCIAL SYSTEMS**
Introduction to the operations of important overseas capital markets.

**Prerequisites:** ACB231, ACB230
**Credit Points:** 12  **Contact Hours:** 3 per week

**ACB360 COMPUTER SECURITY & AUDIT**
The impact of EDP on controls and auditing, general EDP controls, EDP application controls, generalised audit software, static and dynamic computer-assisted auditing techniques, special EDP environments and computer fraud.

**Prerequisite:** ACB311  **Co-requisite:** ACB311
**Credit Points:** 12  **Contact Hours:** 3 per week

**ACB380 LAW & COMMUNICATION**
The institutions of the law, ordering the law - public and private; the fashioning of law - cases, precedent, legislation, delegated legislation, interpretation, facts and the law, legal reasoning, the law library; limits on freedom of expression - torts and crimes - defamation, obscenity, laws and regulations affecting advertising - broadcasting, television and press, contempt of court.

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

**ACB381 PUBLIC ADMINISTRATIVE LAW**
The range of controls exercisable by common or statute law over governmental decision-making processes, where the validity of such processes is not dependent on special constitutional considerations and where it does not involve a question of mere liability under the existing categories of tort or contract law.

**Prerequisites:** MNB181, MNB183
**Credit Points:** 12  **Contact Hours:** 3 per week

**ACB382 INTRODUCTORY ACCOUNTING**
The accounting equation and the double entry principle; recording business transactions; end of period adjustments; financial statements and closing entries; accounting for merchandising operations; specialised journals and subsidiary ledgers; cash controls; accounting for partnerships; accounting for companies; interpretation of financial statements; setting up an accounting system for a legal practice.

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

**ACB383 ACCOUNTANCY FOR ADMINISTRATORS**
Double entry accounting; general journal; ledgers; trial balance; overview of financial statements; worksheet preparation; accounting for merchandising operations; specialised journals and subsidiary ledgers and cash controls.

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

**ACB480 PERSONAL & CORPORATE FINANCE**
The Australian financial environment from both a personal and corporate point of view; goals and functions of finance; methods of project evaluation; evaluation and selection of investment projects; management of working capital; leverage; cash forecasting and cash management; financial statement analysis.

**Credit Points:** 4  **Contact Hours:** 3 per week

**ACB481 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 and the organisation of the Australian capital markets; sources of long-term and short-term finance; the investment of firm funds in working capital and fixed assets; portfolio management theory.

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

**ACB999 SPECIAL TOPIC - ACCOUNTANCY**

**ACN110 PROFESSIONAL YEAR MODULE - ACCOUNTING**
The nature, methodology and development of accounting theory; incentive problems and contracting solutions associated with the issue of debt and equity; contracting explanations for external financial reporting; accounting policy choices and the value of the firm, and accounting and the political process.

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

**ACN111 FINANCIAL ACCOUNTING HONOURS**
See ACN110.

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

**ACN112 ADVANCED COMPANY ACCOUNTING**
Accounting for intercompany investments; relevant Australian and overseas accounting standards, in particular, standards involving goodwill, business combinations, investments, consolidation, equity accounting and accounting for joint ventures; changes in ownership of shares; mutual shareholdings; foreign subsidiaries; different classes of shares and funds statements.

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

**ACN114 ACCOUNTING RESEARCH**
The research methodology used in the field of accounting; the use of certain research techniques in order to assist students in their research dissertation and preparation of research papers. The subject aims to develop a capacity to analyse and evaluate the literature in accounting research publications, and skills in research methodologies for undertaking individual research in accounting. This subject is a prerequisite for ACN950 Dissertation and should, therefore, normally be attempted immediately prior to enrolment in ACN950 Dissertation.

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

**ACN118 INTERNATIONAL ACCOUNTING**
Examination of accounting and auditing functions in the context of multinational corporations; environmental influences on accounting practices; accounting for changing prices; taxation; foreign currency translation; multinational transfer pricing and performance evaluation; role and impact of interna-
ACNI20 PROFESSIONAL YEAR MODULE

- AUDIT & EDP

See ACN125.
Credit Points: 12 per semester
Contact Hours: 3 per week

ACN121 COMPUTER AUDITING

The fundamental principles of the practice of computer auditing: the auditor and the computer; the study and evaluation of control in a computerised application: the general and application controls applicable to an accounting application; the audit trail in computer data processing and applicable computer audit tools and techniques. In discussing these topics consideration will be given to both mini and micro computer systems.
Credit Points: 12
Contact Hours: 3 per week

ACN122 AUDIT SAMPLING

Statistical sampling methods proposed for and employed in the performance of audits; the audit sampling process: auditor decisions and risk of error; attributes and variable-probability proportional-to-size sampling.
Credit Points: 12
Contact Hours: 3 per week

ACN123 INTERNAL AUDITING

The techniques generally used by the internal auditor: the need for efficiency or value-for-money auditing; the role the internal auditor must play in large organisations (public and private).
Credit Points: 12
Contact Hours: 3 per week

ACN124 AUDITING HONOURS

The nature of auditing research; the role of auditing: independence; reporting: liability; fraud detection; audit process: risk; materiality: internal control; analytical review: computer auditing, and auditing standards.
Credit Points: 12
Contact Hours: 3 per week

ACN125 AUDITING STANDARDS & PRACTICE

An examination of relevant auditing standards and their implications for practice: development of an analytical approach; the ability to exercise professional judgement to audit problems.
Credit Points: 12
Contact Hours: 3 per week

ACN126 FINANCIAL REPORTING

The requirements for the preparation and presentation of financial statements in accordance with various professional and statutory reporting requirements; analysis and interpretation of financial statements.
Credit Points: 12
Contact Hours: 3 per week

ACNI27 EXTERNAL REPORTING ISSUES

The consideration of a number of contemporary issues in external reporting. Various practical accounting and reporting issues covered include: accounting for extractive, long-term construction contracts; segment reports; foreign currency translation; leasing; tax-effect accounting; cash flow statements and accounting for off-balance sheet financing. Appropriate statements of accounting standards (both Australian and overseas); relevant discussion papers published by the Australian Accounting Research Foundation.
Credit Points: 12
Contact Hours: 3 per week

ACN151 FINANCE HONOURS

Capital markets, consumption and investment; investment decisions; market equilibrium; the capital asset pricing model; arbitrage pricing theory; capital structure (theory and evidence); dividend policy (theory and evidence); efficient capital markets (theory and evidence).
Credit Points: 12
Contact Hours: 3 per week

ACN152 ADVANCED CAPITAL BUDGETING

The use of case studies to understand the theory and practice underlying the firm's investment and financing decisions; topics include capital investment analysis: adjusted present value; retirement decisions; unequal lives; cost of capital; estimating beta; capital rationing; valuation of new issues; mergers and takeovers.
Credit Points: 12
Contact Hours: 3 per week

ACN153 INTERNATIONAL FINANCE

The finance function in the context of multinational corporations and overseas financial markets; foreign currency translations in a reporting and decision-making context; multinational transfer pricing; performance evaluation; an introduction to international financial markets; exchange risk exposure; multinational diversification: remittance to parent companies (dividends, loan repayments); finance of export trade; host country legislation and its impact on multinational companies.
Credit Points: 12
Contact Hours: 3 per week

ACN155 FINANCIAL MODELLING

The techniques of financial modelling (forecasting, risk analysis, optimisation); model specification, model structure and programming the model; the use of the computer in cash management, financing and investment planning; sensitivity analysis and simulation; solving practical problems using computers, electronic spreadsheets, and modelling applications.
Credit Points: 12
Contact Hours: 3 per week

ACN156 FINANCIAL RISK MANAGEMENT

Emphasis will be placed on how security prices are determined and on market behaviour. Equal emphasis will be placed on institutional detail and the valuation methods used in practice. Finally, students will be introduced to applied research into share price behaviour. Topics covered include the efficient market hypothesis; portfolio theory; the capital asset pricing model; the valuation of fixed interest securities; the valuation of common shares; the valuation of options, warrants and convertible securities.
Credit Points: 12
Contact Hours: 3 per week

ACN170 PROFESSIONAL YEAR MODULE

- TAXATION

See ACN171 and ACN172. Assessable income; allowable deductions; taxation of individuals and
The Australian income tax system in order to give perspective on credit points earned in Australian income; and tax planning arrangements of some complex practical problems raised by the Income Tax Assessment Act and related legislation.

Credit Points: 12 per semester

**ACN171 ADVANCED TAXATION**
A conceptual analysis of the Australian income tax system in order to give perspective and meaning to the considerable body of technical law; income and capital gains, deductions, tax accounting, entities, avoidance and administration; an in-depth treatment of some complex practical problems raised by the Income Tax Assessment Act and related legislation.

Credit Points: 12 Contact Hours: 3 per week

**ACN172 INTERNATIONAL TAXATION**
Principles of Australian income tax law and practice as they apply to situations and transactions with an international element. The root principles of jurisdiction, residence and source; substantive provisions—residence earning overseas income and non-resident earning Australian income; and tax planning arrangements and applicable anti-avoidance legislation.

Credit Points: 12 Contact Hours: 3 per week

**ACN174 LIQUIDATIONS & RECEIVERSHIPS**
The legal rules and standards governing insolvency; the role of liquidators and receivers; the procedural and documentary steps involved in liquidations and receiverships.

Credit Points: 12 Contact Hours: 3 per week

**ACN175 COMMERCIAL LAW HONOURS**
The rules governing local and foreign takeovers and mergers; an examination of prominent takeovers that have recently occurred; the managerial and taxation aspects of takeovers; participation in seminar on relevant takeover issues.

Credit Points: 12 Contact Hours: 3 per week

**ACN176 INDIRECT TAXATION**
Taxes relevant to the conduct of a business other than taxes directly imposed on a taxpayer's income and capital gains. The taxes considered come under the general heading of indirect taxes as the burden of such taxes does not fall fully on the person who pays the tax, but is shifted to another person, e.g., the ultimate consumer of goods and services. Specific taxes covered include sales tax, payroll tax, card tax and stamp duty.

Credit Points: 12 Contact Hours: 3 per week

**ACN177 TAXATION POLICY HONOURS**
The Australian taxation system as it has evolved under the policy-making powers of the Australian Government; in terms of its degree of concordance with traditionally recognised tax policy objectives; specific forms of taxation are appraised; tax reform proposals are critically assessed.

Credit Points: 12 Contact Hours: 3 per week

**ACN178 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; analysis of the various incentives offered by the Government under the Income Tax Assessment Act and by way of grants and other forms of assistance; the professional responsibilities of the tax practitioner, and judicial, statutory and professional responses to tax avoidance and evasion.

Credit Points: 12 Contact Hours: 3 per week
matics; cost of funds; the firm investment decision; investment evaluation techniques; cash budgeting; working capital management; capital budgeting; dividend policy, and financial structure policy.

Prerequisite: ACN813
Credit Points: 4  Contact Hours: 2 per week

- **ACN950 DISSERTATION**
  Prerequisite: ACN114
  Credit Points: 24

- **ACN997 SPECIAL TOPIC – COMMERCIAL LAW**
  Will be offered as required and when the necessary experience is available.

- **ACN998 SPECIAL TOPIC – MANAGERIAL ACCOUNTING/FINANCE**
  Will be offered as required and when the necessary experience is available.

- **ACN999 SPECIAL TOPIC – PUBLIC ACCOUNTING**
  Will be offered as required and when the necessary experience is available.

- **ACPI11 ACCOUNTING PRINCIPLES I**
  This subject aims to develop the students’ ability to interpret and use corporate financial statements. The subject is concerned with both the preparation and the use of financial accounting data and emphasizes the reconstruction of economic events from published accounting reports. The subject, although predominantly about accounting, is directed toward a management rather than an accounting viewpoint.
  Credit Points: 12

- **ACPI213 QUALITY COST ANALYSIS**
  The subject aims to be able to relate programs in quality assurance to an overall cost control strategy in order to achieve the goals of the business as expressed in its periodic budget, and be able to administer the cost of quality assurance as a part of a control and recovery program which is indicated by variances from budget and as part of a program for increasing cost effectiveness. Students are introduced to the terminology used in accounting and the accounting reporting cycle. Emphasis is given to understanding the nature of cost objectives, operational costing, CVP analysis and the variance analysis framework.
  Credit Points: 6  Contact Hours: 3 per week

- **ARBI193 WRITING FOR DESIGNERS I**
  The writing process: style, accuracy and simplicity in writing; the editing process. To develop students’ ability to research, plan, write and present tertiary-standard written communications.
  Credit Points: 2  Contact Hours: 4 per week

- **ARBI194 WRITING FOR DESIGNERS II**
  Writing for the design professional; review of organisation and mechanics; types, formats, styles and review of professional documents; problems of technical style, bibliographic conventions and use of graphics.
  Credit Points: 4  Contact Hours: 4 per week

- **ARBI191 THE HUMAN ENVIRONMENT I**
  The dimensions and movement of the human body, and its perceptual systems, as an essential preliminary to the design of all artefacts for human use. The course will consist of lectures and studio exercises. Lecture topics include: static and dynamic anthropometry; human sensory systems; introduction to ergonomics; applications of anthropometrics and ergonomics to design.
  Credit Points: 4  Contact Hours: 2 per week

- **ARBI192 THE HUMAN ENVIRONMENT II**
  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; observation of behaviour; research methods, interpretation and presentation of research; environmental stressors and their mediation by individual differences.
  Credit Points: 4  Contact Hours: 2 per week

- **ARBI193 DESIGN I**
  Lectures and studio work focusing on design definition: perception; elements and principles of design; effects of colour, texture, contour, pattern; human dimensions; anthropometrics; elements of aesthetics. A series of exercises develop basic skills to apply basic design principles, and to solve simple design problems. Descriptive geometry; architectural graphics and rendering: freehand drawing and sketching.
  Credit Points: 10  Contact Hours: 5 per week

- **ARBI194 DESIGN II**
  See ARBI193.
  Credit Points: 10  Contact Hours: 5 per week

- **ARBI195 TECHNOLOGY I**
  Together, these subjects promote an understanding and develop a basic knowledge of materials, structures and construction in domestic scale buildings. Materials: The manufacture, supply, storage and application in buildings of timber and wood products, paints and clay products, concrete, ferrous and non-ferrous metals, plastics. Construction: Conventional construction of simple, single-storey buildings; footings and floors; walls and roof framing; load bearing masonry, roofing, cladding. Experimentation/Workshop: A series of experiments in heat, light and sound. Use of tools and machinery in wood and metals. Structural testing of materials.
  Credit Points: 4  Contact Hours: 2 per week

- **ARBI196 TECHNOLOGY II**
  See ARBI195.
  Credit Points: 4  Contact Hours: 2 per week

- **ARBI197 HISTORY OF THE BUILT ENVIRONMENT I**
  The development of man’s artificial environment and its relationship to ideas, technology and the fine art from the earliest times to the present.
  Credit Points: 2  Contact Hours: 1 per week

- **ARBI198 HISTORY OF THE BUILT ENVIRONMENT II**
  See ARBI197.
  Credit Points: 2  Contact Hours: 1 per week

- **ARBI289 DESIGN SCIENCE II**
  Continuation of ARBI289.
  Credit Points: 2  Contact Hours: 1 per week

- **ARBI290 DESIGN SCIENCE I**
  A study of the principles of science and their implications on the design of buildings and spaces. The application of these principles in the conceptual stages of design allowed by laboratory tests and computer evaluations of design proposals. The subject is divided into a series of modules, each related to potential studio design exercises.
  Credit Points: 2  Contact Hours: 1 per week
ARB290 INTRODUCTION TO COMPUTING II
Computers as tools for drafting; line graphics; plotting; computer-aided drafting; symbol libraries; dimensioning; computer drafting and office organisation; comparison of available software packages.
Credit Points: 2  Contact Hours: 1 per week

ARB291 THE HUMAN ENVIRONMENT III
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, personal space, territoriality, environmental meaning and cognition, cognitive maps and wayfinding, intracultural and intracultural differences. Application via examination and analysis of an urban environment with respect to its sociocultural function.
Credit Points: 4  Contact Hours: 2 per week

ARB292 THE HUMAN ENVIRONMENT IV
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 styles; 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.
Credit Points: 4  Contact Hours: 2 per week

ARB293 DESIGN III
The concepts of design process to develop a systematic methodology in architecture design; scope of design; Rietman's State Transformation model; problem-solving methods; precedence diagrams; testing; general design heuristic; the art of design. Planning objectives and techniques, privacy and convenience, intelligibility, forms and order, history of planning techniques, the vertical dimension, safety, external constraints.
Credit Points: 10  Contact Hours: 5 per week

ARB294 DESIGN IV
A series of architectural projects of single storey to low rise buildings of domestic or semi-domestic nature. Use of media for presentation of architectural projects; use of colour, shade, shadow in architectural drawings; 3D presentation and modelling.
Credit Points: 8  Contact Hours: 4 per week

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, construction of low-rise buildings; roofing of medium and large spans; environmental factors, building defects and remedies.
Credit Points: 4  Contact Hours: 2 per week

ARB296 BUILDING CONSTRUCTION II
See ARB295.
Credit Points: 4  Contact Hours: 2 per week

ARB297 PRINCIPLES OF STRUCTURES I
The basic principles of structures as applicable to elements of architecture, industrial design, interior design and landscape architecture. The study is qualitative and a minimum of mathematics is used. Emphasis is given to visual and conceptual appreciation of structures.
Credit Points: 2  Contact Hours: 1 per week

ARB298 PRINCIPLES OF STRUCTURES II
The principles and their application to building structures in timber and masonry. Priority is given to structural concepts, and structural design is limited to approximation of overall dimensions.
Credit Points: 4  Contact Hours: 2 per week

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

ARB386 LAW OF THE BUILT ENVIRONMENT
Laws, regulations and their interpretation; a review of the Australian and Queensland Acts, local authority 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.
Credit Points: 4  Contact Hours: 2 per week

ARB387 ENVIRONMENTAL IMPACT STUDIES
Ecological impacts of built environment developments such as roads, railways, power lines, buildings; impact of processes of developments upon natural resources, vegetation, soils, hydrology, air purity etc; secondary effects of development such as fire, feral animals, weeds, added nutrients, tramping, etc; rehabilitation of disturbed ecosystems; maintaining urban habitats and wildlife. Field work will form part of this subject.
Credit Points: 2  Contact Hours: 1 per week

ARB388 DESIGN SCIENCE IV
Continuation of ARB389. Principles governing control of noise and aural conditions in buildings; basic acoustic design and noise control in buildings. Artificial lighting of interiors, lamp characteristics, colour rendering, modelling, lighting quality, simplified lighting design methods, and external lighting.
Credit Points: 2  Contact Hours: 1 per week

ARB389 DESIGN SCIENCE III
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.
Credit Points: 2  Contact Hours: 1 per week

ARB391 BUILDING SERVICES I
This subject is designed to develop an understanding of domestic building services and their integration in the design and construction of small buildings. It covers supply, connection and reticulation of electricity, gas, water and telephone services and relevant outlets and appliances. Sewerage, sullage and stormwater drainage as applicable to domestic buildings. Domestic waste disposal.
Credit Points: 4  Contact Hours: 2 per week

ARB392 BUILDING SERVICES II
Mechanical electrical and hydraulic services and their integration in the design and construction of major buildings.
Credit Points: 4  Contact Hours: 2 per week
ARB393 BUILDING DESIGN V
The building as object, surface, volume, space, and sequence; expression of buildings; criteria of good design in terms of style, function, form, structure, services, context, environment, society, and other relevant issues; design ethics and values; a series of architectural projects of low to medium rise; with emphasis on industry and commerce; integration with architectural science; flow charting; building type analysis; computers in design; three-dimensional modelling; computer-aided planning analysis and environmental control analysis, climate analysis, integration with design process.
Credit Points: 10 Contact Hours: 5 per week

ARB394 BUILDING DESIGN VI
See ARB393.
Credit Points: 8 Contact Hours: 4 per week

ARB395 BUILDING CONSTRUCTION III
Contemporary construction, concentrating on non-domestic buildings and furthering the understanding of the links between structural theory, building science, construction and design.
Credit Points: 2 Contact Hours: 1 per week

ARB396 BUILDING CONSTRUCTION IV
See ARB395.
Credit Points: 2 Contact Hours: 1 per week

ARB397 PRINCIPLES OF STRUCTURES III
The principles and their application to building structures in steel; structural properties of mild steel and high tensile steel; structural framing and connections; structural systems in steel: beams and columns, portal frames, space frames, trusses, tensile structures, approximate sizing.
Credit Points: 4 Contact Hours: 2 per week

ARB398 PRINCIPLES OF STRUCTURES IV
The principles and their application to building structures in reinforced concrete; structural behaviour of reinforced concrete; basic theory of reinforced concrete beams and columns; structural elements systems in reinforced concrete; post-and-beam, one and two-way slab, T and L-beam, waffle slab, flat slab, flat plate; columns; frames; framing, walling and roofing in reinforced concrete; approximate sizing.
Credit Points: 4 Contact Hours: 2 per week

ARB491 HISTORY OF ARCHITECTURE & ART III
Early 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.
Credit Points: 2 per semester Contact Hours: 1 per week

ARB493 DESIGN VII
Masters of the twentieth century in Europe and the U.S.A. and their architectural styles; design philosophy and influence; architects in Australia and their influence in Australian architecture; major design projects including brief, design, construction, services and landscape; a series of architectural projects of medium to high-rise construction with emphasis in workability and compliance with codes, by-laws and regulations.
Credit Points: 10 per semester Contact Hours: 5 per week

ARB495 PROFESSIONAL STUDIES I
The concepts and writing of building specifications; how to interpret and to apply the Standards Association of Australia Codes and other standards; acquisition of the skills and knowledge to use computers as management tools; estimating and accounting; financial aspects of professional practice; building legislation: the law as a constraint in architectural practice; computer applications: the skills and knowledge to use computers as management tools.
Credit Points: 8 per semester Contact Hours: 4 per week

ARB497 ADVANCED TECHNOLOGY
The aim of these subjects is to develop an initial understanding of mechanical, electrical, electronic and special services and the integration in the design and construction of buildings and to understand the approximate sizing of service requirements. Subsequently to understand construction methods and specification of complex and high-rise buildings. Emphasis is on case studies.
Credit Points: 4 per semester Contact Hours: 2 per week

ARB591 HISTORY OF ARCHITECTURE & ART IV
A global perspective of development of art and architecture of regional interest with particular emphasis on non-European traditions. Architectural development in regions such as the Far East, South East Asia, the Pacific, and South America are offered and students are to select one region for study in each semester. The topics include planning of settlements, indigenous architecture, materials and techniques in building construction, social, cultural, economic, religious, and western influence. Modernisation, current architecture issues.
Credit Points: 2 per semester Contact Hours: 1 per week

ARB593 DESIGN VIII
Architectural criticism; main themes selected for design and their 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.
Credit Points: 10 per semester Contact Hours: 5 per week

ARB595 PROFESSIONAL STUDIES II
Credit Points: 8 per semester Contact Hours: 4 per week

ARB597 ELECTIVE I
Students who wish to carry out further studies in architecture may choose from the prescribed fields of study, one for each semester. Students are directed by tutors to carry out surveys, experiments, or such work as required and are to present their findings in seminars and in written reports. Students may also substitute the requirements of this subject by an ap-
Contemporary architectural theories and ideas and their influence in architectural design and practice. The process of brief, functional and space programming of architectural design projects. An introduction to urban values, design principles and landscape/townscape, to acquire skills in civic and formal planning, and techniques to evaluate urban quality. A comprehensive project of groups of complex buildings is used as a design vehicle to develop planning skills, including brief formation and building programming, quality evaluation, planning, and presentation.

Credit Points: 2 per week

**ARB693 DESIGN IX**

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

**ARB695 PROFESSIONAL STUDIES III**

Alternative methods of building procurement with particular emphasis on management of all phases of the building project. This subject is designed to assist students to reach a high level of professional competence and to prepare them for the Practice Examination set by the Board of Architects, Queensland under 'The Architects Act, 1962', and subsequent amendments.

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

**ARB697 ELECTIVE II**

Students carry out studies on approved topics of their nomination to sufficient depth. The work shall demonstrate the student’s ability to define and to logically analyse proposition, and to conduct research to prove its validity. The submission is normally presented in the prescribed written form with illustrations and/or drawings.

Credit Points: 18
Contact Hours: 9 per week

**ARB699 INTRODUCTION TO FACILITIES MANAGEMENT**

The concept of facilities programming and management. The notion of human behaviour over time and the monitoring of building performance as the major focus in the day to day management of facilities in a realistic working environment.

Credit Points: 11
Contact Hours: 4 per week

**ARP501 ENVIRONMENTAL COMMUNICATIONS**

A series of lectures, site visits and projects relating to the design and application of alphabets and factors influencing perception of them in signage systems, display and exhibition, the design of exhibition and display systems, transportation, materials and specifications associated with their construction.

Credit Points: 13
Contact Hours: 5 per week

**ARP503 WORKPLACE DESIGN**

A series of lectures, seminars and projects concerned with physiological, psychological, and sociological aspects of the workplace, involving furniture systems, equipment and services.

Credit Points: 12
Contact Hours: 5 per week

**ARP504 PROFESSIONAL PRACTICE & MANAGEMENT FOR INTERIOR DESIGNERS I**

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

Credit Points: 11
Contact Hours: 4 per week

**ARP505 PROFESSIONAL PRACTICE & MANAGEMENT FOR INTERIOR DESIGNERS II**

A series of seminars/tutorials, case studies and assignments concerned with such topics as: task scheduling, planning systems and control models; program evaluation and review techniques; critical path monitoring; organisational development; personnel recruitment and staffing structures; organisational models; union and labour relations.

Credit Points: 4
Contact Hours: 2 per week

**ARP600 BUILDING EVALUATION & BRIEF DEVELOPMENT**

Formulation of the client’s brief, definition of the design problem and exploration of design methodologies. Evaluation of building types, suitability of spaces to functions.

Credit Points: 8
Contact Hours: 3 per week

**ARP601 FILM, TV & DESIGN FOR THEATRE**

Introduction to the basic language, technology and procedures of film and video production, roles of production and design teams, script analysis, preproduction planning, story boarding, set design and construction, modelling, make up design, lighting and camera work. This will be given through a series of lectures, visits and projects.

Credit Points: 16
Contact Hours: 6 per week

**ARP602 CONSERVATION OF HISTORIC INTERIORS**

A series of lectures, visits and a design project, covering the role and ethic of conservation in interior design.

Credit Points: 16
Contact Hours: 6 per week

**ARP603 HISTORIC TECHNOLOGIES**

An introduction to the interior and building technologies required by a practising interior designer working on conservation, restoration and recycling projects. Knowledge gained in this subject will be applied in Design of Historic Interiors.

Credit Points: 8
Contact Hours: 3 per week

**ARP613 ADVANCED ERGONOMICS I**

Man-machine system and their relations with living and working environment; 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.

Credit Points: 2
Contact Hours: 1 per week

**ARP623 ADVANCED ERGONOMICS II**

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

Prerequisite: ARP613

Credit Points: 4
Contact Hours: 2 per week

**ARP642 CASE STUDIES**

This subject consists of a series of seminars dealing with case study evaluation by practising designers; study of different evaluation methods and techniques;
the application of evaluation methods through individual case studies. All design factors of manufactured products are evaluated in depth.
Credit Points: 4  Contact Hours: 2 per week

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

 ARP653 PROFESSIONAL PRACTICE
This subject explores the role and responsibilities of the industrial designer in professional practice. Lectures cover: job administration, liability, design protection, designer and client relationships.
Credit Points: 2  Contact Hours: 1 per week

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

 ARP672 INDUSTRIAL DESIGN I
 ARP673 INDUSTRIAL DESIGN II
This course consists of studio work in which students design a wide range of products or systems. The emphasis will be on projects generated from local industry and community. The complexity and depth of the design project will increase systematically according to the semester level.
Prerequisite: ARP672 for ARP673
Credit Points: 16 (both) Contact Hours: 6 per week (both)

 ARP674 INDUSTRIAL DESIGN RESEARCH I
This course consists of the topic selected by a student and approved and supervised by the industrial design staff. Examples of topics are: microsurgical equipment design, bushfire safety equipment, mobile dental clinic in isolated regions, and interactive display in psychological testing.
Prerequisite: ARP673
Credit Points: 20  Contact Hours: 8 per week

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

 ARP676 ADVANCED CAD FOR INDUSTRIAL DESIGNERS I
CAD in the design process. 2D and 3D application of appropriate CAD programs. Development of a design project through the interactive use of CAD and related engineering programs as an aid to design analyses and finalisation.
Credit Points: 4  Contact Hours: 2 per week

 ARP677 ADVANCED CAD FOR INDUSTRIAL DESIGNERS II
CAD/CAM in the design, analysis, and manufacturing process. 3D solid modelling, finite analyses, and CAM will be employed. A project will be taken from first concept through final documentation. The presentation, technical description, engineering analyses, and finalisation to Computer Numerically Controlled (CNC) testing and prototype production of a small product.
Credit Points: 4  Contact Hours: 2 per week

 ASB101 LEARNING AT UNIVERSITY
A series of seminars/workshops run by the Learning Unit designed to assist students to investigate what learning at a tertiary institution involves. The aim of the subject is to introduce students to learning for understanding and integration, rather than simply for reproduction. Students with at least one subject in common will be grouped together, so that material from this subject can be used to help students explore approaches to advanced reading and critical thinking skills in an applied manner.
Credit Points: 2  Contact Hours: 1 per week

 ASB200 INTRODUCTORY METEOROLOGY
The earth's atmosphere; heat transfer processes; the gas laws; the physics of water vapour; wind theory; atmospheric stability and instability; precipitation; atmospheric electricity; synoptic meteorology; atmospheric epics.
Credit Points: 8  Contact Hours: 3 per week

 ASB300 COOPERATIVE EDUCATION I
 ASB400 COOPERATIVE EDUCATION II
The opportunity for science students to complete practical work, related to their course, in a commercial environment under the joint supervision of an industry supervisor and an academic adviser. The student will be placed with an approved employer. An academic adviser will obtain reports from the student and his or her work supervisor at regular intervals. The student will be required to complete a progressive assessment program. The student's results will be determined on the basis of reports, continuous assessment, and the employer's report.
Prerequisite: Completion of 4 semesters of a standard full-time degree-level course, normally with a GPA of not less than 4.5 overall.
Credit Points: 24 per semester

 ASP701 INFORMATION RETRIEVAL SKILLS
This subject, taught by the Division of Academic Support (in collaboration with Faculty staff in Modules 2 and 4), includes a relevant literature review. Module 1 – Retrieving Information; Module 2 – Evaluation of Information; Module 3 – Organising Information; Module 4 – Thesis Preparation. This subject is assessed on a pass/fail basis.
Credit Points: 4  Contact Hours: 2 per week

 ASP702 COMPLEMENTARY STUDIES
The unit is tailored to suit individual students – studies include a selection from: participation in research seminars; oral communication skills; written communication skills; formal coursework in occupational health and safety, scientific and industrial ethics, philosophy and methodology of science, and science policy and research funding options; development of research management strategies; preparation of a scientific paper/report; and coursework material from
other accredited courses as directed by the project supervisor and Head of Department. Assessed on a pass/fail basis.
Credit Points: 8 per semester
Contact Hours: 6 per week

ASP703 STUDIES IN GLOBAL SYSTEMS A
Topics of current global concern to mankind from the perspective of each of the participating disciplines (Biology, Geology and Chemistry) including: the enhanced greenhouse effect, ozone depletion, acid rain, pollution, soil erosion, toxic wastes and their disposal, sea level changes, and the laws and treaties which relate to them. Note: Students undertake either ASP703 or ASP704, not both.
Credit Points: 9 Contact Hours: 3 per week

ASP704 STUDIES IN GLOBAL SYSTEMS B
See ASP703.
Credit Points: 6 Contact Hours: 2 per week

ASP705 ADVANCED MICROSCOPY TECHNIQUES
This subject describes, and allows students to practice, preparative techniques relating to transmission (TEM), scanning transmission (STEM) and scanning (SEM) electron microscopy. Techniques include specialist fixation and staining (negative and positive), thin sectioning, critical point drying, replica production, sputter coating and metal shadowing. Each technique is applied to a range of specimens and students familiarised with the use and manipulation of each type of microscope. The analytical capabilities of each instrument are also taught and used.
Credit Points: 9 Contact Hours: 4 per week

BEA004 TAXONOMY
Investigation and identification of local flora and fauna; use and construction of keys. The concepts of systematics, classification, taxonomy and nomenclatural procedure are introduced in short lectures and tutorials associated with the practical exercises.
Credit Points: 8 Contact Hours: 3 per week

BEA011 ANIMAL PHYSIOLOGY
This unit introduces the general physiological processes which sustain life, and develops an understanding of animal-environment interactions.
Credit Points: 8 Contact Hours: 3 per week

BEA016 AQUACULTURE TECHNIQUES
Topics covered include: water quality monitoring; culture methods for microscopic food organisms; disease and parasite identification and treatment; and a variety of techniques associated with spawning, rearing, handling and stock assessment.
Credit Points: 8 Contact Hours: 3 per week

BEA021 PLANT PHYSIOLOGY
An introduction to the important aspects of whole plant physiology, including nutrition, water relations, photosynthesis, translocation and stress physiology.
Prerequisite: BEA108
Credit Points: 8 Contact Hours: 3 per week

BEA026 PLANT CELL TISSUE CULTURE
Topics covered include techniques, equipment and media used in plant tissue culture, the role of plant growth regulators, and micropropagation. The significance of organogenesis, somatic embryogenesis and genetic variability in plant tissue culture are discussed. The lecture program is supported by appropriate laboratory exercises.
Credit Points: 8 Contact Hours: 3 per week

BEA060 HYDROBIOLOGICAL TECHNIQUES
An introduction to the characteristics of aquatic ecosystems. Students gain practical experience using methods, equipment and instrumentation to: estimate population abundance, distribution, biomass and productivity; determine community structure and diversity; determine physical characteristics and morphology and assess water quality. Compulsory field studies form a significant part of this subject.
Credit Points: 8 Contact Hours: 3 per week

BEA090 EXTERNAL PROJECTS I
This elective subject enables students to submit studies carried out as part of their normal employment for credit in the course. Design and assessment of the experimental work program is carried out by the employer in conjunction with a supervisor appointed by the Head of Department/Delegate.
Credit Points: 8 Contact Hours: 3 per week

BEA099 EXTERNAL PROJECTS II
See BEA090.
Credit Points: 8 Contact Hours: 3 per week

BEA108 INTRODUCTORY BIOLOGY
An introduction to the classification of organisms. Examination of the morphology, anatomy, reproduction, life-history and physiology of selected species.
Credit Points: 8 Contact Hours: 3 per week

BEA198 MICROSCOPY TECHNIQUES
The use and roles of various types of optical microscopes; microscope accessories for counting, measuring, drawing and photography; procedures for preparing specimens for examination and histological/histochemical study.
Credit Points: 8 Contact Hours: 3 per week

BEA200 BIOLOGY B
This unit extends the basic concepts presented in Introductory Biology and also includes aspects of mendelian genetics, gene expression and cell differentiation, as well as reproduction and development in selected animals and plants.
Prerequisite: BEA108
Credit Points: 8 Contact Hours: 3 per week

BEA202 CELL STRUCTURE & FUNCTION
A general course in cell biology including the living cell and its processes, structure and function. Photosynthesis, respiration, intermediary metabolism will be emphasised. Elementary molecular genetics will be outlined.
Credit Points: 8 Contact Hours: 3 per week

BEA297 BIOLOGICAL DATA HANDLING
Application of statistical procedures to surveys, sampling and design of experiments. Recognition of problems arising from variability in results and particular data type. Methods of data collection, checking, analysis and presentation are discussed. An introduction to the use of computer software packages is included.
Prerequisite: MAA251
Credit Points: 8 Contact Hours: 3 per week

BEA339 INTRODUCTION TO BIOECOLOGY
This subject introduces students to techniques of botanical and plant community ecology. Topics include nutrient, continuous production techniques, and the use of growth regulators to control growth. The role of environmental factors in controlling growth is also discussed. This subject will provide the theoretical
basis for students undertaking electives in aquaculture techniques and/or plant tissue culture.
Credit Points: 8 Contact Hours: 3 per week

BEA349 COMPUTER APPLICATIONS IN BIOLOGY
An introduction to microcomputers and applications-software such as wordprocessing, data bases, spreadsheets, and computer graphics for report presentation. This subject is not oriented towards any specific computer language.
Credit Points: 8 Contact Hours: 3 per week

BEA398 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 the maintenance of such collections.
Credit Points: 12 Contact Hours: 4 per week

BEA403 ENVIRONMENTAL BIOLOGY
Ecosystems and energy flow. Productivity, decomposition and nutrient cycling, Niche, species packing, diversity, colonisation and community structure. Short compulsory field trips form an integral part of the unit.
Credit Points: 8 Contact Hours: 3 per week

BEA405 POPULATION BIOLOGY
A general course in population biology including: structure and dynamics of populations, evolution and differentiation in populations; the relationships between the genetics, energetics and dynamics of populations leading to particular life-history strategies are emphasised. Field excursions are a compulsory part of the subject.
Co-requisite: BEA498
Credit Points: 8 Contact Hours: 3 per week

BEA498 FIELD TECHNIQUES
Activities include surveying, soil and climatic measurements, assessment and sampling of animal and plant populations, evaluation of spatial changes in plant and animal communities in relation to environmental gradients. Skills are gained not only in sampling and analytical techniques, but also in the establishment and running of a field camp. An extended field excursion is a compulsory part of the subject.
Credit Points: 8 Contact Hours: 3 per week

BEA499 APPLICATIONS IN ELECTRON MICROSCOPY
This subject deals with the roles played by various forms of electron microscopy in the biological sciences and presents an introduction to the basic techniques and their limitations.
Prerequisites: BEA 108, BEA 198
Credit Points: 8 Contact Hours: 3 per week

BEB103 BIOLOGY IA
A course of lectures and tutorials dealing with fundamental biological principles and phenomena. Content includes nutrient procurement, transport systems and mechanisms, energy transformations, population and community biology, reproduction and basic genetics.
Co-requisite: BEB149, unless Senior Biology has been undertaken.
Credit Points: 8 Contact Hours: 3 per week

BEB104 BIOLOGY IB
A program of practical work presenting aspects of applied biology, plant and animal physiology and basic genetics including bacterial transformation.
Co-requisite: BEB149 unless Senior Biology has been undertaken.
Credit Points: 6 Contact Hours: 3 per week

BEB149 INTRODUCTORY BIOLOGY
A companion subject to BEB103 and BEB104, designed for students who have not studied Senior Biology. It presents an overview of organisms with emphasis on the relationship between structure and basic biological function, including nutrition, excretion, reproduction and inheritance.
Credit Points: 6 Contact Hours: 3 per week

BEB150 BIOLOGY
An introduction to biology for students with no previous experience in the discipline. An overview of form and function in animal and plant systems; patterns and mechanisms of inheritance; fundamental ecological principles.
Credit Points: 8 Contact Hours: 3 per week

BEB201 CELL BIOLOGY
A program of lectures and tutorials chiefly concerned with the molecular biology of eucaryotic cells, their structure, function, systems, metabolism and differentiation. The molecular basis for genetic manipulation and other current advances based in molecular genetics is introduced.
Prerequisite: BEB149 or Senior Biology
Credit Points: 8 Contact Hours: 3 per week

BEB207 BIOLOGICAL SYSTEMS
This unit introduces general systems theory as a unifying concept in biology and its application to the study of simple biological systems. Emphasis will be placed on modelling techniques with an introduction to computer simulation of simple systems.
Prerequisite: BEB149 or Senior Biology
Credit Points: 8 Contact Hours: 3 per week

BEB303 BIOLOGY II
Comprises a study of form, function and classification with examples drawn from major plant and animal taxa.
Prerequisite: BEB103
Credit Points: 6 Contact Hours: 3 per week

BEB321 PLANT PHYSIOLOGY I
This unit develops an understanding of the functional systems of plants and provides an introduction to environmental physiology and plant tissue culture.
Prerequisites: BEB103, BEB201
Credit Points: 8 Contact Hours: 3 per week

BEB324 CROP SCIENCE I
An introduction to the biology of crop plants with an emphasis on those species of importance in tropical and subtropical agriculture. Topics will include morphology; functional anatomy; ecophysiology; life history; classification and identification of the more important families of crop plants.
Prerequisite: BEB103
Credit Points: 8 Contact Hours: 3 per week

BEB357 POPULATION & SYSTEMS ECOLOGY
A broad theoretical background in the major concepts of plant and animal ecology. It will form the foundation subject for the Population Studies sub-major. Topics include: the ecology of single populations;
interactions within and between populations; population regulation; adaptation; management; behavioural and community ecology; energetics and biogeography.

Prerequisite: BEB207 Co-requisite: BEB358
Credit Points: 8 Contact Hours: 3 per week

**BE838 EXPERIMENTAL DESIGN**

This subject is offered in two sections. The first section of ten lecture-tutorials involves multiple and curvilinear regression, chi-squared goodness of fit, multi-way analysis of variance, multiple range tests. The second section builds a practical extension on the theoretical basis of statistics, using experimental situations commonly met with in biology.

Co-requisite: BEB357
Credit Points: 8 Contact Hours: 3 per week

**BE836 BIOLOGY & SOILS**

The subject is an important basis for studies in both aquaculture and terrestrial ecology. Attention is given to the characteristics of soils, soil classification, and the factors (parent material, climate, topography and biota) which determine soil development. The structure and productivity of plant and animal communities, and the distribution of species are shown to be dependent on biogeochemical pathways, regulated by the soil, and on other conditions influenced by the substrate (including water quality). Consideration is given to the distribution of major soil types in relation to effective management of terrestrial and aquatic biota.

Prerequisite: BEB103
Credit Points: 8 Contact Hours: 3 per week

**BE838 AQUACULTURE I**

A largely practical subject which introduces students to a range of methods and techniques associated with the commercial production of aquatic animal species in hatcheries and on aquafarms. Topics covered include: water quality measurement and management; intensive production of food organisms; induction of maturation and spawning; nursing and rearing larvae and fry; feeding; diagnosis and treatment of health problems; handling and husbandry.

Prerequisite: BEB103
Credit Points: 8 Contact Hours: 3 per week

**BE839 FIELD STUDIES I**

A field-based subject in which students use the background information gained from BEB357 and BEB444 to sample biological populations. Field Studies I will focus on methods applied to terrestrial populations and may include extended field trips.

Prerequisite: BEB357 Co-requisite: BEB444
Credit Points: 8 Contact Hours: 3 per week

**BE841 ANIMAL PHYSIOLOGY**

The subject provides and develops an understanding of the functional systems of animals and provides an introduction to environmental physiology.

Prerequisite: BEB103
Credit Points: 8 Contact Hours: 3 per week

**BE842 PLANT TISSUE CULTURE I**

This subject introduces students to the techniques and physiological basis of plant tissue culture. Topics covered include: culture media, organogenesis, somatic embryogenesis and micropropagation. It introduces a range of techniques used in research and commercial laboratories.

Prerequisite: BEB321
Credit Points: 8 Contact Hours: 3 per week

**BE844 POPULATION ANALYSIS**

The methods used to estimate important population parameters and characteristics, the underlying theory of methods and the most appropriate circumstances for use of different methods.

Prerequisites: BEB357, BEB358
Credit Points: 8 Contact Hours: 3 per week

**BE847 ENVIRONMENTAL MONITORING**

A course in the skills of environmental measurement concerning ecosystems. The lecture course is supported by field work in several environments using a range of instrumentation to delineate environmental profiles.

Prerequisites: BEB357 or BEB444
Credit Points: 8 Contact Hours: 3 per week

**BE849 FIELD STUDIES II**

A field-based subject in which students use the background information gained in BEB357 and BEB444 to sample aquatic populations. This subject may include extended field trips.

Prerequisites: BEB357, BEB444
Credit Points: 8 Contact Hours: 3 per week

**BE850 SELECTED TOPICS I**

Students complete a study on a specific topic. Such study involves selected reference material and may also include a lecture program or project work.

Prerequisite: BEB357
Credit Points: 8 Contact Hours: 3 per week

**BE853 PLANT TISSUE CULTURE II**

The subject explores several aspects of plant tissue culture in some detail. Topics covered include cytokinetites and protoleptobiology as well as aspects of the biochemistry of plants growing in tissue culture.

Prerequisite: BEB423
Credit Points: 12 Contact Hours: 5 per week

**BE855 POPULATION GENETICS**

This unit is an extension of Introductory Genetics and examines in detail the genetics of populations. Topics covered 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 relevant practical or theoretical problems.

Prerequisite: BEB435
Credit Points: 8  Contact Hours: 3 per week

- **BEB650 PROJECTS I**
  This unit develops a student's capacity for managing his/her own work and for persistence within a circumscribed subject area. Projects emphasise specific investigative skills in reviewing, collating, interpreting and presenting data; contribution to a seminar is usually required. Projects, supervised by various staff members, are graded individually. The Head of Department coordinates assessment, and may request external assessment. Projects are to be selected by the 12th week of the fourth semester of the course. There are a number of compulsory field trips. This unit normally leads into BEB660 Projects II.

Prerequisites: BEB303, BEB357
Credit Points: 16  Contact Hours: 6 per week

- **BEB653 BIOLOGICAL RESOURCES**
  A conceptual basis for aspects of ecosystem management related to naturally occurring materials and ecosystems subject to interactive use within the ecosystem. Limitations on specific exploitation of natural resources are identified and linked with relevant aspects of land tenure, administration and law. Strategies leading to sustained yield and conservation are contrasted with those resulting in resource degradation.

Prerequisite: BEB103
Credit Points: 8  Contact Hours: 3 per week

- **BEB588 AQUACULTURE II**
  A course in theoretical and applied aspects of warm-water aquaculture. Subject content includes the design and operation of production facilities; water quality requirements and management; the biology of commercially important species; reproduction and its control; nutrition, feeding and growth; diseases and their control; methods of production improvement; polyculture; case studies.

Prerequisite: BEB388
Credit Points: 8  Contact Hours: 3 per week

- **BEB600 SELECTED TOPICS II**
  As a final year subject, provides students with an opportunity to complete a detailed study on a specific topic. The study will normally be based on project work and may include a lecture program.

Credit Points: 8  Contact Hours: 3 per week

- **BEB621 PLANT PHYSIOLOGY II**
  Lectures are designed to follow the sequence of biochemical events during life history of a plant. Topics covered include: starch and oil mobilisation during seed germination, biosynthesis of cell membranes, cell pigments (carotenoids, chlorophylls), and plant cell walls; photosynthetic assimilation of nitrogen and sulphur (overview of biosynthesis of all amino acids); biosynthesis of so-called secondary plant products, eg, terpenoids, flavonoids, and the lignin component of wood; biosynthesis of starch and oils in new seeds. Laboratory classes emphasise techniques of value to plant biochemical research.

Prerequisite: BEB423 or MSB450
Credit Points: 8  Contact Hours: 3 per week

- **BEB653 POPULATION MANAGEMENT**
  The principles of biological population management; subject deals with natural populations and three forms of management; pest control, harvesting, and conservation. Field trips and computer simulations will be used to investigate management methods.

Prerequisite: BEB444
Credit Points: 8  Contact Hours: 3 per week

- **BEB655 CASE STUDIES**
  Students apply knowledge and skills gained from other subjects to examine a selected population management problem. Students will work in teams and use field, laboratory and library research to develop a consultant-style report. The topics available will be set by staff but could include a range from environmental impact assessment to pest control.

Prerequisite: BEB444
Co-requisite: BEB553
Credit Points: 12  Contact Hours: 5 per week

- **BEB660 PROJECTS II**
  This elective unit may be undertaken by students who have taken BEB650 Projects I and who have the Head of Department's permission to continue project work. The student either: continues a project undertaken in BEB650, or involves one or more additional projects aimed at developing to a greater depth aspects of the subject matter of experimental subjects previously completed, such projects being established for either individuals or groups. Assessment is conducted as for BEB650. Individual programs for BEB660 are determined by the 12th week of the fifth semester of the course. There are a number of excursions.

Prerequisite: BEB650
Credit Points: 16  Contact Hours: 6 per week

- **BEB680 HYDROBIOLOGY & AQUACULTURE**
  Aquatic biology and aquatic ecosystem management with particular reference to aquatic farming: water quality measurement; criteria and management; nutrient cycles; the composition and biology of aquatic communities; primary and secondary productivity and their control; trophic relationships and energy flow.

Prerequisite: BEB303
Credit Points: 8  Contact Hours: 3 per week

- **BEP100 PROJECT - BIOLOGY**
  All students undertaking Honours are required to select and undertake, in consultation with a supervisor, a substantial project in an appropriate area. Each project will be assessed on the basis of an extensive written report and an oral presentation.

Credit Points: 40

- **BEP701 ADVANCED PLANT PHYSIOLOGY & BIOCHEMISTRY**
  Aspects of plant physiology and biochemistry of current research interest will be covered, expanding upon material in the third year Plant Biochemistry subject. Students will select from a reading list, present seminars and undertake advanced practical work.

Credit Points: 9  Contact Hours: 4 per week

- **BEP703 DATA HANDLING, INTERPRETATION & BIOMETRICS**
  The subject covers the efficient organisation and manipulation of data using techniques available through personal computer software. Data manipulation programs are developed to facilitate the
application of commercial software to the analysis and interpretation of experimental data.
Credit Points: 9 Contact Hours: 4 per week

BEP704 ADVANCED STUDIES IN POPULATION MANAGEMENT
Topics include: pest control and economics; chemical pesticides and their uses; biological control agents; autodomic and genetic control; use of pheromones, attractants and repellents; resistant varieties, cultural and ecological control; physical methods of control; integrative pest management; quarantine. Conservation management; National Parks and protected areas management; legislation.
Credit Points: 9 Contact Hours: 4 per week

BGB005 MEASUREMENT OF CONSTRUCTION
Introduction to Quantity Surveying including the work of the Quantity Surveyor and his relationship with other members of the building industry. A study of measurement and formulae involved in the calculation of length, area and volume. Detailed study and instruction in the process and methods of taking off and billing quantities in the trades roofer, and roof plumber, plasterer, pavior, tiler and terrazzo worker, joiner, immonger, glazier and painter.
Prerequisites: BGB151, BGB154
Credit Points: 6 Contact Hours: 3 per week

BGB006 MEASUREMENT OF CONSTRUCTION
Detailed study and instruction in the process and methods of taking off and billing quantities in the trades excavator, concreter, bricklayer and blocklayer and carpenter.
Prerequisite: BGB005
Credit Points: 6 Contact Hours: 3 per week

BGB009 MEASUREMENT OF CONSTRUCTION
Detailed study and instruction in the process and methods of taking off and billing quantities in more complex building solutions in the trades excavator, concreter, bricklayer and blocklayer, underpinning, piling and beam RC frame and suspended slabs.
Prerequisites: BGB254, BGB006
Credit Points: 4 Contact Hours: 2 per week

BGB010 MEASUREMENT OF CONSTRUCTION
Detailed study and instruction in the process and methods of taking off and billing quantities in the trades asphalt and built up roofing, demolition, mason, structural steel and precast concrete.
Prerequisite: BGB009
Credit Points: 4 Contact Hours: 2 per week

BGB013 BUILDING SERVICES I HVAC
Co-requisite: BGB253
Credit Points: 4 Contact Hours: 2 per week

BGB014 BUILDING SERVICES II – ELECTRICAL
Credit Points: 4 Contact Hours: 2 per week

BGB103 MATERIAL SCIENCE I
Properties, manufacture, use and analysis of timber, steel, concrete, and clay products, including investigation into their strength, density, hardness, porosity, plasticity, elasticity and deterioration. Investigation and protection of materials against corrosion and fire.
Co-requisite: BGB254
Credit Points: 4 Contact Hours: 2 per week

BGB104 MATERIAL SCIENCE II
The aim of this subject is to develop an understanding of the physical and chemical properties of materials and how they affect the construction and structural qualities. It covers laboratory and field testing of bricks, mortar, brickwork, concrete, timber, steel. Investigation and protection of materials against corrosion and fire.
Credit Points: 4 Contact Hours: 2 per week

BGB131 MEASUREMENT OF CONSTRUCTION I
Subject description as for BGB005.
Credit Points: 6 Contact Hours: 3 per week

BGB143 STRUCTURES I
Equilibrium of forces. Shear forces and diagram, bending moments and diagram, loading on structures and loading code, truss analysis and force diagram, stress and strain, tension and compression members, bending theory, design of timber beams, columns and connections, design of steel beams and columns, introduction to indeterminate structures.
Credit Points: 4 Contact Hours: 2 per week

BGB144 STRUCTURES II
See BGB143.
Prerequisite: BGB143
Credit Points: 4 Contact Hours: 2 per week

BGB151 CONSTRUCTION I
Materials and methods – the uses of materials 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 of these structures taking account of the constraints such as costs, dimensional requirements, statutory regulations, life and adaptability and manufacturing and erection requirements. Draughting – preparation of typical details and working drawings. Environmental science – study of the factors and technology involved in creating comfort situations in varying climatic zones and their effect on building construction.
Credit Points: 12 Contact Hours: 6 per week
BGB154 CONSTRUCTION II
Continuation of BGB151. This subject is designed to develop an understanding of 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 will be required to work on preparing written details of building components, coordination of building elements for specific building use.
Prerequisite: BGB151
Credit Points: 14  Contact Hours: 7 per week

BGB161 BUILDING STUDIES I
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.
Credit Points: 14  Contact Hours: 5.5 per week

BGB162 BUILDING STUDIES II
The uses of materials and construction in single and two-storey domestic structures under the elements - staircase, roof, internal and external walls, windows, doors, finishes; fireplaces. Environmental, structural and aesthetic requirements, taking account of constraints such as costs, dimensional requirements, statutory regulations, life and adaptability and manufacturing and erection requirements. Draughting - preparation of typical construction details and drawings.
Prerequisite: BGB161
Credit Points: 9  Contact Hours: 3.5 per week

BGB164 BUILDING SERVICES IA
A study of macro services to the community including water supply, sewerage, power, gas, telephone and other public services. Requirements of headworks and reticulations. A study of sanitation, septic tanks, absorption and transpiration beds, storm-water and sewerage disposal and garbage and refuse disposal. Hydro technic 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.
Credit Points: 6  Contact Hours: 2.5 per week

BGB166 URBAN ECONOMICS
An explanation of economic and financial aspects of the property and construction industries. This will cover the environment in which these industries operate, their structure, operation and control and the financial aspects of development projects.
Credit Points: 4  Contact Hours: 2 per week

BGB172 CONSTRUCTION II
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 will be required to work on preparing written details of building components, coordination of building elements for specific building use.
Prerequisite: BGB151
Credit Points: 6  Contact Hours: 4 per week

BGB173 MATERIAL SCIENCE I
Properties, manufacture, use and analysis of timber, steel, concrete, and clay products including investigation into their strength, density hardness, porosity, plasticity, elasticity and deterioration; investigation and protection of materials against corrosion and fire.
Credit Points: 4  Contact Hours: 2 per week

BGB174 MATERIAL SCIENCE II
The physical and chemical properties of materials and how they affect the construction and structural qualities; laboratory and field testing of bricks, mortar, brickwork, concrete, timber, steel; investigation and protection of materials against corrosion and fire.
Prerequisite: BGB173
Credit Points: 4  Contact Hours: 2 per week

BGB175 STRUCTURES I
Equilibrium of forces; shear forces and diagram; bending moments and diagram; loading on structures and loading code; truss analysis and force diagram; stress and strain; tension and compression members; bending theory, design of timber beams, columns and connections; design of steel beams and columns; introduction to indeterminate structures.
Credit Points: 4  Contact Hours: 2 per week

BGB176 STRUCTURES II
This subject is a continuation of BGB175.
Prerequisite: BGB175
Credit Points: 4  Contact Hours: 2 per week

BGB243 LAW I - BUILDING ACTS & REGULATIONS
Co-requisite: BGB254
Credit Points: 5  Contact Hours: 2 per week

BGB245 MEASUREMENT OF CONSTRUCTION I
Detailed study and instruction in the process and methods of taking off and billing quantities in the trades of excavator, concreter, bricklayer, blocklayer and carpenter for simple buildings.
Prerequisites: BGB151, BGB154
Co-requisite: BGB253
Credit Points: 6  Contact Hours: 3 per week

BGB246 MEASUREMENT OF CONSTRUCTION II
Detailed study and instruction in the process and methods of taking off and billing quantities in more complex building solutions in the trades excavator, concreter, bricklayer and blocklayer in simple basement, underpinning, pier and beam, R.C. frame and suspended slabs. Detailed study and instruction in the process and methods of taking off and billing quantities in the trades asphalt and built up roofing, demolisher, mason, structural steel and precast concrete.
Prerequisites: BGB253, BGB245
Co-requisite: BGB254
Credit Points: 8  Contact Hours: 4 per week
BGB247 MATERIAL SCIENCE III
Elements of material sciences: introduction to 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 fractures, corrosion and protection. Properties, manufacture, use and analysis of fibrous cement, wood products, ceramics, polymers, paints, sealants and mastic products. Investigation into the material's strength, density, hardness, porosity, plasticity, elasticity, deterioration, optical, electrical, thermal and acoustic properties. Prerequisites: BGB103, BGB104
Credit Points: 4 Contact Hours: 2 per week

BGB253 CONSTRUCTION III
Extending the scope of Construction I and II to include a range of structures from industrial single to multi-storey residential buildings. Study management, planning, and coordination necessary for successful construction including site layout, site establishment and material handling processes. Construction draughting and detailed drawings. Site visits and/or workshop. Prerequisites: BGB154, BGB103, BGB104
Credit Points: 10 Contact Hours: 5 per week

BGB254 CONSTRUCTION IV
An extension of Construction I, II and III, dealing with multi-storey commercial buildings. Prerequisites: BGB253
Credit Points: 12 Contact Hours: 6 per week

BGB257 STRUCTURES III
Analysis of indeterminate structures, frame analysis, moment distribution, design of steel connections and structures, concrete columns and walls, composite beams, theory of prestressed concrete, brickwork and concrete masonry design, design of retaining walls, substructures and foundations. Use of computers in structural design. Prerequisites: BGB103, BGB104, BGB143, BGB144
Credit Points: 4 Contact Hours: 2 per week

BGB258 STRUCTURES IV
See BGB257.
Credit Points: 4 Contact Hours: 2 per week

BGB261 BUILDING STUDIES III
Study of the materials and construction of a range of structures from industrial single to multi-storey residential buildings - substructure, columns and upper floors, staircases, roof, external and internal walls, windows and doors, finishes, fire protection and fittings. Environmental, structural, aesthetic, cost, statutory, dimensional, manufacturing and erection requirements. Draughting - preparation of typical details and working drawings. Material science - physical and chemical properties of materials such as non-ferrous metals and alloys, fibrous cement, ceramics, polymers, paints and sealants and how they affect their construction and structural qualities. Prerequisites: BGB162
Credit Points: 12 Contact Hours: 5 per week

BGB262 BUILDING STUDIES IV
An extension of Building Studies III, 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. Prerequisites: BGB261
Credit Points: 12 Contact Hours: 5 per week

BGB263 VALUATIONS I
Concept of value and the methods and reasons for, and factors affecting the valuation of land and buildings. Property inspection procedure and report writing. Role of property within the investment market. Study of leasehold valuation, the concept of profit rent, sinking fund theory and the effect of tax. Valuation tables. Compound interest theory, determination of present value and the sum of an annuity. Valuation methods of valuation, including the determination of annual outgoings. The valuation of perpetual, fixed and varying income, mortgage calculation. Analysis of market information in determining yields and values. Prerequisites: See BGB263
Credit Points: 7 Contact Hours: 3 per week

BGB266 BUILDING SERVICES IIIA
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 and scheduling of lift contracts and ancillary building work. Cost of lifts and their effect on the cost of buildings. Fire protection - sprinklers, detectors, alarms, extinguishers. Telephone and sound systems. Intrusion alarm systems. Clock and time systems. Prerequisites: BGB262
Credit Points: 3 Contact Hours: 1.5 per week

BGB301 PM - ADVANCED CONSTRUCTION METHODS
The main thrust of the subject will be to broaden the education and experience of students by setting them construction and site management problems which are typically encountered by a project manager. Alternatively or in conjunction with the above, case studies will be carried out by the students on projects which have unusual construction problems or techniques. Problems and case studies will cover areas such as: site planning organisations for small, medium and large projects. Material handling and site equipment selection. Prerequisites: BGB254
Credit Points: 4 Contact Hours: 2 per week

BGB341 BUILDING & CIVIL ENGINEERING CONSTRUCTION
Civil Engineering techniques commonly used in excavation of large project sites, involving bulk excavation, earth and rock retaining systems, and rock excavation and explosive handling. Discussion on dewatering techniques of pile driving, bored pier and special foundation construction. Problems faced in the demolition of structures, particularly those associated with prestressed concrete construction. Roadworks - techniques, stabilised construction and surface sealing and associated bridge construction. Particular attention is given to the need for falsework and temporary works and their effect on cost. Prerequisites: See BGB341
Credit Points: 4 Contact Hours: 2 per week

BGB342 LAW II - PRINCIPLES & PROPERTY
Introduction to legal principles and process - the legal system and process. Sources and divisions of the law. Rules of precedent. Interpretation of statutes and

Credit Points: 3 Contact Hours: 1.5 per week

- **BGB343 ECONOMICS OF THE CONSTRUCTION INDUSTRY**
  Branches of economics. 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. Structure of the construction and housing industries, composition and characteristics. Demand for dwellings, the deposit gap, public housing, rental markets. Pricing mechanism, application to land, contract and speculative projects etc. Cost analysis, cost components in housing, problems of rising costs and effects of time delays etc. Finance industries, types and use of finance, use of gearing, risk considerations, cash flow, causes of failure of developer and builder firms.
  Credit Points: 4 Contact Hours: 2 per week

- **BGB345 HYGIENE & SANITATION**
  Subject description as for BGB164.
  Credit Points: 6 Contact Hours: 3 per week

- **BGB361 BUILDING SERVICES II A**
  Co-requisite: BGB261
  Credit Points: 10 Contact Hours: 4 per week

- **BGB362 PROPERTY MARKETING**
  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; considerations 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.
  Credit Points: 7 Contact Hours: 3 per week

- **BGB363 VALUATIONS III**
  Prerequisite: BGB268
  Credit Points: 5 Contact Hours: 2 per week

- **BGB364 VALUATIONS IV**
  See BGB363.
  Credit Points: 7 Contact Hours: 3 per week

- **BGB367 REAL ESTATE ACCOUNTING I**
  Credit Points: 4 Contact Hours: 2 per week

- **BGB368 REAL ESTATE ACCOUNTING II**
  Budgeting and cost accounting, the production function, decision and control aspects of production, cost accounting, cost flows, cost types, cost classification, costing systems, standard costing and variance analysis, flexible budgets and budgetary control, performance and evaluation. Company finance - objectives of the finance function, use of financial indicators, debt equity sources of funds, financial versus capital structure, financial risk and gearing, cost of capital. Cash flow management - decision making using cash flow management techniques viz. purchase vs lease etc. Working capital management and short term investment criteria. Capital budgeting for an on-going business. Project sorting and budgeting.
  Prerequisite: BGB367
  Credit Points: 7 Contact Hours: 3 per week

- **BGB401 BUILDING ECONOMICS & COST PLANNING**
  The concept of cost control - building outputs and costs; comparison of cost planning and approximate estimating. Cost implication of design variables - perimeter/total area ratio; size of building; circulation space; storystory height. Effect of site conditions on building costs; cost implication of prefabrication and standardisation. Approximate estimating - types and uses. Measurement of variations; adjustment of prime cost and provisional sums. Cost analyses, indices and data, applications and use of cost analyses; cost data; worked examples covering the preparation and adjustment of cost plans. Progress payments, rise and fall calculations and final accounts. Bill of quantity and bulk checking techniques.
  Prerequisites: BGB446, BGB540
  Credit Points: 4 Contact Hours: 2 per week

- **BGB403 BUILDING MANAGEMENT II**
  Management in principle - planning, leading, organising, controlling and applied communication. Fundamentals of management. Roles of policy maker
Credit Points: 4
Contact Hours: 2 per week

BGB404 BUILDING MANAGEMENT II
A study of more advanced management principles and their application to site administration and management.
Credit Points: 4
Contact Hours: 2 per week

BGB405 PROJECT EQUIPMENT & SAFETY
Co-requisite: BGB254
Credit Points: 4
Contact Hours: 2 per week

BGB406 BUILDING FINANCIAL MANAGEMENT II
Prerequisites: ACB281, BGB403
Credit Points: 4
Contact Hours: 2 per week

BGB440 LAW III – BUILDING CONTRACTS
Credit Points: 3 per semester
Contact Hours: 1 per week

BGB442 VALUATIONS & DILAPIDATIONS
The nature of value. Effect of supply and demand of land and buildings. Investment value and occupational value. Types of landed property, the incidents of their tenure, the 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. Meaning and liability for 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.
Credit Points: 4 in Semester 1, 2 in Semester 2
Contact Hours: 2 per week in Semester 1, 1 per week in Semester 2

BGB443 BUILDING SERVICES III
Co-requisite: BGB253
Credit Points: 5
Contact Hours: 2.5 per week

BGB444 MECHANICAL & ELECTRICAL ESTIMATING
Outline of the various mechanical and electrical systems and the parameters influencing their design and application. Types of estimates and tenders. Breakdown of preliminaries. Trade awards and wage rates. Take-off procedures under major sections of works including costing and estimating make-up calculations. System costs in relation to total building, floor area, operating and maintenance cost, builders allowance for each system.
Prerequisites: BGB013, BGB014
Credit Points: 4
Contact Hours: 2 per week

BGB446 ESTIMATING I
Building trades award and wages rates. Hourly rate build up for equipment and trade services. Calculation of preliminaries for a small suburban project.
Prerequisites: BGB005, BGB245
Co-requisite: BGB254
Credit Points: 5
Contact Hours: 2.5 per week

BGB451 COMPUTER SOFTWARE APPLICATIONS I
The series of lectures in this subject is to be used to study in depth the preparation of Bills of Quantities using various commercially available computer software packages. The student will be given hands-on experience in the following: set up of base accounts, trades, headings, etc; measurement input; estimating, correction and data manipulation; report generation in various Bill of Quantities formats; pricing using estimated and/or tendered rates; elemental analyses; team leader responsibilities; the use of computers in the measurement of non-traditional contractual systems; and specification and preambles development.
Credit Points: 4
Contact Hours: 2 per week

BGB452 COMPUTER SOFTWARE APPLICATIONS II
This subject covers the preparation of cost plans/estimates using various computer software packages, and includes set up of base accounts including parameter specifications; elemental and detailed estimate measurement; editing, correction and data manipulation; report generation and formatting; development of labour constants, standard rates and standard items; pricing, tendering, spreadsheet ap...
plication. It also deals with contract administration software packages, encompassing set-up of base accounts; variation control, rise and fall and final accounts; and progress payments and cash flow forecasts.

Credit Points: 4  Contact Hours: 2 per week

**BGB461 MEASUREMENT OF CONSTRUCTION V**

Detailed study and instruction in the process and methods of taking off and billing quantities in complex basement and foundation work in the trades underpinning, excavator, concreter and all types of piling systems. Study and instruction will also be applied to complex structural systems in suspended slabs and walls.

Prerequisite: BGB010

Credit Points: 3  Contact Hours: 1.5 per week

**BGB462 MEASUREMENT OF CONSTRUCTION VI**

Detailed study and instruction in the process and methods of taking off and billing quantities in the trades plumber and drainer.

Prerequisite: BGB345

Credit Points: 3  Contact Hours: 1.5 per week

**BGB464 VALUATIONS V - RURAL**

The background to farming in Australia; Government impacts on road and rail development and rural subdivision. Base of value: rural property values; the valuation process; data collection, collation and analysis; soils. Valuation of crown leaseholds. Property inspections and descriptions.

Prerequisite: BGB363, LPP441

Credit Points: 7  Contact Hours: 3 per week

**BGB465 INVESTMENT DECISIONS & FINANCIAL STRATEGY I**

Corporate financial system in Australia: concepts and techniques of financial evaluation, risk management, financing of investments. Investigation of investment strategies related to fixed property; the structure and use of rates of return; the examination of cash flow over time techniques; risk analysis applied to property; the structure of detailed risk and return viability studies; portfolio theory applied to property computer applications.

Credit Points: 7  Contact Hours: 3 per week

**BGB466 INVESTMENT DECISIONS & FINANCIAL STRATEGY II**

See BGB465.

Credit Points: 8  Contact Hours: 3 per week

**BGB520 SPECIFICATIONS**

The compilation of specifications complementing other architectural documents. Definitions, objects and purpose of a specification. Specification as a contract legal and working document; relationship to the Bill of Quantities and drawings; schedules; reference material and specification writing. The use of 'Master' specifications; outright and performance specifications and preparation of specified Bills of Quantities.

Prerequisite: BGB254

Credit Points: 3  Contact Hours: 1.5 per week

**BGB524 MEASUREMENT OF CONSTRUCTION VII**

Detailed study and instruction in the process and methods of taking off and billing quantities in the trades of mechanical and electrical engineer, external works and preliminaries. Detailed study and instruction in the process of Bill of Quantity presentation and the prospects for computer usage in Bill of Quantity preparation.

Prerequisites: BGB013, BGB014, BGB443

Credit Points: 4  Contact Hours: 2 per week

**BGB526 POST CONTRACT SERVICES I**

An in-depth study in the method of adjustment of provisional items in the contract; a study of rise and fall entitlements under various formulae, methods of preparing valuation certificates for progress payments, and modern cost control techniques used on jobs during the construction period including review of relevant contractual clauses applicable to all items within semester study. An in-depth study of various aspects of Quantity Surveying practice including adjustment to the contract sum for variations, feasibility studies and different types of contractual arrangement and selection of contractors.

Credit Points: 5  Contact Hours: 2.5 per week

**BGB529 PM2 - QUANTITATIVE TECHNIQUES**


Prerequisites: BGB403, BGB404

Credit Points: 5  Contact Hours: 2.5 per week

**BGB540 ESTIMATING II**

Buildup of a typical rate for the following trade items: 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 project.

Prerequisites: BGB009, BGB010, BGB246, BGB446

Credit Points: 5  Contact Hours: 2.5 per week

**BGB543 LAW IV - TORTS & ARBITRATION**


Prerequisite: BGB440

Credit Points: 3  Contact Hours: 1.5 per week

**BGB547 PM3 - CONSTRUCTION PLANNING TECHNIQUES I**

This subject is designed to develop skills in the application of construction planning and control techniques. It includes bar charts. Critical path network – arrow and precedence diagrams. Updating, control and reporting techniques. Line of balance. Resource levelling. Least-cost optimisation. Multiple activity chart.

Prerequisite: BGB254

Credit Points: 5  Contact Hours: 2.5 per week
BGB548 PM4 – CONSTRUCTION PLANNING TECHNIQUES II


Prerequisite: BGB147

Credit Points: 8 Contact Hours: 4 per week

BGB550 PM5 – PROJECT COST CONTROL

This subject is designed to develop skills in cost control for various projects. It deals with a variety of topics including the development time relationship, 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. Control and forecasting. Equipment policy. Equipment economics. Maintenance management. Contract administration including maintaining records, processing payments, negotiating extensions and prolongation claims, rise and fall, prescribed payments, sundry administration.

Prerequisite: BGB161

Credit Points: 3 Contact Hours: 1 per week

BGB552 OFFICE MANAGEMENT

A study of scale of fees and professional charges, code of ethics, letters of engagement, law involving the quantity surveyor and his client, professional indemnity, professional image and status. Office management and procedures.

Credit Points: 2 Contact Hours: 1 per week

BGB560 PROPERTY MAINTENANCE I


Prerequisites: BGB165, BGB361, BGB269

Credit Points: 4 Contact Hours: 2 per week

BGB562 PROPERTY MAINTENANCE II

See BGB561.

Credit Points: 6 Contact Hours: 3 per week

BGB563 VALUATION – ADVANCED I

Capital taxation as it affects property transactions. Valuations for development land tax, capital transfer tax and taxation of capital gains. Consideration of fiscal policy and tax planning as they affect the public and private property sectors. Valuations resulting from compulsory purchase with particular reference to land taken, part taken and where no land is taken. Residential and business disturbance claims. Compensation resulting from adverse planning decisions. The compensation and betterment problem. Law and valuation. The Land Court, professional liability.

Prerequisites: BGB363, BGB364

Credit Points: 5 Contact Hours: 2 per week

BGB564 VALUATION – ADVANCED II

Valuation in the development sphere, with emphasis on the valuer’s role in the development process; the structuring of development schemes in the private and public sectors with specific consideration of partnership schemes. Development potential and the effect of equity sharing schemes, capital budgeting, finance. A study of investment appraisal techniques and their application in the property sector. Portfolio management in the public and private sector, including selection, lease management, property maintenance and performance measurement. The conflict between investment theory and the problems/objectives of operational estate management. The valuation of corporate assets for organisational and balance sheet purposes. Consideration of the valuer’s role and responsibilities. The treatment of depreciation of fixed assets for accounting purposes.

Credit Points: 8 Contact Hours: 4 per week

BGB565 TIME MANAGEMENT


Prerequisite: BGB161

Credit Points: 8 Contact Hours: 2 per week

BGB566 REAL ESTATE PRACTICE I

These subjects explore in detail real estate practice, conveyancing, real estate law, marketing and office administration.

Credit Points: 4 Contact Hours: 2 per week

BGB567 REAL ESTATE PRACTICE II

See BGB566.

Credit Points: 5 Contact Hours: 2.5

BGB568 REAL ESTATE PRACTICE III

See BGB567.

Credit Points: 5 Contact Hours: 2 per week

BGB569 PROJECT COST MANAGEMENT I

Principles of project cost planning and control from project inception through design, pre-tender, tender, post contract and final account phases. Principles of measurement and preparation of Bills of Quantities, the pricing of construction work including preliminaries and overheads. An introduction to building economics and cost planning. Comparison of cost planning and approximate estimating. Cost implication of design variables – floor area ratio, size of building, circulation space, storey height, column spacing, floor space and loadings. Variations, adjustment of prime cost and provisional sums and final accounts. Progress payments.

Prerequisite: BGB162

Credit Points: 5 Contact Hours: 2 per week

BGB571 FORMWORK DESIGN & CONSTRUCTION

Objectives in formwork building, quality, safety, control. Formwork planning – re-use, materials and hardware, cost, hire or buy, erecting and stripping, scheduling. Types of materials, facings, finishes, hardware and fasteners. Loads and pressures on slab, beams, column and wall forms. Form design and design tables. Formwork drawing and detailing. Building and erecting formwork, architectural forms, precast concrete. Special techniques and pre-stressing. Proprietary formwork systems. Falsework will be designed in conjunction with the above but will only involve simple support beam or axially loaded props, more complex support systems will not be dealt with.

Prerequisite: BGB144 Co-requisite: BGB253

Credit Points: 4 Contact Hours: 2 per week
BGB606 PM8 – LAND DEVELOPMENT STUDIES
The structure, operation and control of the land development industry including the politico-economic framework, land use plans and approval mechanisms of potentially subdividable land, financial aspects of development projects, and trends and prospects in the house development industry.
Credit Points: 4 Contact Hours: 2 per week

BGB623 PM6 – BUILDING DEVELOPMENT TECHNIQUES I
Credit Points: 4 Contact Hours: 2 per week

BGB624 PM7 – BUILDING DEVELOPMENT TECHNIQUES II
See BGB623.
Credit Points: 4 Contact Hours: 2 per week

BGB626 LAND DEVELOPMENT STUDIES
Subject description as for BGB606.
Prerequisites: BGB623, LPB441, LPB444
Credit Points: 4 Contact Hours: 2 per week

BGB642 APPLIED COMPUTER TECHNIQUES
An evaluation of the range of commercial and non-commercial computer programs designed for the construction industry.
Prerequisites: BGB548
Credit Points: 4 Contact Hours: 2 per week

BGB643 LAW 5 – COMMERCIAL LAW
Credit Points: 3 Contact Hours: 1.25 per week

BGB647 COST PLANNING & COST CONTROL I
The significance of construction economics for the client, the professions, the industry and society. Historical development, need for main aims of cost control. Comparing cost planning and approximate estimating. Cost implication of design variables – shape, size, perimeter, storey height, etc. Cost implications of construction methods, of site and market conditions, of 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, effect of taxation and insurance.
Prerequisites: BGB005, BGB006, BGB009, BGB010, BGB446, BGB461, BGB462, BGB524, BGB540
Credit Points: 4 Contact Hours: 2 per week

BGB648 COST PLANNING & COST CONTROL II
See BGB647.
Credit Points: 6 Contact Hours: 3 per week

BGB653 POST CONTRACT SERVICES II
See BGB526.
Credit Points: 5 Contact Hours: 2.5 per week

BGB656 BUILDING RESEARCH
Prerequisite: BGB341
Credit Points: 9 per semester
Contact Hours: 4.5 per week

BGB661 ELECTIVE RESEARCH PROJECT I
The subject is designed to develop an ability to disseminate and evaluate information and specialised knowledge and to acquire an understanding of research methodology. It encompasses the definition, history, financing, future prospects and management of research. Students may either select a research subject, test its workability, develop working procedures, prepare an outline for the study, draft the preliminary section and after a series of critiques, present a bibliographic report, or carry out 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.
Credit Points: 8 Contact Hours: 4 per week

BGB662 ELECTIVE RESEARCH PROJECT II
See BGB661.
Credit Points: 8 Contact Hours: 4 per week

BGB663 PROJECT DEVELOPMENT PROCESSES I
An overview of the project development process from inception to occupancy as a prelude to detailed study of discrete parts of the process. Subject description as for BGB623/4.
Credit Points: 5 Contact Hours: 2 per week

BGB664 PROJECT DEVELOPMENT PROCESSES II
See BGB663.
Credit Points: 5 Contact Hours: 2 per week

BGB665 PROPERTY MANAGEMENT I
Principles and techniques in property management in the private and public sectors. The management of a property department in an organisation with a large property holding. Management of property portfolio in the private and public sectors. The characteristics and choice of alternative forms of ownership and interests. The management of residential, retail, industrial and commercial buildings. Main statutory provisions relating to above tenancies. Tenancy agreements, management records and accounts. In-

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assurance. Cash flow and credit control. Property brokerage—principles and practices.
Credit Points: 8 Contact Hours: 3 per week

**BGP666 PROPERTY MANAGEMENT II**
See BGB665.
Credit Points: 8 Contact Hours: 3 per week

**BGP667 APPLIED COMPUTER TECHNIQUES**
The subject is designed to give students hands-on experience and to demonstrate contemporary commercial software. On completion of the subject, students should be able to evaluate a range of commercial and non-commercial computer programs designed for the property development and construction industry. It covers accounting and cost control packages; feasibility studies, etc.; maintenance packages and CPM network analysis techniques.
Credit Points: 6 Contact Hours: 3 per week

**BGB668 LAW 6—VALUATION OF LAND**
The aim of this subject is to provide students with a better understanding of the basis upon which valuations of land are made for the levy of rates and taxes and the assessment of compensation for compulsory acquisition. It encompasses review of land, fixtures, plant, improvements, tenure, interests of land. Valuation—market, capital, unimproved, annual and site values. General principles—assessment of value. Valuation methods—urban and rural lands. Goodwill and business disturbance. Compensation upon compulsory acquisition. Mines and mineral bearing lands. Licensed premises. Valuation of strata title property. Valuer as an expert witness. Valuation appeals procedures.
Co-requisite: BGB563
Credit Points: 4 Contact Hours: 2 per week

**BGP412 PROPERTY MAINTENANCE**
Nature and importance of building maintenance; maintenance standards; statutory requirements; cost control and taxation.
Credit Points: 6 per semester Contact Hours: 2 per week

**BGP414 TIME MANAGEMENT II**
This subject is designed to develop an understanding and a high level of competence in the design of planning and control techniques for all stages of project management. It is expected that students will understand basic planning techniques. The subject covers updating, control and reporting techniques. Using CP networks. Resource, time and cost analysis of CPM and PERT. Production planning and control using line of balance/flowline techniques. A critical examination of CPM and case studies on its misuse and abuse in contracts. Development of basic planning to produce detailed repetitive production planning of project components and elements, including cycle times and balancing. Planning for various project types and its processes, including systematic analysis of methods, techniques and alternatives. Use of multiple activity charts in planning and monitoring progress, and material handling time analyses in repetitive projects.
Credit Points: 6 Contact Hours: 2 per week

**BGP417 DESIGN MANAGEMENT**
The aim of this subject is to provide the student with an understanding of the nature of design and a knowledge of all factors which influence the process of design. It includes planning, managing and controlling the design process from inception to detail documentation; decision sequences in design; appreciation of the consequence of design decisions on the total project; the interrelationships between architectural design and engineering and services design requirements; briefing techniques; cost control; and building maintenance manuals.
Credit Points: 6 Contact Hours: 2 per week

**BGP422 ADVANCED VALUATIONS**
Credit Points: 6 Contact Hours: 2 per week

**BGP426 PROJECT DEVELOPMENT**
Credit Points: 6 per semester Contact Hours: 2 per week

**BGP429 COST MANAGEMENT & ECONOMICS**
Credit Points: 6 per semester Contact Hours: 2 per week

**BGP430 CURRENT ISSUES**
This subject is to be seen very much as an integrative study area. There are two main strands of integration: the integration, under the project management umbrella, of areas already studied; and the integration of recent and topical developments in the area of project management. Areas may include: quality management, buildability, value analysis, current studies, industrial relations, computer applications and selection, technology, information systems IT and AI, international project management, simulation exercises (Arousal, Bicep), recent developments in law, and global land development. It is expected that many of these topics will be covered by guest speakers from industry or presented in the form of seminars.
Credit Points: 9 per semester Contact Hours: 2 per week

**BGP431 PROJECT MANAGEMENT I**
This subject is designed to introduce the student to basic theory in the areas of communication, management and organisation as it applies to the project situation. It encompasses communication—process, skills, environment, applications; management theory and organisation theory.
Credit Points: 6 Contact Hours: 2 per week
BGP432 PROJECT MANAGEMENT II
Credit Points: 6 Contact Hours: 2 per week

BGP433 PROJECT MANAGEMENT LAW
Credit Points: 6 per semester Contact Hours: 2 per week

BGP434 TIME MANAGEMENT I
Credit Points: 6 Contact Hours: 2 per week

BGP437 FIELD TRIP
An experiential field trip of 5 days duration in an adventure style environment. The emphasis will be on team building, working in a stressful environment, development 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.
Credit Points: 12 Contact Hours: 5 days

BGP438 REAL ESTATE INVESTMENT & ECONOMICS
Credit Points: 6 Contact Hours: 2 per week

BGP439 PROPERTY MANAGEMENT
Credit Points: 6 Contact Hours: 2 per week

BGP440 RESEARCH METHODOLOGY
This subject is to enable the student to apply recognised research techniques to the production of higher research dissertation. It covers structure of a dissertation and format. Referencing. Hypotheses. Different methods of investigation. Formulation of questionnaires, interviews etc. Sampling, sample size.
Credit Points: 3 Contact Hours: 2 x 7 weeks

BGP441 STATISTICS
Collection and presentation of data. Probability and probability distribution. Normal, t, F and chi distributions, statistical estimation and tests of hypotheses based on these. Introduction to non-parameter tests of hypotheses. Regression and correlation.
Credit Points: 6 Contact Hours: 2 per week

BGP442 DISSERTATION
The dissertation may be of a research or investigative nature on any approved area related to project management. Suitable topics will be discussed and arranged with course members each year. Each student will be assigned a supervisor and will be examined by means of a dissertation by that supervisor and another member of staff prior to review by the external examiner.
Credit Points: 19.5 per semester Contact Hours: 2 per week

BTB100 INTRODUCTORY DESIGN I
The greater part of the course will consist of studio work in freehand and mechanical drawing techniques, applied to a variety of subject matter at different environmental scales. Topics covered include: contour, texture and tone; depth perception, optical illusions and the principles of perspective; techniques of perspective drawing; the organisation of the visual field and the gestalt "laws of pragmatics"; pattern in two and three dimensions; visual interest and attention; visual dynamics; and principles of scale drawing.
Credit Points: 16 Contact Hours: 8 per week

BTB101 THE HUMAN ENVIRONMENT I
The aim of this subject is to provide a basic understanding of 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. The course consists of lectures and studio exercises. Lecture topics include: static and dynamic anthropometry; human sensory systems; introduction to ergonomics; applications of anthropometrics and ergonomics to design.
Credit Points: 4 Contact Hours: 2 per week

BTB102 HISTORY OF THE BUILT ENVIRONMENT I
The course reviews the development of man's artificial environment and its relationship to ideas, technology, and the fine arts from the earliest times to the seventeenth century.
Credit Points: 6 Contact Hours: 5 per week

BTB103 ENVIRONMENTAL STUDIES I
Man's place in nature. Some concepts of ecology - concept of the ecosystem, energy in ecosystems, interactions in the natural environment. Population, resources and pollution - the ecology of populations, man as part of the ecosystem, diversity as an ecological resource, resilience of natural systems, systems of overloading. Structure and function of essential biological systems. Environmental health.
Credit Points: 2 Contact Hours: 1 per week

BTB110 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. Data collection and analysis in design; introduction to statistics; use of
computers in data analysis; elements of computer programming.

Credit Points: 6 Contact Hours: 3 per week

**BTB113 ENVIRONMENTAL SCIENCE**
Composition of the atmosphere and atmospheric process including climate; air pollution and smog; water cycles, the composition of lakes and oceans; sea-level changes and water pollution as a global issue; carbon, nitrogen and phosphorous cycling and terrestrial, aquatic and atmospheric links; introduction to human population and demographic trends in developed and developing countries; distribution and trade in renewable and non-renewable resources; trends in the use of land; implications of urbanisation for rural land management; the city as an ecosystem – local and regional environmental impacts; natural resource management and conservation.

Credit Points: 4 Contact Hours: 2 per week

**BTB132 LIGHT & COLOUR STUDIES**
This subject extends the study of colour vision, colour harmony and contrast, mixing and the application of colour; examines a range of contemporary theories relating to the use of colour in design; and introduces the study of the qualitative effects of lighting on form and colour in interiors. Lecture topics include the physiological-psychological basis for colour relations and examine the range of techniques used to apply these theories in the design professions.

Credit Points: 8 Contact Hours: 2 per week

**BTB135 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. Material will be covered by lectures, workshops, visits to map and air photo source organisations. Evaluation and assessment will be by assignment and practical workshop(s).

Credit Points: 2 Contact Hours: 1 per week

**BTB151 INTRODUCTION TO TECHNOLOGY**
This subject aims to provide basic knowledge on applied technologies, and how they relate to industrial products and systems. The subject consists of series of short case studies occurring in a broad sense; different technological issues and their application in the content of technological evolution; factors related to technological changes; appropriate technologies.

Credit Points: 2 Contact Hours: 1 per week

**BTB200 INTRODUCTORY DESIGN II**
Studio work: simple three-dimensional design tasks at a variety of scales, and illustrating tasks associated with the five professions. Workshop and fieldwork will be related to studio exercises. Studies of the professions: a seminar course in which the work and roles of architect, industrial designer, landscape architect, urban and regional planner and interior designer will be explained and discussed by staff and practitioners and related to current work in the studio and to teaching in History of the Built Environment II.

Prerequisite: BTB100

Credit Points: 18 Contact Hours: 8 per week

**BTB201 THE HUMAN ENVIRONMENT II**
This subject encourages the understanding of human behaviour by examination of relevant theories and processes, and skill acquisition and practical application to daily life. It encompasses 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 focus of control in transactions with the world in general.

Credit Points: 4 Contact Hours: 2 per week

**BTB202 HISTORY OF THE BUILT ENVIRONMENT II**
A continuation of History of the Built Environment I. History of the following from circa 1600 AD: Ideas, art, and three of the following (one of which must be the student’s major discipline) – Town and Country Planning, Landscape Architecture, Architecture, Interior Design, Industrial Design.

Credit Points: 10 Contact Hours: 5 per week

**BTB203 ENVIRONMENTAL STUDIES II**
A continuation of Environmental Studies I, covering the natural environment and its interactions with people. It looks at man’s place in nature. Some concepts of ecology – concept of the ecosystem, energy in ecosystems, interactions in the natural environment. Population, resources and pollution – the ecology of populations, man as part of the ecosystem, diversity as an ecological resource, resilience of natural systems, systems of overloading. Structure and function of essential biological systems. Environmental health.

Credit Points: 2 Contact Hours: 1 per week

**BTB204 APPLIED SCIENCE FOR DESIGNERS II**
In laying the foundations of a scientific understanding of the physical environment and the technology by which it can be adapted to human use, this subject covers chemistry for environmental design; basic chemical properties of commonly occurring materials, natural and artificial; common chemical processes in buildings and artifacts.

Credit Points: 4 Contact Hours: 2 per week

**BTB209 APPLIED LAND SCIENCE FOR DESIGNERS**
This subject is concerned with establishing the foundations of a scientific understanding of the earth’s surface. It includes earth science and climatology for environmental design; land forms and their origins; introduction to the physical properties and behaviour of soils and rocks in relation to the design professions.

Credit Points: 2 Contact Hours: 1 per week

**BTB210 APPLIED MATHEMATICS FOR DESIGNERS II**
Applications of plane and solid geometry in design: revision of basic geometry; symmetry; construction and packing of solids; spherical geometry and its applications. Applications of trigonometry in design: revision of basic trigonometry; calculation of heights, distances, areas and volumes. Data collection and analysis in design; introduction to statistics; use of computers in data analysis; elements of computer programming.

Credit Points: 6 Contact Hours: 3 per week

**BTB220 ERGONOMICS I**
To develop a scientific and research approach to problem solving and implementation of principles during the design education, this subject studies different aspects of human factors with an emphasis on their application to human-equipment interface.

Credit Points: 2 Contact Hours: 1 per week
• BTB303 INTRODUCTION TO INTERIOR TECHNOLOGY
The subject has two purposes: to introduce the student to the elements of construction systems and construction materials and how these elements relate to form and structure; and to develop skills in measuring, surveying and recording information in existing spaces in buildings. Lectures deal with basic structural systems and building carcase. Construction materials and finish materials are differentiated. Instruction in techniques of measuring and recording existing structures including the use of levels, photography, photogrammetry and the recording, storage and use of surveyed information. 
Credit Points: 8 Contact Hours: 3 per week

• BTB300 DESIGN I
Lecture topics include: Scope of problem solving theory; Reinman's State Transformation Model; 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; and general psychological theories of creativity. The theoretical base also encompasses theories of development and in art, design and perception. The studio exercises, to which most of the time is devoted, are aimed at a range of problems within specific boundaries to focus on the systematic processes of design rather than on questioning the environmental implications of these processes. 
Prerequisite: BTB200
Credit Points: 18 Contact Hours: 8 per week

• BTB201 THE HUMAN ENVIRONMENT III
The role of social, cultural, and historical variables in human-environment interactions. 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, personal space, territoriality, environmental meaning and cognition, cognitive maps and wayfinding, intercultural and intracultural differences. Application via examination and analysis of an urban environment with respect to its sociocultural function. 
Credit Points: 6 Contact Hours: 3 per week

• BTB203 ENVIRONMENTAL STUDIES III - EVALUATION
The characteristics and elements of spaces - form, size, scale, contextual relationships, furnishings, fittings, and uses; the needs of living vegetation in external and internal urban spaces - light, air, soil, water, support, management problems; techniques of evaluation of spaces relevant to the various disciplines - Architecture, Urban and Regional Planning (similarities and differences in techniques, approaches, and terminology will be highlighted); graphic-based assignment with class discussion on specific requirements. 
Credit Points: 2 Contact Hours: 1 per week

• BTB306 VISUAL COMMUNICATION I
A practice-based program will be followed with specialised, formal lecture inputs related to the development of methodologies. The program will concentrate on the achievement of a professional standard in basic techniques of production documented in the visual and graphic context and provide further individual development in the more "legitimate" aspects of artistic expression. 
Credit Points: 4 Contact Hours: 2 per week

• BTB307 DESIGN SCIENCE I
Credit Points: 2 Contact Hours: 1 per week

• BTB310 BUILDING CONSTRUCTION I
Lecture topics will include: introduction to common building materials, their properties and behaviour in use; the building as a system; technical innovation and its influence and design and performance; the influence of occupancy, environmental factors, materials and erection procedures in the choice of a construction method; elements of the small building and their function in the building system; historical and contemporary methods of construct small timber framed and masonry buildings. Studio work will consist of exercises in construction drawing related to the lecture topics. Lectures and studio work will be complemented by site visits and workshop practice. 
Credit Points: 16 Contact Hours: 6 per week

• BTB315 MANUFACTURING TECHNOLOGY I
The course will consist of lectures and studio work. Lecture topics will include: metals, glass, ceramic, wood technologies in relation to product construction. The relationship between the properties of materials and the industrial processes available for their fabrication. Applications of the study of materials, processes and their fabrication to product design including product development, systems and specifications for manufacture will be the subject of studio exercises. 
Prerequisite: BTB220
Credit Points: 12 Contact Hours: 6 per week

• BTB320 ERGONOMICS II
The aim of this subject is to develop a scientific and research approach to problem solving and implementation of principles during the design process. This subject studies different aspects of human factors with an emphasis on their application to human-equipment-interface. The course will consist of lectures, and laboratory exercises. Lecture topics will include systems and people; person-machine-system models; human capabilities; hearing and signal detection theory; vision. 
Prerequisite: BTB220
Credit Points: 6 Contact Hours: 2 per week

• BTB331 FURNITURE & FITTINGS I
The course will consist of lectures and field studies. Topics will include: introduction to fabrics and textiles in interior design; wall to wall carpeting, materials, properties and fixing methods; curtains and blinds, materials, properties, methods of installation and control; upholstery, materials, properties and techniques; the role of fabrics and textiles in interior design. 
Credit Points: 4 Contact Hours: 2 per week

• BTB335 INTERIOR TECHNOLOGY I
Upgrades the technical drawing skills developed in BTB235 and introduces students to the building codes and by-laws regulating the design and construction of building interiors at the domestic level; addresses
various technological issues such as the evolution of building materials and the evaluation of material performance and suitability.
Credit Points: 14  Contact Hours: 5 per week

**BTB340 SITE MEASUREMENT**
Introduction to basic equipment for site measurement - levels, staffs, chains and tapes, 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. Theory and technique will be introduced in lectures and applied in the field with a site measurement exercise. Evaluation and assessment will be based on the fieldwork.
Credit Points: 4  Contact Hours: 1 per week

**BTB341 SITE PLANNING THEORY**
Exploration of open space theory at regional and local scales; definition of spatial characteristics by edges, nodes, landmarks, districts and paths. Sense of place; structure and form; legibility; imageability; human responses and expectations and their effects on site planning decisions. The subject is taught through lectures, seminar, and application in Design I. Evaluation and assessment will be by assignment and contribution to project work in Design I.
Credit Points: 6  Contact Hours: 2 per week

**BTB343 INTRODUCTION TO THE PROFESSIONS**
The concept of professionalism and contemporary social expectations of the environmental design professions. Current issues and controversies in environmental design and planning in Australia including resource conservation and degradation, and coastal, city centre and inner city development. Roles and ranges of employment within the two professions. Organisation and activities of the professional institutes. The powers, responsibilities and day to day activities of landscape architects and urban and regional planners in different forms of private and public employment. The future directions, potentials and job opportunities of the two professions.
Credit Points: 3  Contact Hours: 1 per week

**BTB344 ORAL PRESENTATION**
Formal oral presentation techniques including meetings, conferences, interviews and speeches (informative and persuasive). Evaluation and assessment is by verbal report and presentation.
Credit Points: 3  Contact Hours: 1 per week

**BTB345 INTRODUCTION TO ECOLOGY**
Basic plant taxonomy, classification and the physiological processes of plants; the interrelationships of plants, animals (including man) and the environment; populations and population regulation; limiting factors, inter and intra specific competition and predation; life history patterns in plants and animals; the concept of the niche; resources, competition and dynamics of plant communities; ecosystems and ecosystem energetics.
Credit Points: 8  Contact Hours: 4 per week

**BTB346 GRAPHIC COMMUNICATION**
A practice-based program will be followed with specialised, formal lecture inputs related to the development of methodologies. The program will concentrate on the achievement of a professional standard in basic techniques of production documentation whilst allowing further individual development in the more 'legitimate' aspects of artistic expression.
Credit Points: 6  Contact Hours: 3 per week

**BTB400 DESIGN II**
This subject aims to develop the design process 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 develop a rigorous and systematic methodology in the sciences and arts that constitute the design process; to concentrate attention on problems within specific parameters so that students are exposed to and involved in design rather than the broader area of problem solving; and to instil an appreciation of design as a capability of human beings.
Prerequisite: BTB310
Credit Points: 20  Contact Hours: 6 per week

**BTB401 THE HUMAN ENVIRONMENT IV**
Organisation of society; bureaucracy; other approaches to organisation and their structure; directing society; the roles of government and private enterprise; theories of power in society; Federal governments; the Australian example; three tiers of government; Australian constitution; Parliamentary democracy and procedures in State and Federal governments; Queensland State administration; role of local government, especially in Queensland; quango and statutory authorities; pressure groups and lobby groups and their influence in the Built Environment arena; examples of interactions between government and built environment professions.
Credit Points: 4  Contact Hours: 2 per week

**BTB403 ENVIRONMENTAL STUDIES - ENVIRONMENTAL IMPACTS**
The impacts of particular types and processes of development; environmental impacts related to land uses, land and building development, production and use of consumer products, construction materials and processes; environmental criteria for future land and product development.
Credit Points: 2  Contact Hours: 1 per week

**BTB406 VISUAL COMMUNICATION II**
To concentrate on graphic applications in the specific professional areas represented by the School and to allow exploration of areas of particular individual interest and ability, emphasis is placed on development and application of skills and techniques previously covered and computer graphic techniques relevant to professional applications.
Credit Points: 4  Contact Hours: 2 per week

**BTB407 DESIGN SCIENCE II**
Continuation of the aims and principles as described in Design Science I. Basic design for hot humid climates. Principles governing air flow through and around buildings and spaces. Natural ventilation. Introduction to airflow in cities. Testing of airflow through and around models. Basic design for hot arid climates and for cold climates. Macro and micro climatic conditions and their evaluation for design. Manual and computerised climatic evaluation.
Prerequisite: BTB307
Credit Points: 2  Contact Hours: 1 per week

**BTB408 DESIGN SCIENCE**
The quantity and quality of light and daylight in buildings; solar variation in cities and in and around buildings; macro and micro climatic conditions are considered and their evaluation for design. Throughout the course as each of these units are covered students are given opportunity to conduct experiments and test models. The subject consists of
lecture and practical work used for assessment in conjunction with assignment work.
Credit Points: 4  Contact Hours: 2 per week

**BTB409 COMPUTER TECHNIQUES**
Development of understanding, awareness, and appreciation of the use of computers in a variety of areas as aids in data analysis and presentation, and of basic skills to input, manipulate, and analyse output; the appropriate use of computers and statistical analysis of data in decision making in physical, social and economic areas; the range of information systems; usefulness of the computer as a tool in landscape architecture and planning; the variety of areas where information systems and statistical analysis can assist decision making. The subject will be orientated towards actual use of computers to ensure student experience in all phases of the process (input, manipulation, output, analysis and presentation).
Credit Points: 4  Contact Hours: 2 per week

**BTB410 BUILDING CONSTRUCTION II**
The course will be conducted by the case study method, with lectures and studio work. Case studies will be selected to develop understanding of construction in breadth and depth. Each case study will be introduced by lectures explaining the system characteristics of the problem, the human and environmental factors which constrain the solution, and the technical systems which have been developed to deal with problems of this type. Students will then develop their own solution for a particular case in the studio. Lectures and studio work will be complemented by field studies and workshop practice.
Prerequisite: BTB310
Credit Points: 10  Contact Hours: 5 per week

**BTB411 LANDSCAPE ECOLOGY**
The broad division of the earth in relation to climate and soils - bionics, formations, alliances, associations and societies; the ecosystem concept and its development and application at various geographic scales; the plant community as an expression of ecosystems; energy and water balance; concept of community -ecophysiology and growth equations; vegetation classification in Australia and its functional significance; ecological biogeography of Australian vegetation; classification of landscape - concepts of biogeographic regions, provinces, land systems and land units; landscape structure - patches and corridors and the ideas of matrix and network; analysis of landscape structure and function; significance for nature conservation planning; landscape ecology and the practice of planning and landscape architecture.
Credit Points: 8  Contact Hours: 3 per week

**BTB414 POPULATION & URBAN STUDIES**
Within this subject students are introduced to urbanisation and its definition. Aspects of urban structure including size/function relationships, concentric zone theory, Hoyt's Settlement patterns and problems of rural settlements are discussed. 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.
Credit Points: 6  Contact Hours: 3 per week

**BTB415 MANUFACTURING TECHNOLOGY II**
The course will consist of lectures and studio work. Lecture topics will include application of principles of engineering mechanisms to products/systems in current technology. Analysis of the performance of mechanical, electrical, hydraulic and pneumatic mechanisms in relation to product evaluation and performance criteria. Application of engineering mechanisms and product performance check lists to design problems will be the subject of studio exercises.
Credit Points: 12  Contact Hours: 6 per week

**BTB420 ERGONOMICS III**
Different aspects of human factors with an emphasis on their application to human-equipment interface. The course will consist of lectures, and laboratory exercises. Lecture topics will include: psychomotor skills, human information processing. Human machine interfaces, displays, controls and tools, human machine system properties, feedback, and controls, workspace design, noise, stress, vibration, legal aspects, safety and product liability.
Credit Points: 2  Contact Hours: 1 per week

**BTB431 FURNITURE & FITTINGS II**
The manufacture, assembly and fabrication of furniture, fittings and components. Lectures include the expected performance of materials and furniture elements, and will focus on functional, maintenance, life span, economic properties.
Credit Points: 4  Contact Hours: 2 per week

**BTB435 INTERIOR TECHNOLOGY II**
The subject will comprise lectures, tutorials and studio work complemented by site visits. The subject will deal with industrialised interior finishes, and construction of joinery and fittings and their interaction with the building shell and services. The notions of interior maintenance, life span economies will be introduced.
Credit Points: 8  Contact Hours: 4 per week

**BTB440 INTRODUCTION TO ECONOMICS**
An 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 household and trade sectors are outlined together with the role of government. Business cycles, inflation, unemployment, saving and investment are introduced and discussed. The second part of the subject deals with microeconomic concepts. The market system and associated concepts of demand, supply and price equilibrium are developed.
Credit Points: 2  Contact Hours: 1 per week

**BTB441 SITE PLANNING TECHNIQUES**
Introduction to the processes of site planning and detailed site design that lead to defendable and accountable solutions; role and objectives of survey and analysis phases; types of information required and the methods of processing the resultant data; data analysis, its scope and documentation; the use of data analysis to generate and evaluate possible solutions in conceptual form as a basis for master planning and the value of these processes as a long-term mechanism for adaptation of master planning to meet changing needs.
Credit Points: 2  Contact Hours: 1 per week

**BTB442 QUANTITIES & COSTS**
Measurement and costing of time, resources, and materials for professional services, production of documents, and implementation of projects. The techniques and tools available for both preliminary and detailed measurement and costing and their control.
Credit Points: 2  Contact Hours: 1 per week
II BTB506 DESIGN III
As the growth of design abilities is largely dependent upon practice and experience, the program will continue to maintain the major time allocation to studio and workshop exercises. Studies in theory will form an integral part but will be cross-referenced with other subject areas that give emphasis to the methodologies inherent in the roles of the professions represented by the School. The study program will allow for the exploration of optional design topics by students.
Prerequisite: BTB400
Credit Points: 20 Contact Hours: 6 per week

II BTB508 VISUAL COMMUNICATION III
This subject concentrates on processes and techniques employed in the production of three-dimensional aids to design and presentation. The course will consist of a series of studio exercises in the production of rough mock-ups as an aid to the design process; scale model-making and choice of materials.
Credit Points: 4 Contact Hours: 2 per week

II BTB510 BUILDING CONSTRUCTION III
The course will be conducted by the case study method, and predominantly by studio work. Case studies will be selected to develop a thorough understanding of the construction of non-domestic buildings of intermediate size. Each case study will be introduced by lectures explaining the system characteristics of the building type, the human and environmental factors which constrain the solution, and the building systems which have been developed for the building type. Students will then develop their own set of solutions for a particular case. Studio work will be complemented by field work.
Prerequisite: BTB410
Credit Points: 17 Contact Hours: 6 per week

II BTB511 LANDSCAPE CONSTRUCTION
This subject aims to introduce students to materials and methods commonly used in landscape construction; and to develop skills in construction detailing and preparation of construction documents. Topics covered include the common building materials; an understanding of foundation soils; basic services of site stormwater drainage, water and electrical services; applied systems including paving, steps and ramps; and construction for planting and small water features.
Credit Points: 6 Contact Hours: 3 per week

II BTB517 BUILDING SERVICES I
Supply, connection and reticulation of electricity, gas, water and telephone services and relevant outlets and appliances. Sewerage, sullage and stormwater drainage as applicable to domestic buildings. Domestic waste disposal.
Credit Points: 4 Contact Hours: 2 per week

II BTB527 DESIGN SCIENCE III
Prerequisite: BTB407
Credit Points: 3 Contact Hours: 1 per week

II BTB531 FURNITURE & FITTINGS III
The aesthetic and practical possibilities of the decorative crafts for interior design. The course will consist of lectures, field studies, and studio and workshop exercises. Lecture topics will include: general principles of ornamental design; decorative metalwork; stained glass; decorative ceramics; plasterwork; carved and inlaid woodwork; lacquer work; printed fabrics and papers; tapestry and embroidery.
Credit Points: 2 Contact Hours: 2 per week

II BTB535 INTERIOR TECHNOLOGY III
This subject continues Interior Technology I, with an emphasis on commercial construction systems and the impact of regulations. High-rise buildings are examined, the planning of tenneaux, partitioning, and furniture systems. Special considerations for shopping centres, theatres, medical clinics, taverns and restaurants are highlighted.
Credit Points: 16 Contact Hours: 6 per week

II BTB543 ENVIRONMENTAL STUDIES V - IMPACT ANALYSIS
Credit Points: 2 Contact Hours: 1 per week

II BTB546 LAND DEVELOPMENT I
This subject is designed to illuminate the political, economic, and physical contexts of land development, and establish an understanding of the land development process; to study environmental services and utilities at the broad scale and their effects on land development; to examine the necessary design criteria for these services; and to explore contemporary techniques, future trends, and alternatives systems. It looks at a range of topics including characteristics of land development projects; structure and operation of approval authorities; design considerations; impacts of electricity and gas systems on the natural environment; and transport systems planning.
Credit Points: 8 Contact Hours: 3 per week

Credit Points: 4 Contact Hours: 2 per week

II BTB551 ARCHITECTURAL INTERIOR SYSTEMS II
An overview of the environmental systems used in buildings: air-conditioning and system performance, thermal and atmosphere control; the building as a comprehensive environmental system; and their impact on individual interior spaces.

Credit Points: 4 Contact Hours: 2 per week

II BTB552 ECONOMICS OF INDUSTRIAL PRODUCTION
This subject consists of series of lectures and seminars and covers the following aspects: business, costing, production, marketing, strategic planning and capital budgeting.

Credit Points: 4 Contact Hours: 2 per week

II BTB556 MARKETING
The aim of this subject is to develop an understanding of marketing concepts and their relation to industrial design; and to provide knowledge on methodologies of forecasting and their relation to industrial design. A series of lectures and seminars covers: marketing concept, market segmentation, market test methodologies of forecasting, planning and organisation, costing of products etc.

Credit Points: 4 Contact Hours: 2 per week

II BTB558 MANUFACTURING TECHNOLOGY III
The course will consist of lectures, studio work and field studies. Lecture topics will include: production techniques in relation to different materials, various methods for different finishing operations, various methods for forming, automatic and semi-automatic assembly and quality control methods. Field studies will consist of site visits to selected manufacturing industries. The application of the appropriate production technique should be developed through the design project.

Credit Points: 12 Contact Hours: 5 per week

II BTB561 ECONOMICS OF TOWN PLANNING
This subject is essentially microeconomic although the global and national macroeconomic forces as they affect firms will be outlined. It introduces urban economics and the economic aspects of town planning issues; provides techniques for economic analysis suited to planning needs; and illustrates interactions with employment, industry, population and urban studies at the economic interface.

Credit Points: 3 Contact Hours: 1 per week

II BTB562 REPORT PREPARATION

Credit Points: 2 Contact Hours: 1 per week

II BTB563 TRANSPORT PLANNING
The objective of this subject is to introduce students to alternative modes of transport; to methods for predicting future urban transport patterns; and to techniques of transport planning and management. It covers movement and its alternative modes – foot, cycle, car, bus, train, plane, pipeline, inland waterway and marine modes. The origin and destination approach to traffic management; interchange studies; inter-urban traffic and regional transport planning. The relationship between land use and traffic generation.

Credit Points: 5 Contact Hours: 2 per week

II BTB565 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. Lectures and工作室 work. Evaluation will be based on evidence of skills and understanding through studio exercises and folio/workbook.

Credit Points: 6 Contact Hours: 2 per week

II BTB571 PLANT RECOGNITION & REQUIREMENTS
Field recognition by visual characteristics of size, form, texture and colour and by use of simple keys. Requirements of plants for growth in differing environments and the selection of species most suited to particular sets of environmental conditions. Basic botanical terms, plant nomenclature, collection and preservation of plant material, plant physiology and concepts of plant association will be introduced. Teaching consists of lectures, field work, workshops and the use of slides and films etc. Evaluation and assessment is by submission of annotated plant sketches and tests of both identification skills and basic terminology.

Credit Points: 4 Contact Hours: 2 per week

II BTB600 DESIGN IV
The major time allocation will again be given to studio and workshop exercises. Studies in theory again form an integral part of design and will be cross-referenced to other subjects such as Dynamics II, Environmental Studies IV, Building Construction II, Industrial Construction II, Building Services III, Ecological Principles II, Land Development II, Interior Construction III, Visual Communication IV and External Services II. All students will pursue the same program providing specific inputs but with a limited range of specialisation through research studies and field exercises associated with the studio projects.

Prerequisite: BTB500
Credit Points: 20 Contact Hours: 6 per week

II BTB609 LAW OF THE BUILT ENVIRONMENT
The law as a constraint in the design and construction process. Laws, regulations and their interpretation. A review of the Australian and Queensland acts, local authority 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.

Credit Points: 4 Contact Hours: 2 per week

II BTB610 BUILDING CONSTRUCTION IV
Continuing from Building Construction III. The course will be conducted by the case study method,
and predominantly by studio work. Case studies will be selected to develop a thorough understanding of the construction of non-domestic buildings of intermediate size. Each case study will be introduced by lectures explaining the system characteristics of the building type, the human and environmental factors which constrain the solution, and the building systems which have been developed for the building type. Students will then develop their own set of solutions for a particular case. Studio work will be complemented by field work.

Prerequisite: BTB510
Credit Points: 14 Contact Hours: 6 per week

**BTB617 BUILDING SERVICES II**
Mechanical, electrical and hydraulic services and their integration in the design and construction of major buildings. Hydraulics: water supply, plumbing, drainage; fire services: sprinklers, alarms, extinguishers, emergency systems; electricity: supply, substations, switchboards, metering, reticulation; vertical transportation: lifts, escalators, hoists.

Prerequisite: BTB527
Credit Points: 4 Contact Hours: 2 per week

**BTB627 DESIGN SCIENCE IV**

Prerequisite: BTB527
Credit Points: 2 Contact Hours: 1 per week

**BTB631 FURNITURE & FITTINGS IV**
This subject encompasses the development of a methodological approach to the choice of loose furniture, furniture systems and interior products; introduces both quantitative and qualitative assessment approaches; and extends the understanding of design of furniture and its integration into interiors.

Credit Points: 4 Contact Hours: 2 per week

**BTB635 INTERIOR TECHNOLOGY IV**
The subject will consist of lectures, tutorials and studio work. Lectures will concentrate on the technological assessment of interiors, structure, openings, environmental systems, artifacts and ambience of existing spaces with a view to utilising/changing what an existing space has to offer. Tendering, consultants, leasing and tenancy-building interface will be examined.

Credit Points: 16 Contact Hours: 6 per week

**BTB640 PLANTING DESIGN**
Design characteristics and criteria. The use of plants as structural and design elements within landscape principles to planting design. Scale. Design for change, growth, replacement and maintenance. Planting design in typical schemes such as streets, highways, parks, urban frontages and interior plantscapes, gardens and broadscale regeneration and stabilisation. Lectures, tutorials and a field visit will be held. Evaluation and assessment will be undertaken through a selected analytical exercise.

Credit Points: 3 Contact Hours: 1 per week

**BTB643 ENVIRONMENTAL STUDIES VI – ISSUES & ETHICS**
Case studies of successful solutions to environmental problems (eg, Oregon, London, South Australia). Implications of major environmental problems and environmental awareness for urban form and policies.

Environmental impacts of technological change. Contrasting attitudes towards conservation of natural, rural and urban environments. Concept of stewardship.

Credit Points: 2 Contact Hours: 1 per week

**BTB644 APPLIED ENVIRONMENTAL SCIENCE**
The basic principles of ecosystems are introduced and the concepts of plant community-environmental associations are strengthened. Methods and techniques of vegetation mapping and classification are introduced including use of air photo and remote sensing.

Prerequisite: BTB643
Credit Points: 6 Contact Hours: 3 per week

**BTB645 GRADING**
Techniques of land surface manipulation including the construction of platforms for building, carparks, sports ovals and other features and the 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. Evaluation and assessment is based on the studio exercises and the grading plans.

Credit Points: 4 Contact Hours: 3 per week

**BTB646 LAND DEVELOPMENT II**
Continuation of BTB546. Land development projects, their financial, marketing and local authority requirements; the housing industry, firm and industry developments and current trends in place-making; the requirements of community, public and utility services are considered.

Credit Points: 7 Contact Hours: 3 per week

**BTB647 LAND USE POLICIES**
Review of the Government structure as applied to urban areas and regions. The levels of urban planning. How urban policies are made, and analysis of their effectiveness and implementation. Organisations as policy makers, and policy implementors. Areas of conflict and their resolution. Roles of various agencies involved; the various levels and types of land use planning, their powers, and their limits and practice. Major land uses and activities: work, housing, recreation, transport and welfare.

Credit Points: 4 Contact Hours: 2 per week

**BTB648 PUBLIC SERVICES**
The provision, organisation, and administration of community services other than public utility services. The subject covers definitions and concepts, historical perspectives, and measurement of community needs in relation to social infrastructural systems and services; health and welfare, education, law/order and safety, open space and recreation, cultural, administration, and communication. Planning objectives for service provisions and maintenance, siting requirements, design considerations, environmental considerations, recent trends and developments.

Credit Points: 4 Contact Hours: 2 per week

**BTB649 CONSERVATION THEORY**
Introduction to the concepts of conservation and preservation. Outline of the development and current status of the conservation movement. The structure of conservation legislation and responsibility in
Australia, ICOMOS and the 'Burra' charter. The particular requirements of places, landscapes and precincts in mixed or public ownership. Application of conservation concepts and their use in the National Listings process. Local and regional case studies.

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

### BTB650 IMPACTS & ASSESSMENT

Forms of impact assessment and analysis considering ecological, social and economic issues; various statutory systems, especially those pertaining in Queensland and under Federal legislation; an analysis of the ecological processes which structure and maintain the major aquatic and terrestrial ecosystems as a background to assessing impact of human activities—urbanisation, resource exploitations, mining and other forms of landscape change.

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

### BTB653 VISUAL COMMUNICATION IV

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

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

### BTB654 ELECTIVE (PLANNING)

Any approved subject 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 may be selected from courses offered in other faculties of QUT or in another approved university or college.

**Credit Points:** 3  **Contact Hours:** 2 per week

### BTB655 CAD FOR INDUSTRIAL DESIGNERS

2D CAD used for the development of design concepts through to technical drawings. Evaluations of projects and their evolution through studies undertaken with three-dimensional CAD, both wire frame and shaded.

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

### BTB656 HOUSING & COMMUNITY SERVICES

Population change and households formation on techniques of analysis and projection of housing stock. 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—schools, colleges, universities. Shared use of facilities. Location and space standards. Social and welfare services and their role in the community. Planning and management aspects of welfare.

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

### BTB658 MANUFACTURING TECHNOLOGY IV

This course is designed to develop an understanding of advanced manufacturing processes and materials; and to provide knowledge of advanced manufacturing production techniques and how they relate to product design solutions. Lecture topics will include: organisation, planning and technologies required for CIM (computer-integrated manufacturing). The impact of CIM to product design solutions; advanced materials and their applications. Field studies will complement the lecture series. The application of CIM should be developed through the design project.

**Credit Points:** 14  **Contact Hours:** 5 per week

### BTB663 URBAN PLANNING I

Building upon preliminary economic knowledge, urban growth theory and constraints are outlined. Population and employment changes and their effect on employment, industry and residential location are identified together with relevant definition and analytical techniques. Introduction to economic base studies, activity rates and use of multipliers. The urban labour market, unemployment and labour supply are outlined. Theory and methods of industry location are developed: types and needs of industry, retailing, retail hierarchies; office activities, office location; shopping centres; and office, industrial and corporate parks. The role of government and the impact of the post-industrial society are considered.

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

### BTN101 URBAN DESIGN ANALYSIS STUDIO

The emphasis within this subject is on the development of skills in analysis related to the urban design process and adequate communication of the results. Each student will be required to undertake two studies, one chosen from each of two groups typically: city interpretation or townscape appraisal, and housing morphology or pedestrian environments. Where applicable, work in other units of study will be incorporated into this subject. Field work will be incorporated as necessary.

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

### BTN102 URBAN DESIGN CONTEXT STUDIO

Aim: to develop design skills required for relating new development to existing urban contexts. Each student will be required to undertake two studies, one from each of two groups typically: a community participation project or a sense of place project and a conservation and infill project for the redevelopment/rehabilitation of either an urban precinct or a residential area. Where applicable, work in other units of study will be related to this subject.

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

### BTN103 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. Each student will be required to undertake one study chosen typically from: local area, precinct, part of the city, the city as a whole. Where applicable, work in other units of study will be incorporated into this subject.

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

### BTN104 URBAN DESIGN GUIDELINES STUDIO

Each student will be required to develop design guidelines for an urban complex, typically one of the following: a regional centre, a tourist development or a housing development and then to test a design guideline produced by a fellow student for a project other than the one used for his/her own design. Where applicable, work in other units of study will be related to this subject.

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

### BTN105 URBAN DESIGN FIELD STUDIES STUDIO

Aim: To provide students with direct experience of a range of recent and current urban design problems in Australia. The work in this subject will consist of a field trip of approximately two weeks duration. Visits
will be paid to successful and unsuccessful examples of urban design and to design offices in the eastern states and the Australia Capital Territory.

Credit Points: 9 Contact Hours: 3 per week

BTN 303 THE URBAN LANDSCAPE
The city as a landscape unit, notable examples of city/site relationships; contribution of natural factors and patterns (topography, soils, drainage, vegetation, climate) towards better delineation of urban form and character. Spaces and their organisation, the city as spatial entity, sequential experience; spaces for specific purposes; the chorography of spaces — use, settings, and furnishings (enclosure, floors, overhead structures, services, features, finishes). Natural elements and their nurture within urban areas — vegetation species, groupings, and their requirements (streets, plazas, forecourts, roofs, parks, urban forests, natural areas); water bodies and their conservation as healthy feature; urban wildlife — habitats and contribution to the urban experience; landscape conservation techniques in urban areas.

Credit Points: 3 Contact Hours: 1 per week
and manipulation; computer graphics; and interactive integrated design systems.

Credit Points: 6  Contact Hours: 2 per hour

**BTN402 LAW & LEGISLATION IN URBAN DESIGN**

The subject will investigate legislative controls and law reform related to urban design and the development process with specific reference to Queensland. Topics will include the potential range of legislative controls, principal relevant legislation in Queensland and its impact on urban design, the development process, the roles of the developer, developments control authority, arbitration process and of the State Government and influences of additional legislation (e.g., Group Title, Heritage Acts, Pedestrian Mall) on the urban design process.

Credit Points: 3  Contact Hours: 1 per week

**BTN403 URBAN DESIGN GUIDELINES & DEVELOPMENT CONTROL**

Change and continuity as factors in urban environments. The contrasting needs for innovation and heritage, coherence and diversity, natural features and vigorous built form. Techniques of control: the use of regulations, ratios, and performance standards. Positive planning and the use of incentives for good design: bonuses, transferable rights, advances, public involvement. Permissible development, rapid decisions, early dissemination of information. The preparation of design guides and development briefs. Strategic choice in the management of public and private sectors in the development process.

Credit Points: 3  Contact Hours: 1 per week

**BTN404 URBAN DESIGN FEASIBILITIES & MANAGEMENT**

The role of feasibility studies. Methods of assessment of feasibility. Evaluation of economic and social/environmental costs and benefits. Decision-making criteria. Introduction to management. The management of urban projects, management structures, project team organization, planning and programming, project control and maintenance.

Credit Points: 3  Contact Hours: 1 per week

**BTN501 URBAN DESIGN RESEARCH DISSERTATION**

Each student will be required, with tutorial guidance, to prepare a dissertation on an individually selected topic approved by the Course Coordinator. The student will be required to show evidence of proficiency in research and application of research in the development of design ideas. This may be achieved through an emphasis on a design project or through a written process. The balance between theory and design application in the dissertation may vary. However, a dissertation which focuses on a specific design project must be supported by a theoretical analysis sufficient to define the problem and to explain how the design proposed satisfies the conditions for a solution. Conversely, a dissertation which focuses on the development of a theory must sufficiently illustrate the practical implications of the theory for the relevant classes of design task. The dissertation will be supported by work undertaken as Research Electives. Approval for each student by the Course Coordinator is required for each student by the Course Coordinator on the basis of the students' qualifications and experience.

Credit Points: 9  Contact Hours: 3 per week

**BTN701 URBAN DESIGN RESEARCH ELECTIVES I**

These subjects are intended to give guidance on research techniques, to provide the opportunity for students to research urban design of personal choice, and to provide a firm basis for the final dissertation. Study required for these subjects may be undertaken within QUT or other academic institution or may be undertaken as individual research under direction of a tutor, all subject to the approval of the Course Coordinator. Research Electives I will also contain formal input on research and presentation techniques. The electives undertaken should be selected to support the topic of the Research Dissertation typically from the following within the Faculty of Built Environment and Engineering: Planning in Developing Countries, Computer Applications, Social Planning, Urban Land Development, Landscape Design, History of Landscape Design, Principles of Landscape Design, and Building Economics.

Credit Points: 6  Contact Hours: 2 per week

**BTN702 URBAN DESIGN RESEARCH ELECTIVES II**

See BTN701.

Credit Points: 15  Contact Hours: 3 per week

**CEB102 CIVIL ENGINEERING**

Lectures and field visits aimed at introducing the student to the profession of civil engineering, its scope and variety, and its many branches.

Credit Points: 3  Contact Hours: 1.5 per week

**CEB184 ENGINEERING MECHANICS I**

The study of bodies in static equilibrium under the action of forces; resolution and resultant of forces acting on a particle or rigid body; equilibrium of particle or rigid body; analytical and graphical analysis of plane trusses; shearing force and bending moment in beams; the properties of sections; introduction to stress and strain.

Credit Points: 7  Contact Hours: 3 per week

**CEB185 ENGINEERING MECHANICS II**

Fundamental principles of structural mechanics and the application of computer programming to the same, ie, stress, strain and elasticity; elastic compatibility; simple beam theory including the flexure formula and the shear stress formula; torsion of circular sections; stresses in thin walled pressure vessels; hydromechanics.

Co-requisites: CEB184 [R]

Credit Points: 7  Contact Hours: 3 per week

**CEB192 INDUSTRIAL EXPERIENCE I**

Students should engage in at least five weeks' employment, approved by the Head of School.
details see the School's Industrial Experience Handbook.
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 will be discussed. Site visit and laboratory testing may be included.
Prerequisite: CEB185
Co-requisites: CEB281[R], CEB282[R]
Credit Points: 4 per semester
Contact Hours: 1.5 per week

**CEB202 CONCRETE STRUCTURES I**
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; the evaluation of deflections in concrete structures and the analysis of long and short columns in uniaxial bending.
Prerequisite: CEB185
Co-requisites: CEB281[R], CEB282[R]
Credit Points: 4 per semester
Contact Hours: 1.5 per week

**CEB220 CIVIL SYSTEMS I**
Computer applications in Civil Engineering Science; hardware and software integration within the database environment.
Prerequisite: CEB191, MAB193, CEB185
Co-requisites: CEB252, CEB260
Credit Points: 6
Contact Hours: 3 per week

**CEB231 CONCRETE TECHNOLOGY**
Materials: cement, aggregates, water quality, pozzolans, chemical admixtures and special materials; testing: materials and concrete including quality control; characteristics of concrete; plastic and hardened properties and influences of environment; mix design: design for standard and special requirements.
Credit Points: 7
Contact Hours: 3 per week

**CEB240 SOIL MECHANICS I**
Systematic 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.
Prerequisite: CEB185
Credit Points: 5
Contact Hours: 3 per week

**CEB241 SOIL MECHANICS II**
Bearing capacity of shallow foundations; permeability and seepage; surface loading on an elastic medium; pore pressure parameters; consolidation; settlement of shallow foundations; design of shallow foundations; computer applications in seepage and consolidation.
Prerequisite: CEB240
Credit Points: 7
Contact Hours: 3 per week

**CEB253 STRUCTURAL ENGINEERING I**
The calculation of deflections for determinate beams, frames and trusses and the analysis of indeterminate structures by the method of superposition; introduction to buckling and computer based analytical procedures.
Prerequisite: CEB185
Co-requisites: MAB493, CEB282 [R]
Credit Points: 5
Contact Hours: 3 per week

**CEB260 FLUID MECHANICS**
Introduction to fluid mechanics and 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.
Prerequisites: CEB185, MAB193
Credit Points: 7
Contact Hours: 3 per week

**CEB281 STRENGTH OF MATERIALS**
Extension of elastic theory from engineering mechanics into more complex states of stress and shape; composites; stress strain transformations; unsymmetrical sections; shear flow; shear centre; torsion; theories of failure; stress concentrations and fatigue.
Prerequisite: CEB185
Credit Points: 2
Contact Hours: 1 per week

**CEB282 STATICS**
The structural behaviour of trusses, beams and frames; qualitative evaluation of deflected shapes, shear force and bending moment diagrams; load paths and structural idealisation of real structures.
Prerequisite: CEB185
Co-requisite: CEB184 [R]
Credit Points: 2
Contact Hours: 2 per week

**CEB291 CIVIL ENGINEERING MATERIALS**
Physical, chemical and engineering properties of common civil engineering materials; ferrous and nonferrous metals and alloys, timber, bitumen, cladding materials, polymers; corrosion of materials and protective measures; selection of materials; role of quality control in engineering subjects.
Prerequisites: MEB171, MEB133
Credit Points: 7
Contact Hours: 3 per week

**CEB292 INDUSTRIAL EXPERIENCE II**
Students should engage in at least five weeks' employment, approved by the Head of School. For details see the School's Industrial Experience Handbook.
Contact Hours: 5 weeks

**CEB304 CIVIL ENGINEERING DESIGN I**
Design project work involving the use of steel and reinforced concrete, geotechnical and highway designs; the influence of construction method to design; preparation of design calculations and sketches with the help of design aids and computer software; the development of problem-solving skills.
Prerequisites: CEB201, CEB202, CEB241
Co-requisites: CEB253, CEB354, CEB291
Credit Points: 8 per semester
Contact Hours: 4 per week

**CEB305 CONSTRUCTION PLANNING & ECONOMICS**
The use of manual and computer-based methods for the planning and programming of projects; the fundamental principles of economic and financial analysis pertaining to both the planning and execution of engineering projects.
Prerequisites: CEB307
Credit Points: 6
Contact Hours: 3 per week

**CEB306 CONCRETE STRUCTURES II**
Basic 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, design of anchorage zones, evaluation of deflections, and anchorage zone reinforcement, design.

Prerequisite: CEB202
Credit Points: 7 Contact Hours: 3 per week

CEB307 CONSTRUCTION PRACTICE
Basic procedures of civil engineering construction; provides a foundation for further construction studies and also gives a practical perspective to later theoretical subject.

Prerequisites: CEB231, CEB281
Credit Points: 6 Contact Hours: 3 per week

CEB312 HIGHWAY ENGINEERING
Highway geometry including vehicle performance and human factors as they relate to road geometry, geometric design, geometric coordination and use of computer aided design. Highway pavements including pavement materials and construction processes, pavement cross sections and drainage, pavement theory and pavement analysis methods.

Prerequisites: SVB306, MAB193, CEB291, CEB211
Co-requisites: MAB493, CEB240
Credit Points: 6 Contact Hours: 3 per week

CEB313 TRAFFIC ENGINEERING
Traffic theory including traffic behaviour, models, traffic management analysis including unsignalised and signalised intersections, street lighting, signs and markings, barriers and parking; traffic studies and transport planning procedures.

Prerequisite: MAB493 Co-requisite: CEB312
Credit Points: 6 Contact Hours: 3 per week

CEB341 GEOTECHNICAL ENGINEERING I
Soil slope stability analysis by limit equilibrium, drained and undrained conditions; rock mechanics: rock properties and shear strength, application to simple slope stability models; pile foundations: analysis for vertical load soil capacity and settlement estimates; site investigation and in-situ determination of soil properties.

Prerequisite: CEB241
Credit Points: 6 Contact Hours: 3 per week

CEB353 PRINCIPLES OF STRUCTURES I
Terminology, forces and reactions; loading on structures, equilibrium and stability; co-planar and non-co-planar forces; resolution of forces; mechanism of structural components under load: compression, tension, bending, shear, deflection, connections.

Credit Points: 2 Contact Hours: 1 per week

CEB354 STRUCTURAL ENGINEERING II
The analysis of indeterminate structures using moment distribution and matrix structural analysis techniques; analysis of simple cable structures.

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

CEB355 STRUCTURAL ENGINEERING III
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.

Prerequisite: CEB281
Co-requisites: MAB993, CEB354
Credit Points: 6 Contact Hours: 3 per week

CEB360 HYDRAULIC ENGINEERING I
The applications of fluid mechanics to pipe and open channel flow, flow measurement and hydraulic machinery; steady flow in pipes; networks; flow measurement; uniform flow in open channels; pump and turbines.

Prerequisite: CEB260 Co-requisite: MAB493
Credit Points: 6 Contact Hours: 3 per week

CEB361 HYDROLOGY
Introduction to hydrology and urban drainage design; hydrologic cycle, rainfall and runoff; groundwater, evapotranspiration, statistical concepts; urban drainage design; unit hydrograph methods; flood studies; data generation, storage estimation.

Prerequisite: CEB260
Co-requisite: CEB360
Credit Points: 6 Contact Hours: 3 per week

CEB364 ENGINEERING SCIENCE II
Introduction to hydraulic engineering for surveyors, fluids and fluid flow in pipes and channels; flow measurement; hydraulic models; pumps and pump characteristics.

Prerequisite: MAB199 [R]
Credit Points: 6 Contact Hours: 3 per week

CEB370 PUBLIC HEALTH ENGINEERING I
An introduction to 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.

Prerequisite: CEB346
Credit Points: 6 Contact Hours: 3 per week

CEB371 ENGINEERING INVESTIGATION & REPORTING I
The appropriate techniques of investigation and reporting on civil engineering processes.

Prerequisite: CEB103
Credit Points: 3 Contact Hours: 2 per week

CEB401 DESIGN PROJECT
Students work in groups to produce initial studies and outline designs of typical civil engineering projects. Students are required to design problems, to establish goals for the project, to identify and collect necessary information, to generate alternative solutions and to optimise some of these solutions. Students are to develop an awareness of the possible impact of civil engineering projects on ecosystems. Students prepare and present reports on various aspects of selected projects, including feasibility studies, environmental and economic assessment. Compulsory site visits are included.

Prerequisites: CEB301, CEB305, CEB313
Co-requisites: CEB470, CEB440
Credit Points: 5 Contact Hours: 3 per week

CEB403 PROFESSIONAL PRACTICE
Engineering organisations; project initiation; documentation; form of contract; contract administration; arbitration; safety and insurances; legal responsibilities; ethics.

Prerequisite: CEB191 Co-requisite: CEB305
Credit Points: 7 Contact Hours: 2 per week
Site visits to several civil and structural projects (generally under construction in south-east Queensland). The practical inspections are supervised by lecturing staff and engineers associated with the project, and allow valuable consolidation of the theoretical aspects of other subjects.

**CEB404 FIELD TRIP**
Credit Points: 3  Contact Hours: 1.5 per week

**CEB405 CIVIL ENGINEERING DESIGN II**
Continuation of CEB304, with topics covering primarily civil engineering design, ie, municipal civil/structural projects. Field visits are required.

Prerequisites: CEB341, CEB304, CEB231
Co-requisites: CEB460, CEB470
Credit Points: 6 per semester
Contact Hours: 3 per week

**CEB406 STRUCTURAL APPLICATIONS**
Analysis, design, supervision of construction and performance of structures using case studies; topics include: structural systems, structure 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.

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

**CEB421 CIVIL SYSTEMS II**
Understanding and applying advanced civil engineering software; methods of error checking and model validation.

Prerequisites: CEB220, CEB241, CEB260, CEB460, CEB355
Credit Points: 3  Contact Hours: 1 per week

**CEB430 BUILDING CONSTRUCTION**
General introduction to building techniques and principles; building construction from foundations to fitting out for low and high-rise structures including appropriate building regulations.

Prerequisite: CEB305
Credit Points: 3  Contact Hours: 2 per week

**CEB440 GEOTECHNICAL ENGINEERING I**
Bearing capacity and settlement of deep foundations; introduction to rock mechanics; stability of soil and rock structures; site investigation procedures. Computer applications in slope stability.

Prerequisite: CEB185, CEB240
Co-requisite: CEB241
Credit Points: 6  Contact Hours: 3 per week

**CEB453 PRINCIPLES OF STRUCTURES II**
Loading on buildings; foundations and footings; timber construction; floor, wall and roof framing and cladding, fastening and connections; structural stability; masonry construction; brickwork and blockwork, load-bearing construction, continuity, stiffening; codes.

Prerequisite: CEB353 [R]
Credit Points: 2  Contact Hours: 1 per week

**CEB460 HYDRAULIC ENGINEERING II**
Hydraulics with particular emphasis on unsteady flow, movable boundary hydraulics, hydraulic models and hydraulic design of structures. Topics include: steady flow in pipes; unsteady flow in open channel flow; design of hydraulic structures such as transitions, culverts, channels, chutes etc., mobile boundary hydraulics; and the theory and practice relating to fixed and mobile boundary, natural scale and distorted models.

Prerequisite: CEB360 Co-requisite: CEB361
Credit Points: 7  Contact Hours: 3 per week

**CEB470 PUBLIC HEALTH ENGINEERING II**
Development of principles taught in CEB370 to enable functional design of treatment units to be undertaken; an introduction to sewerage and water reticulation.

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

**CEB491 PROJECT (CIVIL)**
The student is required to undertake a relatively difficult task in an area of civil engineering practice requiring further research and development. Each project includes: a literature review; problem definition; organisation and execution of a program of investigation; critical analysis of investigation; presentation of a seminar on the work and presentation of a written report.

Prerequisite: Students must normally be in final year of course; however students in the penultimate year of their course may be given special permission to attempt CEB491.
Co-requisites: CEB393, CEB492
Credit Points: 9 per semester
Contact Hours: 3 per week

**CEB492 ENGINEERING INVESTIGATION & REPORTING II**
Verbal presentation techniques of civil engineering investigation topics. Each student is required to prepare a report and deliver a half hour lecture on a civil engineering investigation topic.

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

**CEB501 CIVIL ENGINEERING PRACTICE I**
Current topics in a specified area of civil engineering at an advanced undergraduate level. Subject is offered irregularly. When offered, the subject material is advertised.

Prerequisite: Students must be substantially in the final year of course.
Credit Points: 6  Contact Hours: 3 per week

**CEB503 ADVANCED CONSTRUCTION METHODS**
Examination of existing practice and technology in the construction industry; provides insights into current and future developments in construction techniques and plant.

Prerequisites: CEB307, CEB305
Credit Points: 6  Contact Hours: 3 per week

**CEB504 ENGINEERING SCIENCE III**
Hydrology; rainfall, stream flow measurement; hydraulic design of drainage; soil mechanics for surveyors; definition, properties and grading of soils; roadwork, foundation and retaining wall design; soil stability; concrete technology; properties, manufacture and testing of concrete; elementary reinforced concrete design.

Co-requisite: CEB364 [R]
Credit Points: 6  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 and to submit reports and make presentations regarding these exercises.

Prerequisite: CEB366
Credit Points: 6  Contact Hours: 3 per week
CEB542 GEOTECHNICAL ENGINEERING III
Development of marginal lands: trafficability; embankments on soft soil; preloading; vertical drainage; vibroflotation; dynamic compaction and other methods of deep foundation improvement; rock excavation and rock slope stabilisation; soil improvement, including mechanical and chemical stabilisation, soil reinforcement and other techniques which may be economically feasible; anchoring in soil and rock; principles of earth and rockfill design and construction.
Prerequisite: CEB541
Credit Points: 6 Contact Hours: 3 per week

CEB551 ADVANCED STRUCTURAL DESIGN
Widens and deepens experience in the structural design area; with emphasis on the design of more complex structures. Normally three projects are studied which involve some or all of: design in new materials, new analytical techniques, new codes of practice, novel structures.
Prerequisites: CEB354, CEB201, CEB306
Co-requisite: CEB403
Credit Points: 6 Contact Hours: 3 per week

CEB553 PRINCIPLES OF STRUCTURES III
Structural properties of mild steel and high tensile steel; structural framing and connections; structural systems in steel; beams and columns, portal frames, space frames, trusses; tensile structures.
Prerequisite: CEB453
Credit Points: 2 Contact Hours: 2 per week

CEB560 HYDRAULIC ENGINEERING III
Selected topics in water engineering, chosen from hydrology, mobile bed hydraulics, river hydraulics, hydraulic structures, urban drainage, physical and mathematical modelling.
Prerequisites: CEB361, CEB460
Credit Points: 6 Contact Hours: 3 per week

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

CEB570 PUBLIC HEALTH ENGINEERING III
Solid waste management (of domestic, commercial and industrial wastes); general principles of industrial liquid waste management.
Co-requisite: CEB470
Credit Points: 6 Contact Hours: 3 per week

CEB589 PRINCIPLES OF STRUCTURES IV
Structural behaviour of reinforced concrete; basic theory of reinforced concrete beams and columns; structural elements systems in reinforced concrete; post-and-beam, one and two-way slab, waffle slab, flat slab; columns; frames; framing, walling and roofing in reinforced concrete.
Prerequisite: CEB553 [R]
Credit Points: 4 Contact Hours: 2 per week

CEB701 CIVIL ENGINEERING QUANTITIES I
The measurement of civil engineering works based on the study of SMM of Civil Engineering Quantities; detailed study of construction methods, plant, specification and measurement of earthworks, clearing, compaction, and dredging; roadworks (survey,
bulk excavation and filling; pavement construction, kerbing, culverts); and bridges (types of structures, foundations, prestressed concrete); brief introduction to computer applications such as earthwork calculations etc.

Credit Points: 4 Contact Hours: 2 per week

**CEP801 CIVIL ENGINEERING QUANTITIES II**

Further study of SMM of Civil Engineering Quantities leading to measurement of: foundations (pad footings, piles and piers); bridges (further study, including abutments, superstructure, approach embankments, safety structures); wharves (over water work, deck structures); and specialised earthworks: (tunnelling, dredging, open cuts, earthworks, earth dams).

Prerequisite: CEB701 (R)

Credit Points: 4 Contact Hours: 1.5 per week

**CEP107 CONSTRUCTION MANAGEMENT & ECONOMICS**

The management of operational features of municipal practice; engineering economics; contracts; plant and labour considerations of concern to the municipal engineer and manager.

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; the powers and responsibilities of the municipal engineer.

Credit Points: 8 Contact Hours: 2 per week

**CEP127 ROAD & TRAFFIC ENGINEERING**

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

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.

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.

Credit Points: 12 Contact Hours: 3 per week

**CEP172 WATER QUALITY ENGINEERING**

Characteristics of liquid wastes; the effect of liquid wastes on receiving waters; dispersion and decay of pollutants in the water environment; water quality standards and objectives.

Credit Points: 8 Contact Hours: 2 per week

**CEP174 PUBLIC HEALTH ENGINEERING PRACTICE**

Water reticulation, network analysis; water supply appurtenances; sewerage design and construction; materials and corrosion control, pumping station design; unit operations and processes of water quality control; process design parameters.

Credit Points: 12 Contact Hours: 3 per week

**CEP200 PROCESS MODELLING**

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

Credit Points: 8 Contact Hours: 2 per week

**CEP215 ADVANCED TRAFFIC ENGINEERING**

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

Credit Points: 8 Contact Hours: 2 per week

**CEP218 TRANSPORTATION ENGINEERING**

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

Credit Points: 12 Contact Hours: 3 per week

**CEP276 ADVANCED TREATMENT PROCESSES**

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

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.

Co-requisite: CEP174

Credit Points: 12 Contact Hours: 3 per week

**CEP310 URBAN TRANSPORTATION PLANNING**

Transportation planning applications; road needs, urban transport, new developments, local area planning; macro land use/transportation and micro urban transportation models; urban transportation zone selection and data needs; trip generation; model splits; survey techniques.

Credit Points: 8 Contact Hours: 2 per week

**CEP361 DRAINAGE ENGINEERING**

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

Credit Points: 8 Contact Hours: 2 per week

**CEP491 MUNICIPAL ENGINEERING PRACTICE**

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

Credit Points: 16 Contact Hours: 3 per week
CEP999 PROJECT
The student is required to investigate in depth an approved topic within the range of civil engineering practice and to carry out design, computing, model or experimental design and construction, experimental work and testing. The results are presented in a major formal report.
Credit Points: 18 per semester
Contact Hours: 8 per week

CET120 CIVIL SYSTEMS I
Introduction to hardware and operating systems of personal computers; wordprocessors, spreadsheets and databases used for civil engineering applications; introduction to high level languages.
Credit Points: 7 Contact Hours: 3 per week

CET135 ENGINEERING MECHANICS
Equilibrium of forces and moments; reactions; free body diagrams; truss analysis; shear force and bending moment diagrams.
Credit Points: 7 Contact Hours: 3 per week

CET180 CIVIL DRAFTING PRACTICE A
Short, practical exercises to cover the highest possible range of drafting experience commensurate with the first year student's stage of development.
Co-requisite: MET120
Credit Points: 3 Contact Hours: 3 per week

CET190 CIVIL ENGINEERING MATERIALS
Properties of common ferrous and nonferrous metals and alloys, timber, plastics, bitumen and asphaltic concrete; welding processes and defects, corrosion mechanisms and prevention and evaluative testing procedures; quality control and selection of engineering materials.
Credit Points: 7 Contact Hours: 3 per week

CET195 CIVIL ENGINEERING I
Civil engineering: the profession, organisation and work options; measurement in civil engineering; maintenance of standards, role of NML and NATA; technical writing, reports, letters etc; mathematical techniques applicable to relevant examples.
Credit Points: 7 Contact Hours: 3 per week

CET235 LABORATORY PRACTICE A
The type and role of laboratories in civil engineering; NATA registration and calibration requirements; quality control and assurance, basic statistics; basic measuring equipment and techniques; associated calculations; presentation of data in reports; laboratory work in materials and hydraulic engineering to demonstrate measuring techniques.
Co-requisites: CET365, CET435
Credit Points: 3 Contact Hours: 3 per week

CET255 STRUCTURAL MECHANICS
Stress, direct flexure, shear in beams and shafts; combined stress conditions; deflections in beams and trusses.
Prerequisite: CET135
Credit Points: 7 Contact Hours: 3 per week

CET286 CIVIL OFFICE PRACTICE
The preparation and layout of civil engineering drawings; design office procedures including methods of data manipulation, presentation and checking.
Prerequisite: MET120
Credit Points: 7 Contact Hours: 3 per week

CET287 CIVIL OFFICE PRACTICE B
Further experience in civil engineering design drafting/drawing, supplementing that undertaken in CET286.
Prerequisite: MET120 Co-requisite: CET286
Credit Points: 3 Contact Hours: 3 per week

CET305 FIELD PRACTICE IIA
Tutorial, practical sessions and field trips supplemented by some lectures covering: setting out, as-built surveys and drawings, photography and field sketching; field measurement and sampling in water, soils and materials; implications of field measurements on design and construction practice.
Prerequisites: SVT306, CET365
Co-requisite: CET775
Credit Points: 3 Contact Hours: 3 per week

CET365 HYDRAULIC ENGINEERING
Properties of fluids; simple hydrostatics; fundamental characteristics and equations of fluid flow; pipe and open channel flow and hydraulic measurements; laboratory work on basic fluid behaviour and instrumentation.
Prerequisite: CET135
Credit Points: 7 Contact Hours: 3 per week

CET387 CIVIL ENGINEERING DRAFTING A
Further experience in municipal engineering design drafting/drawings, additional to that undertaken in CET385.
Prerequisites: CET286 Co-requisite: CET585
Credit Points: 3 Contact Hours: 3 per week

CET405 FIELD PRACTICE IIA
Field visits and laboratory workshops on many aspects of civil engineering construction.
Credit Points: 3 Contact Hours: 3 per week

CET420 CIVIL SYSTEMS II
Computer file management; error recovery; networking; pre and post processing in CAD environment; software installations and data acquisition.
Prerequisite: CET120
Credit Points: 3 Contact Hours: 3 per week

CET435 CONCRETE PRACTICE
Raw materials; elements, aggregates, additives and admixtures; properties of plastic and hardened concrete; testing and quality control; simple mix design, concrete manufacture and transportation, construction procedures.
Credit Points: 7 Contact Hours: 3 per week

CET495 PROJECT A
Undertaking of a substantial project in the student's chosen field. Involves the investigation of the topic, performance of the tests, design calculations etc, and submission of a comprehensive report on sets of drawings.
Prerequisite: Subject must be in student's final year.
Credit Points: 3 Contact Hours: 3 per week

CET565 ROAD & DRAINAGE ENGINEERING
Elements of road construction and maintenance; road pavement types; design and construction; road drainage principles; design and construction of urban and rural culverts, urban stormwater drainage systems.
Prerequisites: CET815, CET645, CET365
Credit Points: 7 Contact Hours: 3 per week
- **CET585 CIVIL ENGINEERING DRAFTING**
  Preparation of municipal engineering drawings including roadworks and stormwater drain exercises; State and local authority standards; projects will involve varying amounts of design computations and at least one example involves computer usage; introduction to quantity takeoff; bills of quantities, cost estimates and cross referencing between drawings, bills or quantities and specifications.
  **Prerequisites:** CET286  
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET598 PROJECT II**
  An individually designed program including designs, reports and investigations in the area of sanitary engineering.
  **Prerequisite:** The student must have completed 72 credit points.
  **Credit Points:** 21  
  **Contact Hours:** 9 per week

- **CET606 CONSTRUCTION MANAGEMENT**
  Construction planning; organisational structure; construction reporting; contract, management and administration; human relations; plant hire.
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET645 SOIL MECHANICS**
  Identification and classification of soils; testing methods required; compaction of soil, soil permeability, effective and total stress, shear strength and compressibility; introduction to retaining walls; bearing capacity; CBR testing and in-situ sampling and testing.
  **Prerequisite:** CET135  
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET655 CONCRETE & STEEL DESIGN**
  Principles of structural design; design in structural steel, detailing of elements; design of concrete members, detailing of elements.
  **Prerequisites:** CET135, CET255, CET435  
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET703 CIVIL ENGINEERING PRACTICE I**
  Current topics in a specified area of civil engineering practice at a level appropriate to the course and as approved by the Head of School. The content of this subject may be changed from semester to semester depending on demand and available staff.
  **Prerequisite:** Students must have completed 72 credit points.
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET704 CIVIL CONSTRUCTION PRACTICE**
  Principles of temporary works design; form work, false work and scaffolding; shoring, dewatering, excavation and earthworks; plant introduction to the Construction Safety Act and Regulations.
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET707 MUNICIPAL ENGINEERING**
  Structures and function of local authorities; local roads, streets, traffic management, swimming pools, solid waste management, drainage, bridges, town planning, subdivision, landscaping, building practice, relevant legislation.
  **Prerequisite:** CET815  
  **Co-requisites:** CET565, CET775  
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET708 SPECIFICATIONS & ESTIMATES**
  General conditions of contract; arbitration; annexures, specifications; special provisions; types of estimates; mechanics of estimating, computer applications.
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET709 SAFETY & INDUSTRIAL RELATIONS**
  Current systems and practices in occupational safety and health programs, the industrial relations system in Australia, and the management techniques which may be employed to create a good industrial relations climate on a site or in an industry.
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET735 ADVANCED LABORATORY TESTING I**
  Testing work to give the student experiences with a range of equipment and testing procedures; the program includes tests in a number of selected laboratory areas.
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET756 BUILDING CONSTRUCTION PRACTICE**
  Reinforced, prestressed concrete (in situ and precast); steel construction aspects associated with fabrication and erection; building construction aspects of clay brick and concrete masonry construction including cladding; overview of building regulations.
  **Prerequisite:** CET190  
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET775 PUBLIC HEALTH ENGINEERING**
  Design construction and operation of water supply and sewerage systems, materials and equipment; pumping station layout and operation; basic principles of water quality control; treatment plant construction, layout and operation.
  **Prerequisite:** CET365  
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET776 EQUIPMENT OPERATION & MAINTENANCE**
  Principles and practice of the operation and maintenance of equipment in water and wastewater treatment plants; overview of plant; motors, engines, pumps, compressors and generators; rotary and reciprocating pumps, compressors and generators; chemical and biological processes.
  **Prerequisites:** CET365, CHA140  
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET777 PROCESS OPERATION & CONTROL I**
  Principles of unit processes of water and wastewater treatment; methods of operational control of these processes.
  **Prerequisites:** CET365, CET775, CHA140  
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET778 STRUCTURAL ENGINEERING DRAWING**
  Preparation of structural engineering drawings covering basic steel work and reinforced concrete works; reinforcing schedules together with details of steel connections.
  **Prerequisites:** MET120, CET286, CET585, CET655  
  **Credit Points:** 7  
  **Contact Hours:** 3 per week

- **CET797 PROJECT I**
  The student is required to undertake a substantial project in his/her chosen field. This involves the investigation of the topic, performance of tests, design
calculations etc, and submission of a comprehensive report on sets of drawings.

Prerequisite/Co-requisite: Students must have completed 72 credit points.
Credit Points: 7 Contact Hours: 3 per week

CET802 CIVIL ENGINEERING PRACTICE II
See CET703.
Prerequisite: Students must have completed 72 credit points.
Credit Points: 7 Contact Hours: 3 per week

CET815 ROAD LOCATION & DESIGN
Road location principles, road design and geometry including computer applications, subdivision and subdivision street design, introduction to traffic engineering, intersection design.
Prerequisite: SVT306 Co-requisite: CET286
Credit Points: 7 Contact Hours: 3 per week

CET838 ADVANCED LABORATORY TESTING II
Testing projects undertaken in a more limited number of specialist areas and presented as a series of reports. Each report is expected to include a discussion of the tests undertaken, based on the student's experience and background reading.
Credit Points: 7 Contact Hours: 3 per week

CET856 ADVANCED CONSTRUCTION TECHNIQUES
Continuation of CET606. History, planning and programming including critical paths; contracts; cranes; selection and safety; case studies and testing estimating.
Prerequisite: CET606
Credit Points: 7 Contact Hours: 3 per week

CET876 PLANT OPERATION & MAINTENANCE
The operation and maintenance requirements of water quality treatment plants; scheduling, labour control, workshop organisation, safety, training and performance monitoring.
Prerequisite: CET606 Co-requisite: CET776
Credit Points: 7 Contact Hours: 3 per week

CET877 PROCESS OPERATION & CONTROL II
Continuation of CET777. Unit processes of water and wastewater treatment with particular reference to their operation; the methods of operational control of these processes.
Prerequisite: CET777
Credit Points: 7 Contact Hours: 3 per week

CET887 COMPUTER AIDED DRAFTING
Using the VAX780 mainframe and personal computers for civil and structural drawing presentation.
Prerequisite: CET286
Credit Points: 7 Contact Hours: 3 per week

CET888 STRUCTURAL DRAWING & DESIGN
Minor structural design and layout; preparation of advanced structural engineering drawings covering steel, reinforced and prestressed concrete and timber where geometric and physical restraints interact with the structural design process.
Prerequisites: MET120, CET286
Co-requisites: CET778, CET585, CET555
Credit Points: 7 Contact Hours: 3 per week

CET894 COMPUTATIONS A
Calculations involving aspects of civil and structural engineering; computer-aided design; planimeters; technical reports.
Co-requisite: SVT306
Credit Points: 3 Contact Hours: 3 per week

CHA111 LABORATORY TECHNIQUES
A course introducing safe and proficient procedures in the laboratory, and giving practice in the manipulation of common elementary laboratory apparatus, equipment and reagents. On completing the course 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.
Credit Points: 8 Contact Hours: 3 per week

CHA145 INTRODUCTORY CHEMISTRY
An integrated course of fundamental chemistry covering: the nature of chemistry, atomic molecular and nuclear structure, bonding and types of bonds; the structure and nature of matter, molecular formulae, atomic and molecular weights; the periodic classification; reduction/oxidation, chemical equilibrium; liquids and solutions and simple phase equilibria; equilibria in electrolyte solutions; pH and its measurement. Carbon chemistry and functional groups. The chemistry and properties of some common laboratory chemicals. Practical applications are emphasised.
Credit Points: 8 Contact Hours: 3 per week

CHA218 ANALYTICAL CHEMISTRY I
A lecture and laboratory program covering fundamental theory and techniques of titrimetric and gravimetric analysis.
Prerequisite: CHA111
Credit Points: 8 Contact Hours: 3 per week

CHA219 QUALITATIVE ANALYSIS
This course considers 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 also are covered.
Prerequisite: CHA111
Credit Points: 6 Contact Hours: 3 per week

CHA230 CHEMISTRY OF INORGANIC MATERIALS
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.
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 chemistry.
Prerequisite: CHA111
Credit Points: 8 Contact Hours: 3 per week

CHA250 ORGANIC CHEMISTRY I
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. 
Prerequisite: CHA145 
Credit Points: 8 Contact Hours: 3 per week

[CHA270 PHYSICAL CHEMISTRY I] 
The first part of an integrated syllabus of physical chemistry in the Associate Diploma. A study of the fundamental aspects of chemical energetics, solution chemistry and equilibria and practical applications thereof. 
Prerequisite: CHA145 
Credit Points: 8 Contact Hours: 3 per week

[CHA318 INSTRUMENTAL ANALYTICAL CHEMISTRY] 
A course of lectures and practical work introducing the principles and practices of mass spectrometry, fluorescence spectroscopy and ICP together with further development of selected topics from the unit CHA240. 
Prerequisite: CHA218, CHA240 
Co-requisite: CHA319 
Credit Points: 8 Contact Hours: 4 per week

[CHA319 ANALYTICAL CHEMISTRY II] 
A course of lectures and practical work designed to develop further the basic titrimetric and gravimetric analysis principles introduced in the unit CHA218. The practical program will feature the analysis of commercial materials with emphasis on sample dissolution techniques. 
Prerequisite: CHA218 
Credit Points: 6 Contact Hours: 3 per week

[CHA320 CHEMICAL PROCESS PRINCIPLES I] 
This course discusses chemical reactors (both homogeneous and heterogeneous), unit operations (transport and preparation of materials and separation of materials) and material and energy balances in chemical processes. 
Prerequisite: CHA270 Co-requisite: CHA370 
Credit Points: 8 Contact Hours: 3 per week

[CHA350 ORGANIC CHEMISTRY II] 
This subject 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 are discussed. 
Prerequisite: CHA250 
Credit Points: 8 Contact Hours: 3 per week

[CHA368 INDUSTRIAL CHEMISTRY] 
This subject aims to develop an appreciation of the underlying fundamental chemistry and an overall concept of the chemical technology involved in, for example, the petroleum and petrochemical industry, the polymer, plastic and adhesive industries, the paint industry, the textile industry, the sugar industry, water treatment plants, the glass and ceramics industry, and the cement industry. Field trips are an integral part of this subject. 
Prerequisite: CHA230, CHA250, CHA320 
Credit Points: 8 Contact Hours: 3 per week

[CHA370 PHYSICAL CHEMISTRY II] 
The second part of the integrated syllabus of physical chemistry of the Associate Diploma. Covers the areas of chemical kinetics, surface chemistry and elementary electrochemistry. 
Prerequisite: CHA270 
Credit Points: 8 Contact Hours: 3 per week

[CHA410 COMPUTERS IN CHEMISTRY] 
This course outlines the use of computers in various aspects of the chemical industry, both in laboratory and plant. The different approaches to laboratory automation are discussed and a detailed study of computer control in a selected industry undertaken. Field trips also are included. 
Prerequisite: CHA319 
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. 
Credit Points: 4 Contact Hours: 2 per week

[CHA520 CHEMICAL PROCESS PRINCIPLES II] 
A lecture and laboratory course which deals with measurement systems, the principles of process control and the applications of process control in the chemical industry. 
Prerequisite: CHA320 
Credit Points: 8 Contact Hours: 3 per week

[CHA530 ORGANIC CHEMISTRY III] 
This subject aims to give students an appreciation of 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. 
Prerequisite: CHA350 
Credit Points: 8 Contact Hours: 3 per week

[CHA580 FOOD CHEMISTRY I] 
Topics covered include the basic chemical components of food, fats and oils, proteins, carbohydrates, vitamins and minerals and factors affecting quality such as texture, flavour and colour. Measurements of food quality. A major assignment related to the dairy industry is incorporated. 
Prerequisite: CHA240, CHA250, CHA218 
Co-requisite: CHA350 
Credit Points: 8 Contact Hours: 3 per week

[CHA610 INDUSTRIAL ANALYSIS] 
A course involving the use of both qualitative (semimicro) and quantitative techniques in the analysis of commercially important materials, including ores, cement, fertiliser, fats and oils and sugar products. 
Prerequisite: CHA318, CHA319 
Credit Points: 8 Contact Hours: 3 per week

[CHA670 PHYSICAL CHEMISTRY III] 
This subject forms the third part of the integrated syllabus of physical chemistry of the Associate Diploma and covers the areas of applied electrochemistry, corrosion, distillation and extraction. Practical applications are emphasised. 
Prerequisite: CHA370 
Credit Points: 8 Contact Hours: 3 per week

[CHA680 FOOD CHEMISTRY II] 
A more advanced unit covering the chemistry and principal methods of food processing and preparation.
A further major assignment appropriate to the dairy industry is incorporated.

Prerequisite: CHA580
Credit Points: 8 Contact Hours: 3 per week

### CHB001 INTRODUCTORY CHEMISTRY

For students without a pass in Senior Chemistry. Scientific measurement, atomic structure, periodic table, chemical equations, stoichiometry and calculations, chemical bonding, chemical reactivity, acids and bases, redox systems, properties of matter, chemical thermodynamics, enthalpy, heat of reactions, organic chemistry.

Credit Points: 6 Contact Hours: 3 per week

### CHB002 INTRODUCTION TO ENGINEERING CHEMISTRY

The foundations of the principles of chemistry; the basic concepts of stoichiometry; properties of the elements of the periodic table; chemical equilibrium; acids and bases. The subject is offered for engineering students without sound achievement in Chemistry and serves as the foundation for CHB344 and CHB346.

Credit Points: 2 Contact Hours: 1 per week

### CHB101 CHEMISTRY IA

A series of lectures and tutorials introducing the important concepts in chemistry. Topics include principles of physical chemistry, chemical bonding and molecular geometry and an introduction to the chemistry of carbon compounds.

Co-requisite: CHB001, or Senior Chemistry
Credit Points: 8 Contact Hours: 3 per week

Note: This subject is not compatible with CHB150, CHB180; credit may not be retained for more than one of these subjects.

### CHB102 CHEMISTRY IB

A course in practical chemistry covering the experimental aspects of analytical chemistry, physical chemistry and organic chemistry. This is primarily an experimental program supported by appropriate lectures.

Co-requisite: CHB101 (+ CHB001 unless Senior Chemistry has been undertaken)
Credit Points: 6 Contact Hours: 3 per week

### CHB110 ANALYTICAL CHEMISTRY I

Introduction to analytical chemistry. Examples of acid base titrations, reduction-oxidation titrations and precipitation titrations are used to develop the theory and practice of volumetric analysis. Gravimetric analysis is introduced and both precipitometric and evolution methods are discussed. A coverage of methods available for handling experimental results is given, including absolute and relative precision and accuracy, deviations, rejection of results, significant figures, sources of error and means by which they may be minimised.

Credit Points: 6 Contact Hours: 3 per week

### CHB142 CHEMISTRY I

Inorganic Chemistry: modern atomic theory, electronic configuration of the elements, covalent bonding of simple molecules; Organic Chemistry: reactions of the carbon-hydrogen bond, carbon-halogen bond, the carbon-carbon double bond, carbon-carbon triple bond and aromatic substitutions; Physical Chemistry: chemical equilibrium; equilibria in electrolyte solutions, properties of liquids, phase rule, liquid mixtures and colligative properties. Incompatible with CHB101, CHB102

Credit Points: 12 Contact Hours: 6 per week

### CHB150 ORGANIC CHEMISTRY I

An introduction to the principles of organic chemistry. Topics include: principles of bonding and their effect on organic structure; nomenclature; influence of acidity, polarity and structure on reactivity; the major reaction types; properties of hydrocarbons and alkyl halides.

Credit Points: 8 Contact Hours: 4 per week

Note: This subject is not compatible with CHB101, CHB102; credit may not be retained for more than one of these subjects.

### CHB180 PHYSICAL & INORGANIC CHEMISTRY I

The structure and bonding of atoms and molecules; elementary thermodynamics including the First Law and thermochemistry; the states of matter and the gas laws; homogeneous, heterogeneous and ionic equilibria; elementary kinetics and experimental methods. Principles of non-redox and redox ionic reactions involving oxygen compounds; Periodic Table and periodicity; chemistry of simple acids, bases and salts; chemistry of hydrogen and hydrides; applications.

Credit Points: 8 Contact Hours: 4 per week

Note: This subject is not compatible with CHB101, CHB102; credit may not be retained for more than one of these subjects.

### CHB201 CHEMISTRY IIA

A series of lectures and tutorials continuing the study of the principles of chemistry covered in CHB101.

Prerequisite: CHB101
Credit Points: 8 Contact Hours: 3 per week

Note: This subject is not compatible with CHB230, CHB250, CHB270; credit may not be retained for more than one of these subjects.

### CHB202 CHEMISTRY IIB

A course in practical chemistry covering experimental aspects of inorganic, physical and organic chemistry that expands on the techniques covered in CHB102.

Prerequisite: CHB102 Co-requisite: CHB201
Credit Points: 6 Contact Hours: 3 per week

### CHB210 ANALYTICAL CHEMISTRY II

Volumetric and gravimetric techniques introduced in the unit CHB110 are applied to more complex samples. Complexometric and back titration techniques are introduced; qualitative organic analysis is discussed with reference to separation methods based on functional groups and solubility; simple colorimetric methods are used as an introduction to instrumental analysis.

Prerequisite: CHB110
Credit Points: 6 Contact Hours: 3 per week

### CHB230 INORGANIC CHEMISTRY II

A course of lectures and practical work in the area of general inorganic chemistry encompassing the topics of the chemistry of the non-metals and anions; the chemistry of main group and transition metals; basic coordination chemistry.

Prerequisite: CHB180
Credit Points: 6 Contact Hours: 3 per week

### CHB242 CHEMISTRY II

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

Prerequisite: CHB 142
Credit Points: 12 Contact Hours: 6 per week
Note: This subject is not compatible with CHB 201, CHB 202; credit may not be retained for more than one of these subjects.

CHB 250 ORGANIC CHEMISTRY II
Alkenes and alkynes – electrophilic and free radical addition, Benzene – aromatic character, electrophilic substitution. Alcohols, phenols and ethers – nucleophilic reactions, oxidation. Aldehydes and ketones – addition reactions, oxidation and reduction, active hydrogen reactions, synthesis from Grignard reagents. Simple spectroscopic properties (infrared and ultraviolet) of the above classes.

Prerequisite: CHB 150
Credit Points: 8 Contact Hours: 4 per week
Note: This subject is not compatible with CHB 201, CHB 202; credit may not be retained for more than one of these subjects.

CHB 270 PHYSICAL CHEMISTRY II
The Second Law of thermodynamics; introductory surface chemistry and electrochemistry; the properties of liquids and solutions and the phase chemistry of one component systems; molecular bonding and introductory spectroscopy.

Prerequisite: CHB 180
Credit Points: 8 Contact Hours: 4 per week
Note: This subject is not compatible with CHB 201, CHB 202; credit may not be retained for more than one of these subjects.

CHB 310 ANALYTICAL CHEMISTRY III
Calculation of titration curves for redox, precipitometric and complexometric titrations, conditional stability constants, masking and demasking phenomena, organic analytical reagents, gravimetric theory, methods and theory of sampling, errors, sample dissolution, electrodeposition, potentiometric methods, ion selective electrodes, coulometry, polarography.

Prerequisites: CHB 101 + CHB 102 or CHB 201 + CHB 202 or CHB 110 + CHB 210 + CHB 270
Credit Points: 8 Contact Hours: 4 per week

CHB 327 CHEMICAL TECHNOLOGY III
Introduction to chemical process industries. Economic significance. Flowsheets. Unit operations: basic concepts, a study of range of unit operations selected from: comminution, classification, leaching, solid-fluid separations, drying, fluid transport, agitation, liquid-liquid extraction, heat exchange, evaporation, distillation, gas absorption.

Prerequisites: CHB 180 + PHB 260 or CHB 101 + CHB 102 + CHB 110 + PHB 111
Credit Points: 6 Contact Hours: 3 per week

CHB 340 SPECTROSCOPY
The theory of rotational, vibrational and electronic spectroscopy. Instrumentation and spectroscopic methods of analysis.

Prerequisites: CHB 180 + CHB 210 or CHB 101 + CHB 102 + CHB 201
Credit Points: 8 Contact Hours: 3 per week

CHB 344 ENGINEERING CHEMISTRY M
Specialised chemistry subject designed for mechanical engineers: includes such topics as fuels and their combustion; the chemistry of lubricants and lubrication; corrosion and its prevention and water treatment processes.

Prerequisite: CHB 102 or equivalent
Credit Points: 4 Contact Hours: 2 per week

CHB 346 ENGINEERING CHEMISTRY C
Specialised chemistry subject designed for civil engineers and includes such topics as pH control; the chemistry of materials; polymers and composites; corrosion and its prevention.

Prerequisite: CHB 102 or equivalent
Credit Points: 4 Contact Hours: 2 per week

CHB 350 ORGANIC CHEMISTRY III
This unit continues the study of organic functional groups and extends the students' knowledge to include simple molecules of biological significance. A study of the stereochemical aspects of organic chemistry is included along with a more detailed examination of spectroscopic properties, including ultraviolet, infrared and nuclear magnetic resonance spectroscopy.

Prerequisites: CHB 150, CHB 250
Credit Points: 8 Contact Hours: 4 per week
Note: This subject is not compatible with CHB 351; credit may not be retained for both.

CHB 351 ORGANIC CHEMISTRY III C
This unit continues the study of organic functional groups and extends the students' knowledge of the mechanisms of simple organic and biochemical processes. A study of organic spectroscopy is also involved and includes ultraviolet, infrared and nuclear magnetic resonance spectroscopy.

Prerequisites: CHB 101, CHB 102, CHB 202
Credit Points: 8 Contact Hours: 4 per week
Note: This subject is not compatible with CHB 350; credit may not be retained for both.

CHB 370 PHYSICAL CHEMISTRY III
Experimental, theoretical and applied reaction kinetics; thermodynamics; real fluids; gas absorption and heterogeneous catalysis; phase equilibria.

Prerequisites: CHB 180, CHB 270
Credit Points: 8 Contact Hours: 4 per week
Note: This subject is not compatible with CHB 371; credit may not be retained for both.

CHB 371 PHYSICAL CHEMISTRY III C
Experimental, theoretical and applied reaction kinetics; thermodynamics; real fluids; gas adsorption and heterogeneous catalysis; phase equilibria.

Prerequisites: CHB 101, CHB 102, CHB 201
Credit Points: 8 Contact Hours: 4 per week
Note: This subject is not compatible with CHB 370; credit may not be retained for both.

CHB 382 CHEMISTRY III
Biochemical relevance of pH; instrumental analytical techniques used in the pathology laboratory; the coordination chemistry of biological systems; dyes and stains; the thermodynamics and kinetics of biological systems.

Prerequisites: CHB 142, CHB 242
Credit Points: 4 Contact Hours: 2 per week

CHB 411 ENVIRONMENTAL ANALYTICAL CHEMISTRY
A course of lectures and practical work for students of biological sciences dealing with the principles and
application of sampling, and electrometric/spectroscopic/flame separation methods to the analysis of materials from the biosphere.

Prerequisites: CHB101, CHB102, CHB201, CHB202
Credit Points: 8  Contact Hours: 4 per week
Note: This subject is not compatible with a major in Chemistry or CHB310.

**CHB427 CHEMICAL TECHNOLOGY IV**

Prerequisites: CHB230 or CHB201 + CHB202
Credit Points: 8  Contact Hours: 3 per week

**CHB430 INORGANIC CHEMISTRY IV**
A course of lectures and practical work relating to the topics of crystal field theory, solution chemistry of metal complexes, principles of bioinorganic chemistry and the chemistry of post-transition elements.

Prerequisites: CHB230 or CHB201 + CHB202
Credit Points: 8  Contact Hours: 3 per week

**CHB440 SEPARATION METHODS**
Basic principles and applications of solvent extraction. Principles and practices of chromatography with reference to column chromatography, ion exchange chromatography, molecular sieves, gel permeation chromatography, thin layer chromatography, paper chromatography. Gas chromatography with particular reference to theory, instrumentation and applications including column selection, efficiency, detectors, resolution and temperature programming. Liquid chromatography with particular reference to instrumentation, columns, detector systems and applications.

Prerequisites: CHB210 + CHB250 + CHB270 or CHB201 + CHB202
Credit Points: 8  Contact Hours: 3 per week

**CHB450 ORGANIC CHEMISTRY IV**
A study of the reactions and properties of polyfunctional organic compounds as well as heterocyclic compounds particularly naturally occurring and technically useful compounds. Rearrangement reactions and the chemistry of organometallic compounds are studied.

Prerequisites: CHB230, CHB250
Credit Points: 8  Contact Hours: 4 per week
Note: This subject is not compatible with CHB451; credit may not be retained for both.

**CHB451 ORGANIC CHEMISTRY IV VC**
A study of the reactions and properties of polyfunctional organic compounds as well as heterocyclic compounds, particularly naturally occurring and technically useful compounds. Rearrangement reactions and the chemistry of organometallic compounds are studied.

Prerequisites: CHB351
Credit Points: 8  Contact Hours: 3 per week
Note: This subject is not compatible with CHB450; credit may not be retained for both.

**CHB470 PHYSICAL CHEMISTRY IV**

Prerequisites: CHB270, CHB370
Credit Points: 8  Contact Hours: 4 per week
Note: This subject is not compatible with CHB471; credit may not be retained for both.

**CHB471 PHYSICAL CHEMISTRY IV VC**
Thermodynamics of real gases and ideal solutions; surface chemistry; industrial chemical reactors; reaction rate theory and homogeneous catalysis.

Prerequisites: CHB201, CHB371
Credit Points: 8  Contact Hours: 3 per week
Note: This subject is not compatible with CHB470; credit may not be retained for both.

**CHB510 INSTRUMENTAL ANALYSIS**
Scope of trace analysis, including method reliability, accuracy, precision, sensitivity and selectivity. Atomic absorption and atomic emission - theory and instrumentation. Determination of organic structure by mass spectrometry.

Prerequisites: CHB310, CHB340, CHB440, CHB351
Credit Points: 8  Contact Hours: 4 per week
Note: This subject is not compatible with CHB641; credit may not be retained for both.

**CHB527 CHEMICAL TECHNOLOGY V**
Chemical engineering process analysis and its applications to selected industrial processes. An introductory study of basic economic principles and their applications to the chemical process industries. An introduction to process plant design.

Prerequisites: CHB327, CHB427, CHB470
Credit Points: 8  Contact Hours: 4 per week

**CHB530 INORGANIC CHEMISTRY V**
A course of lectures and practical work dealing with organometallic chemistry; lanthanides and nuclear chemistry; inorganic rings and cages including the chemistry of organometallic and metal clusters.

Prerequisites: CHB430
Credit Points: 8  Contact Hours: 3 per week

**CHB550 ORGANIC CHEMISTRY V**
A course in advanced organic chemistry which emphasises the solution of synthetic problems both in the laboratory and on the industrial scale. Topics may include choice of starting materials, major carbon-carbon bond forming procedures, selectivity and control, design of industrial organic processes, significance of reaction mechanism and structure activity relationships.

Prerequisites: CHB350, CHB450
Credit Points: 8  Contact Hours: 4 per week
Note: This subject is not compatible with CHB551; credit may not be retained for both.

**CHB551 ORGANIC CHEMISTRY V VC**
A course in advanced organic chemistry which emphasises the solution of synthetic problems. Topics may include choice of starting materials, major carbon-carbon bond forming procedures, selectivity and control, significance of reaction mechanism, and structure activity relationships.

Prerequisites: CHB451
Credit Points: 8  Contact Hours: 3 per week
Note: This subject is not compatible with CHB550; credit may not be retained for both.

**CHB570 PHYSICAL CHEMISTRY V**
Solid-liquid equilibria, ternary eutectics and industrial phase chemistry; equilibrium and dynamic electrochemistry and corrosion; kinetics of chain reactions.

Prerequisites: CHB370, CHB470
Credit Points: 8  Contact Hours: 4 per week
Note: This subject is not compatible with CHB571; credit may not be retained for both.
CHB571 PHYSICAL CHEMISTRY VC
Solid-liquid equilibria, ternary eutectics and industrial phase chemistry; equilibrium and dynamic electrochemistry; kinetics of chain reactions.
Prerequisites: CHB371, CHB471
Credit Points: 8 Contact Hours: 3 per week
Note: This subject is not compatible with CHB370; credit may not be retained for both.

CHB590 MATERIALS SCIENCE
The nature of solids; crystalline materials; metals; non-metallic materials and organic polymers.
Prerequisites: CHB370 or CHB371, CHB470 or CHB471
Credit Points: 8 Contact Hours: 3 per week

CHB600 PROJECT
A laboratory-oriented investigation extending over one semester full-time or two semesters part-time under the supervision of a member of staff. The project will require a literature search, further study, continuing discussion with the project supervisor and a laboratory research program. The literature search, study and discussion component of CHB600 and CHB601 is aimed at developing student competence in research techniques and experience in experimental design. The laboratory program aims to develop student competence in the use of experimental techniques as a basis for problem solving. Completion of the project requires the submission of a written technical report.
Prerequisites: for CHJ 129 - CHB510 or CHB527 and two of CHB530, CHB550 and CHB570 or, for AS1226 - two of CHB530, CHB551 and CHB571
Credit Points: 20 Contact Hours: 10 per week

CHB610 ADVANCED ANALYSIS
Use of computers for on-line data acquisition and instrument control. Microprocessor controlled instrumentation and dedicated data systems. Advanced instrumental techniques, with emphasis on trace techniques and associated sample-handling requirements. Techniques included for discussion will be electroanalytical techniques, nondestructive techniques and thermal methods.
Prerequisite: CHB510
Credit Points: 4 Contact Hours: 2 per week

CHB618 LABORATORY AUTOMATION
Current approaches to the use of computer facilities in commercial laboratories will be emphasised in the lecture course. Discussion will centre on planning to achieve an integrated network. Instrument types to include analogue output, BCD and serial digital interfaces (RS232C, IEEE etc.). Incorporation of microprocessor controlled instruments and those instruments with dedicated data systems. Report generation and data communication systems. Polling (programmed I/O) and interrupt techniques.
Prerequisite: PHB504
Credit Points: 8 Contact Hours: 3 per week

CHB627 CHEMICAL TECHNOLOGY VI
Measurement and control in large-scale chemical processing. An introduction to process modelling including strategies of process operations, optimisation methods, linear programming and dynamic programming.
Prerequisites: CHB327, CHB427
Credit Points: 4 Contact Hours: 2 per week

CHB628 ENERGY TECHNOLOGY
A study of energy conversion systems and energy economics including choice of fuels, distribution costs and net energy analysis.
Prerequisite: CHB572 Co-requisite: CHB627
Credit Points: 6 Contact Hours: 3 per week

CHB631 ADVANCED INORGANIC CHEMISTRY
Selected metals: the solution and solid state chemistry of metals such as titanium, zirconium, hafnium, chromium, molybdenum and tungsten with emphasis on structures, bonding and reaction mechanisms. Precious metals: the 'platinum group', silver and gold; high purity chemicals. Redox systems: hydrogen peroxide and related peroxo-compounds; dichromates and the oxosulphur system; sodium borohydride and other complex hydrides.
Prerequisite: CHB530
Credit Points: 8 Contact Hours: 3 per week

CHB640 CHEMISTRY VI
Celluloid chemistry and rheology; Fourier transform, laser and time resolved spectroscopy; interpretative 13C NMR spectroscopy; free radical and photochemistry and the organic chemistry of sulphur and phosphorus compounds.
Prerequisites: CHB450, CHB470, CHB550, CHB570
Credit Points: 4 Contact Hours: 2 per week
Note: This subject is not compatible with CHB641, CHB671; credit may not be retained for more than one of these subjects.

CHB641 ADVANCED SPECTROSCOPY
Atomic absorption and emission spectroscopy. Electron spin resonance spectroscopy. Lasers and laser spectroscopy. Mass spectrometry, particularly GC-MS. Fourier transform spectroscopy, particularly 13C and multi-nuclei NMR. The role of dedicated computers in these techniques will be emphasised.
Prerequisite: CHB340
Credit Points: 8 Contact Hours: 3 per week
Note: This subject is not compatible with CHB510, CHB640; credit may not be retained for more than one of these subjects.

CHB651 BIOLOGICAL CHEMISTRY
Prerequisite: CHB551
Credit Points: 8 Contact Hours: 3 per week

CHB660 INDUSTRIAL VISITS
Visits to selected industries, for example, petroleum, industrial chemicals, sugar.
Prerequisite: CHB501
Credit Points: 2 Contact Hours: 1 per week

CHB671 SOLIDS & SURFACES
Colloid chemistry and rheology. The surface chemistry of metals, polymers and other solid materials. Surface analysis techniques including FTIR, XPS, SAM and ESCA.
Prerequisite: CHB571
Credit Points: 8 Contact Hours: 3 per week
CHB690 ADVANCED MATERIALS SCIENCE
Advanced materials analysis; fibre reinforced composite materials; advanced alloys; inorganic polymers; applied polymer science.
Prerequisite: CHB590
Credit Points: 8  Contact Hours: 3 per week

CHB691 ENVIRONMENTAL CHEMISTRY
The nature and composition of natural and polluted waters; metal ions, gases, redox equilibria complexation and microbial transformation of chemicals in water; water pollution and trace-level substances in water. Environmental chemistry of soils; acid-base equilibria and ion-exchange; chemicals in soil. The nature and composition of the atmosphere; chemical and photochemical reactions in the atmosphere; the oxides of carbon, sulphur and nitrogen in the atmosphere; organic pollutants and photochemical smog; particulate matter. Water and atmospheric monitoring.
Prerequisites: CHB551, CHB571
Credit Points: 6  Contact Hours: 3 per week

CHD148 CHEMISTRY
Introduction to general and organic chemistry as applied to biological systems. Topics covered include: the basic chemical concepts of atoms, molecules; molecules, ions; chemical bonding and equations; solution chemistry; acid bases and chemical equilibria; gases and nuclear chemistry; the chemistry of biological components such as proteins, carbohydrates, lipids enzymes and nucleic acids.
Credit Points: 6  Contact Hours: 3 per week

CHP120 BIOCHEMICAL ENGINEERING
The application of biological organisms, systems and processes to productive levels; specific areas are in fermentation, bioprocessing and enzyme technology. Topics include: fermentation processes; microbial physiology and environmental factors in process; organic pollutants and photochemical smog; particulate matter. Water and atmospheric monitoring.
Prerequisites: CHB551, CHB571
Credit Points: 6  Contact Hours: 3 per week

CHP700 PROJECT
All students undertaking Honours are required to select and undertake, in consultation with a supervisor, a substantial project in an appropriate area. Each project will be assessed on the basis of an extensive written report and an oral presentation.
Credit Points: 10  Contact Hours: 6 per week

CHP701 ADVANCED TOPICS IN CHEMISTRY I
CHP702 ADVANCED TOPICS IN CHEMISTRY II
A selection of advanced topics in the areas of physical, organic and inorganic chemistry. The topics offered will reflect the expertise of the academic staff as well as the needs of the students. Both subjects will be assessed at the end of the year.
Credit Points: 12  Contact Hours: 6 per week

CHP703 ADVANCED ANALYSIS
Separation methods: gas chromatography including capillary techniques, liquid chromatography including ion exchange and size exclusion chromatography; electrophoresis; electrochemical methods: principles of interfaced electrochemistry, the ion double layer, electro capillarity, electrode kinetics, evaluation of kinetic parameters; surface analysis: ESCA, SIMS and related techniques.
Credit Points: 6  Contact Hours: 2 per week

CHP704 ADVANCED MATERIALS SCIENCE B
Physical and chemical properties of advanced materials; mechanical, thermal, electrical, optical and magnetic properties of advanced materials such as fibre reinforced composites, rapidly solidified compounds, ceramics, inorganic polymers and shock processed materials.
Credit Points: 6  Contact Hours: 2 per week

CHP705 ADVANCED SPECTROSCOPY
A theoretical background in spectroscopy and an appreciation of the applications, limitations and practice of modern methods of spectrochemical analysis. Topics may include: molecular spectrophotometry; atomic absorption and atomic emission; x-ray fluorescence; nuclear magnetic resonance spectroscopy and electron spin resonance spectroscopy; Fourier transform spectroscopy; mass spectrometry; advanced techniques in electron microscopy and electron probe microanalysis.
Credit Points: 6  Contact Hours: 2 per week

CHS200 CHEMISTRY
Introduction to general and organic chemistry; atoms, molecules, ions; chemical bonding; chemical reactions; solutions; chemical reactions in solutions; solution chemistry; acids, bases and chemical equilibria; gases; electrochemistry and nuclear chemistry; basic chemistry of organic compounds, aliphatic aromatic and aromatic compounds.
Credit Points: 6  Contact Hours: 3 per week

CMA133 COMMUNICATION TECHNIQUES
Credit Points: 4  Contact Hours: 2 per week

CMB012 SPEECH COMMUNICATION
The major aim of the course is to develop in the student the ability and confidence to successfully communicate in speaking in contemporary business and professional situations. The specific objectives are to develop an understanding of the concepts and skills required for effective participation in performance situations, such as: radio and television broadcasting, creative presentations to clients, creative presentations to the public, persuasive presentations to an audience. Supportive bases for these methods of communication will include language and non-verbal aspects, listening and delivery and staging and use of visual aids.
Credit Points: 12  Contact Hours: 3 per week

CMB014 WRITING & COMMUNICATION THEORY
The subject provides a broad overview of the contemporary study of communication and writing by introducing students to a wide range of theories, methods, and approaches. Emphasis is placed on mass communication theory and practice, with particular attention to the relevance of communication theory to
professional practice. Theoretical approaches dealt with include rhetorical, process, interactive, and cultural studies perspectives.

**CMB104 PROFESSIONAL COMMUNICATION**

Communicating successfully in writing and orally in contemporary professional situations. An understanding of the concepts and skills required for effective writing, oral reporting and persuasive speaking, group decision making and meeting procedure, and leadership and participation.

Credit Points: 12  Contact Hours: 4 per week

**CMB105 BUSINESS COMMUNICATION**

To achieve standards of preparation and presentation in formal communication which are acceptable in contemporary organisations. It encompasses an introduction to the techniques and objectives of communication in formal contexts. The processes of oral and written communication and their application within organisational settings to interviewing, presentational speaking, research papers, reports and correspondence.

Credit Points: 12  Contact Hours: 3 per week

**CMB106 PROFESSIONAL COMMUNICATION**

Communicating successfully in writing and orally in contemporary professional situations. An understanding of the concepts and skills required for effective practices in formal reporting and persuasive writing, oral reporting and persuasive speaking, group decision making and meeting procedure, and leadership and participation.

Credit Points: 6  Contact Hours: 3 per week

**CMB108 ENGLISH FOR TECHNOLOGISTS**

A series of lectures and tutorials aimed at improving the student’s ability to write sound paragraphs comprising economical sentences acceptable in grammar, syntax, punctuation and idiom.

Credit Points: 6  Contact Hours: 3 per week

**CMB111 SOCIOLOGY**

To develop an awareness of the impact of the social environment of human behaviour and to provide a contextual understanding of society for practice in professional fields. Students will be introduced to some of the main theories which have been developed to gain insight into the operation of society, and to the basic concepts employed in those theories. Some of the topics to be addressed include: culture and sub-cultures; the family; stratification; groups and communities; formal organisations; social deviance; social change.

Credit Points: 12  Contact Hours: 3 per week

**CMB116 WRITING FOR DESIGNERS I**

The writing process; style, accuracy and simplicity in writing; the editing process.

Credit Points: 4  Contact Hours: 2 per week

**CMB117 WRITING FOR DESIGNERS II**

Writing for the design professional; review of organisation and mechanics; types, formats, styles and review of professional documents; problems of technical style, bibliographic conventions and use of graphics.

Credit Points: 4  Contact Hours: 2 per week

**CMB118 SOCIOLOGY FOR PROFESSIONALS**

To develop an awareness of the impact of the social environment of human behaviour and to provide a contextual understanding of society for practice in professional fields. Students will be introduced to some of the main theories which have been developed to gain insight into the operation of society, and to the basic concepts employed in those theories. Some of the topics to be addressed include: culture and sub-cultures; the family; stratification; groups and communities; formal organisations; social deviance; social change.

Credit Points: 12  Contact Hours: 3 per week

**CMB134 COMMUNICATION FOR ENGINEERS**

Development of confidence in the dissemination of knowledge, skills and information to both technical and nontechnical associates via written and oral communication resources. Oral presentation techniques. Effective written communication skills.

Prerequisite: CMB108  
Credit Points: 4  Contact Hours: 2 per week

**CMB136 TECHNICAL WRITING**

The prose, mechanical and graphical elements in reports, proposals, instructions and other technical literature are analysed and put into practice. The subject includes the preparation of routine correspondence, and presents contemporary developments in organisational communications.

Credit Points: 2  Contact Hours: 1 per week

**CMB161 LITERATURE & COMMUNICATION**

This course develops skills in written communication, and also develops critical and analytical skills in dealing with a variety of communicative and textual forms. Students will acquire an understanding of various forms of written communication, specifically literary forms such as fiction and poetry, and performative, such as drama. This will entail understanding the theory behind such forms; students will therefore be introduced to literary theory as well as language and communication theory. The subject provides a theoretical background for students wishing to take electives in the Humanities area in later semesters.

Prerequisite: CMB104  
Credit Points: 12  Contact Hours: 3 per week

**CMB163 INTRODUCTION TO AUDIO-VISUAL COMMUNICATION**

Introduction to the theory and practice of audio-visual communication, media consciousness, definition of operational objectives, analysis of audience characteristics; development of concept, selection of appropriate mediated form, basic scripting; equipment, quality, and cost effectiveness; selection and operation of appropriate equipment; familiarity with still camera, audio and video equipment; techni-
This subject aims to provide students with an understanding of qualitative and quantitative research methods used in the communication professions. The course will examine the basic assumptions and strategies of social research. Topics will include focus group interviews; questionnaire construction and sample surveys; experimental design.

Co-requisite: CMB111, CMB104
Credit Points: 12  Contact Hours: 3 per week

This subject provides the student with a greater awareness of the Australian social history. It examines the construction of Australian identity since white settlement.

Prerequisite: CMB111 or 5 subjects B.Bus degree program
Credit Points: 12  Contact Hours: 3 per week

Students will be given a course of relaxation, vocal and expression exercises to increase their control of body language and vocal presentation. They will study the communication of an age by looking at the manners, values and attitudes of the culture reflected in its drama. Particular attention will be paid to twentieth century drama and its reflection of the communication of our society. Students' perception, especially auditory awareness and visual perspicacity, will be extended by the use of video recording of their work. This subject has a greater awareness and visual perspicacity, will be extended by the use of video recording of their work.

Credit Points: 12  Contact Hours: 3 per week

This course examines the basic assumptions and strategies of social research. Topics will include demographic, social surveys; experimental design. Forthrightly photographic assignments. Portfolio.

Credit Points: 12  Contact Hours: 3 per week

This subject provides the student with a greater awareness of the Australian social history. It examines the construction of Australian identity since white settlement.

Prerequisite: CMB111 or 5 subjects B.Bus degree program
Credit Points: 12  Contact Hours: 3 per week

Practical knowledge of a significant and growing area of professional documents; audience considerations in planning community relations programs, fund raising and special events; and the setting up of community groups. The subject is designed to increase intellectual depth of understanding as well as practical knowledge of a significant and growing area of public relations. Practical work will be undertaken in planning community relations programs, fund rais-
CMB422 PROFESSIONAL SPEECHWRITING
The context for speeches - environmental, relational and linguistic; issues for targeting speeches; rhetorical principles for developing personal language style; methods of interpreting and evaluating speeches; study of exemplars and writing of various types of speeches - occasional addresses; informative speeches; persuasive speeches; modern campaign speeches; using speeches for advance release and promotional purposes; reports on speech writing projects.
Prerequisite: CMB552
Credit Points: 12 Contact Hours: 3 per week

CMB423 AUSTRALIAN MEDIA INSTITUTIONS
The aim of the course is to introduce students to the major media institutions within Australia. This will involve examination of industry development and structure, and industry practices in the press, television, advertising and radio. Outside specialists will be used to augment the expertise of Communications staff.
Prerequisite: CMB104
Credit Points: 12 Contact Hours: 3 per week

CMB441 RETAIL ADVERTISING
Topics of study include the examination and study of the advertising objectives, requirements, strategies and practices of the different segments of the retail industry. These are compared and contrasted with the same aspects of national advertising. Workshop sessions and assignments accent practical work on retail advertising.
Prerequisite: CMB363, CMB364 or MNB491
Credit Points: 12 Contact Hours: 3 per week

CMB442 MOTIVATION & ETHICS IN ADVERTISING
The subject will provide an introduction to those areas of psychology particularly appropriate to advertising. It will relate these to classical and modern theories of the motivational aspects of advertising. The ethical standards of the Advertising Institute of Australia, the Australian Association of National Advertisers, the Advertising Federation of Australia and the Direct Marketing Association will be examined and compared with motivational practice and requirements. Emphasis will be placed on the examination of current campaigns against motivational and ethical backgrounds.
Prerequisite: CMB241
Credit Points: 12 Contact Hours: 3 per week

CMB451 INDUSTRIAL PRESS
An examination of the requirements for communication with employees, shareholders, customers and other specific publics through specialist publications. Analysis of requirements for house magazines, newspapers and newsletters, customer brochures, pamphlets and newsletters, and financial reports to shareholders and staff. Desk-top publishing and examination of new technology.
Prerequisite: CMB552
Credit Points: 12 Contact Hours: 3 per week

CMB452 INTRODUCTION TO PUBLIC RELATIONS
An introduction to the concept and practice of public relations. The subject surveys the history, theories, models, and management of public relations activities and processes. Modes of communication are analysed in relationship to reaching different levels of society. A number of guest practitioners discuss their programs and areas of specialisation, such as community, internal, media, and government relations.
Credit Points: 12 Contact Hours: 3 per week
CMB461 CREATIVE WRITING
Creative writing is a highly skilled form of communication, involving the communication of ideas and values within a social framework. Students will examine the creative writing process from first draft to final product, with particular emphasis on the short story form. The problems of publishing and marketing as a professional writer will be considered.
Prerequisite: CMB161
Credit Points: 12 Contact Hours: 3 per week

CMB462 MAGAZINE & FEATURE WRITING
Study of reporting and writing techniques for magazine articles and newspaper human interest stories; analysis of content and style of publications; market research for publication; practical writing and production assignments.
Prerequisite: CMB360 and 40 wpm Teeline
Credit Points: 12 Contact Hours: 3 per week

CMB463 MODERN LITERATURE & FILM IN SOCIETY
This course will offer an integrated study of contemporary literature and film and show how both media provide an insight into topical issues of the day. Various critical approaches to literary and filmic texts will be analysed and the concepts of genre, authorship and structure will be considered.
Prerequisite: CMB161
Credit Points: 12 Contact Hours: 3 per week

CMB464 VIDEO PRODUCTION TECHNIQUES
Analysis of audio-visual media in terms of markets served – eg mass media, specialist, the arts, with reference to cost effectiveness; criteria used in selection of the appropriate mediated form; the technology and development of film and television from the magic lantern to satellite broadcasting; principles of production; realising the intention of program, conversion of script to mediated form, roles and responsibilities, budgeting and production management; future directions in video; principles and practice of directing; editing; pictorial composition, lighting, use of colour, camera control; sound and sound recording; animation and special effects.
Prerequisite: CMB163
Credit Points: 12 Contact Hours: 3 per week

CMB465 LITERATURE, LANGUAGE & SOCIETY
Novels will be considered as both influenced by, and influencing the society in which they are produced. Students will be shown that literature can provide a detailed and complex analysis of society and ideologies. As with the prerequisite subject Literature and Composition, emphasis will be placed on critical and analytical skills through close textual analysis, applying contemporary literary and linguistic theory.
Prerequisite: CMB161
Credit Points: 12 Contact Hours: 3 per week

CMB466 NARRATIVE CONCEPTS
The interrelationship between improved technical means – lenses, editing techniques, cameras and sound and how these increase the creative scope of film makers; national preferences in narrative communication. The course 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 the various national groupings.
Credit Points: 12 Contact Hours: 3 per week

CMB521 COMMUNICATION & PUBLIC OPINION
The processes of public opinion are studied from the perspective of sociological theory. Within this framework, the operation of the media will be examined in some detail. Specific topics to be considered include opinion polling in Australia; the association between demographic characteristics and opinions; the role of the media in the 'social construction of reality'; the conceptual and operational relationships between attitudes and opinions; cognitive dissonance and communication strategies for opinion change; the role of institutionalised forms of community agitation in influencing public opinion and public policy; social stability and social change. Students analyse opinion poll data from a number of sources using statistical software on a mainframe computer.
Prerequisite: CMB211
Credit Points: 12 Contact Hours: 3 per week

CMB542 ADVERTISING MANAGEMENT
The purpose of the subject 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, competing theoretical concepts of 'how advertising works'.
Prerequisite: CMB241 or MNB233
Credit Points: 12 Contact Hours: 3 per week

CMB543 ADVANCED ADVERTISING
This subject will build upon the knowledge and skills gained by students in either Advertising Copywriting or Media Strategy and build them to be fully operative at copywriter or media planner level. While theoretical perspectives will be expanded, there will be a heavy emphasis on practical work.
Prerequisite: CMB363, CMB364 or CMB541
Credit Points: 12 Contact Hours: 3 per week

CMB544 DIRECT RESPONSE ADVERTISING
This subject will cover the underlying principles and practice of direct response advertising in its various forms. Ethical considerations will be considered against a background of Australian societal norms. Skills in the appropriate areas will be taught and practised. Practitioners will lecture on current procedures and brief students on assignments, which will be presented to them. There will be a considerable emphasis on practical work.
Credit Points: 12 Contact Hours: 3 per week
CMB552 PUBLICITY & PROMOTION (PRINT)
Focus is on communication with media. The skills and knowledge necessary to deal with, write and produce materials for print media are developed. Guest speakers in mass media present techniques for working with and in newspapers, and magazines. Practitioners provide information on special events, community relations, political campaigns, and promotions, which students can apply to field assignments.
Prerequisites/Co-requisites: CMB452, CMB359
Credit Points: 12  Contact Hours: 3 per week

CMB553 PUBLICITY & PROMOTION (ELECTRONIC)
Concentrates on development of production skills in video as they apply to public relations in organisations. Students will produce a complex video news magazine for a client organisation. This includes scripting, presenting, studio management, special effects, graphics, field operation of video equipment and video editing. Techniques for producing community service announcements are also taught.
Prerequisites: CMB552, CMB464
Credit Points: 12  Contact Hours: 3 per week

CMB561 FILM & TELEVISION SCRIPT WRITING
Wide scope approach to writing through analysis of such forms as features, documentaries and drama; depth approach to writing through analysis of audiences and the industry; the writer's commitment to social responsibility; use of film in television and public relations; analysis of scripts and script requirements in contemporary markets.
Prerequisite: 10 subjects in a degree program
Credit Points: 12  Contact Hours: 3 per week

CMB562 MEDIA TEXT ANALYSIS
The aim of the course is to enable students to better understand the nature of film and television as forms of communication. It uses the general range of cultural studies approaches structuralism, psychoanalysis, linguistics, film theory and narrative theory. It examines media productions as 'texts', subjecting them to close analysis in order to read from them possible meanings for their audiences.
Prerequisite: CMB423
Credit Points: 12  Contact Hours: 3 per week

CMB564 TELEVISION STUDIO/POST PRODUCTION
Television studio production and post production of news/current affairs, corporate, documentary and drama; the roles of: producer, director, art director, camera and audio operators, vision mixers, floor manager, technical director, production assistant and on-line editor.
Prerequisite: CMB662
Credit Points: 12  Contact Hours: 3 per week

CMB571 RADIO/TELEVISION JOURNALISM I
The purpose of this subject is to train students to explore theoretical problems related to radio and television news and to provide them with practical experience in writing/production/reading broadcast news. Students will study the theoretical aspects of broadcast news writing and production. They will contribute to the 4EB news and current affairs throughout the semester. Students will prepare television reports and present them in class for criticism. Students will be required to develop an understanding of the workings of the radio broadcast equipment.
Prerequisite: CMB462 and 60 wpm Teeline
Credit Points: 12  Contact Hours: 3 per week

CMB572 COMPARATIVE JOURNALISM
Development of national press systems; the journalist as a mass communicator; functions of the press in different societies; foreign press systems; international and inter-cultural communication.
Prerequisite: 16 communication degree subjects
Credit Points: 12  Contact Hours: 3 per week

CMB592 VIDEO DOCUMENTARY PRODUCTION
Orientation to the history and development of documentary production; various types of film and television materials; approaches to the production of a documentary, different approaches to script development. The place of editing in the production, affective elements; the scope and limitations of creative editing; evolution of an editing plan; correlation of image, sound, music, pace and tone in the total design; editing practice in workshops using materials provided on tape. Production of a documentary or corporate video.
Prerequisite: CMB464
Credit Points: 12  Contact Hours: 3 per week

CMB622 PROFESSIONAL COMMUNICATION PRACTICE
The aim of this elective subject will be to provide the communication student with an opportunity to observe, and gain insight into, the applications of communication theory to communication practice. The student will be placed with an approved employer. The lecturer in charge of the subject will obtain reports from the student at regular intervals. The student will be required to complete a progressive assessment program. The student's result will be determined on the basis of reports, continuous assessment and the employer's report.
Prerequisite: EITHER CMB363/CMB364 and CMB542 and CMB541 OR CMB371 or CMB672 OR CMB451 and CMB553
Credit Points: 12  Contact Hours: 3 per week

CMB641 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.
Prerequisite: CMB542
Credit Points: 12  Contact Hours: 3 per week

CMB651 ADVANCED PUBLIC RELATIONS
An advanced approach to public relations submissions by means of the case study method. The subject provides practical experience in problem solving, strategic planning, analysis, and implementation of public relations programs. Guest practitioners present problems they deal with in government and financial relations, from which students derive underlying principles and devise model plans that offer solutions to these societal problems.
Prerequisite/Co-requisite: CMB451
Credit Points: 12  Contact Hours: 3 per week

CMB662 FILM DRAMA PRODUCTION
Analysis of the process and effects of film drama; budgeting and production management; direction and script interpretation; film editing techniques; advanced production techniques; working in crews to
produce a significant film production. Students are required to discuss script preparation with the lecturer in the semester prior to undertaking this subject.

Prerequisites: CMB592 - Film and Television majors only

Credit Points: 12 Contact Hours: 3 per week

CMB664 FILM & VIDEO 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 and mini-series; achieving balance in the above-the-line, below-the-line and marketing costs. Sources of finance: corporate sponsors, corporate clients, investors, pre-sales, government grants, Film Finance Corporation; methods of obtaining finance, insurance, completion guarantees, legal and accounting requirements; script breakdowns, budgeting and production management. Students will be required to produce a significant corporate or documentary video.

Prerequisite: CMB662

Credit Points: 12 Contact Hours: 3 per week

CMB666 PUBLIC RELATIONS CONSULTING & MANAGEMENT

Covers operation of a consultancy and the management of a public relations department in various types of organisations. Guest speakers in specialised areas provide cases on budgeting, staff development, client relations, computer utilisation, management liaison, and group discussions.

Prerequisite: CMB351 or CMB651

Credit Points: 12 Contact Hours: 3 per week

CMB671 PUBLIC AFFAIRS REPORTING

An advanced reporting subject dealing with four main areas of news coverage: finance, industrial, government and social issues. Students do in-depth reporting on the facts behind financial, industrial, political, scientific and social issues. Students undertake practical assignments and participate in publications and broadcasts.

Prerequisite: CMB371

Credit Points: 12 Contact Hours: 3 per week

CMB672 RADIO/TELEVISION JOURNALISM II

In this subject students will explore the theory underlying current affairs and TV news broadcasting. They will consider all aspects of current affairs and TV news production, and at the same time contribute to 4EB news and current affairs programs for radio throughout the semester and on roster between semesters. The radio programs will be sited on 4EB. Students will also read news and do more advanced interviewing segments of the news on 4EB during the semester and on roster between semesters.

Prerequisite: CMB571 and 80 wpm Teeline

Credit Points: 12 Contact Hours: 3 per week

CMB673 JOURNALISM ETHICS & ISSUES

This is a seminar subject in which lectures serve as starting points for discussion and panels. Students are challenged on journalistic practices and are asked to make decisions. Experts from various fields are invited to take part in seminars and panel discussions. Students produce a School newspaper and radio news and current affairs programs.

Prerequisites: CMB371 and CMB672

Credit Points: 12 Contact Hours: 3 per week

CMB100 SOCIOLOGY

Introduction to the sociological concepts and theories with which to analyse the impact of the social environment on human behaviour; the social and cultural diversity of Australian society; socialisation; the family as a social institution; culture; social control; social deviance and social change.

Credit Points: 6 Contact Hours: 3 per week

CMB200 SOCIOLOGY OF HEALTH AND ILLNESS

Social aspects of health and illness in the community; health care in the family group and community; patient-professional roles; stress and disease; social aspects of ageing; preventive health care and the medical model; health and social problems; bureaucratisation and health care delivery.

Credit Points: 6 Contact Hours: 3 per week

CMN709 CONCEPTS IN COMMUNICATION

Prerequisites:

Credit Points: 12 Contact Hours: 3 per week

CMN710 MASS COMMUNICATION A

An advanced exploration of the theories of mass communication, as a process, and its impact in society. It studies the role of mass media, and their relationships from one to another, to major institutions and to individuals and groups. It gives a theoretical basis for research in mass communication, including the structure, process and effects of mass media.

Credit Points: 12 Contact Hours: 3 per week

CMN711 MASS COMMUNICATION B

Examines further the relationship between mass media and society through analysis of the practices, conventions and forms of mass communication, especially film and television. It relates the impact of mass media upon society to cultural formations such as ideology and politics. This subject provides additional theoretical bases for analysis of mass communication messages and reception, through the application of discourse analysis involving semiotic, structural and signification theories.

Credit Points: 12 Contact Hours: 3 per week

CMN720 COMMUNICATION EVALUATION

Introduces students to the conceptual skills of communication evaluation at an advanced level. It provides the knowledge and skills in both quantitative and qualitative methods. It is intended to prepare people who will commission, supervise and use research and search, not as an end in itself but as a means to solving communication problems.

Credit Points: 12 Contact Hours: 3 per week

CMN723 SEMINAR IN COMMUNICATION RESEARCH

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

Credit Points: 12 Contact Hours: 3 per week
On completing this subject the student should have an appreciation of the social trends and issues which influence the operation of mass communication. Students will study a diversity of social environments which are the setting for communication technology and policy. Students will be assisted in investigating specific fields of interest. Suggested topics may include: social impact of communication technology (home computer, video, access radio, cable television, Aussat); patterns of personal communication in networks and neighbourhoods; cross-cultural communication, multiculturalism and the media; social change in industrial and developing countries; media presentation and the social construction of reality; audience research in mass media and live, performing arts; and communication in urban and rural setting.

Credit Points: 12  Contact Hours: 3 per week

Deals primarily with written forms of discourse in mass culture. Topics include: the concept of mass culture and cultural formations; the growth of written mass culture/popular literature; the relationship between language and reality (reality formed by language, rather than vice versa); the modern debate about mass culture versus 'high' culture literary journalism; mass culture and ideology (fictional and non-fictional prose, scripts). Theory will be related to textual analysis. This subject follows on from Mass Communication B.

Credit Points: 12  Contact Hours: 3 per week

A study of putting communication theory into practice. Students may take policy and plans formed either in the subject Communication Policy and Planning, or elsewhere, and consider how to produce the appropriate change. The ethics of persuasion and the problems of cooperation are explored. Students must take into account the social implications of producing change, the role of the change agent and ways to monitor the effects in Australian as well as developing societies. Alternative perspectives for strategic thinking will be compared for application in the environments of marketing, advertising, editorial journalism, public relations, public affairs, public information.

Credit Points: 12  Contact Hours: 3 per week

This subject is designed to give students who are non-engineers a working understanding of modern and emerging communication technologies and their use by individuals and social institutions, with regard for their social consequences. Particularly, it aims to investigate the access to these technologies by citizens and to give students basic technological literacy. It overviews the state of the art and studies current and emerging communication technologies and their use by individuals and social institutions, with regard for their social consequences. It allows students to conduct independent research in areas of their personal interests and readings.

Credit Points: 12  Contact Hours: 3 per week

A series of seminars comprising postgraduate students, teaching staff, and variously, visiting scholars and practitioners, for the purpose of sharing knowledge of human communication across the range of perspectives, theories, research and applications. It allows students to pursue, review and compare their own personal interests and readings.

Credit Points: 12

Permits students to conduct independent research in an area not covered by a substantive subject in their program. It is an opportunity to study an area of personal interest or use it as a pilot study for a thesis or project.

Credit Points: 12

Consolidates research knowledge and skills, refines the research strategy for the student's thesis project.
and assists with the planning and writing of the thesis report. Further material on research methods and procedures will be covered as necessary for students to undertake their thesis research.

Prerequisite: CMN409 or CMN831
Co-requisite: IFN001
Credit Points: 8 Contact Hours: 2 per week

CMN910 and CMN911 DISSERTATION
Taken in conjunction with, or subsequent to, a subject in the CMN800-899 series; normally a 10,000 word investigation of a communication concept using secondary research relevant to that subject.
Prerequisites: CMN710, CMN711, CMN720
Credit Points: 24 (each)

CMN950 THESIS
Students may complete a thesis or a project. A thesis is a scholarly work which provides an opportunity to combine an appropriate theory or perspective, and appropriate research methodology to examine a significant communication problem or issue. Main text will not normally exceed 20,000 words. A project is an approved program of substantive work leading to a report, communication program, printed or audio-visual production, disc or some other product in which theories of communication are applied to some problem or issue.
Credit Points: 24 per semester

CMP007 COMMUNICATION CONCEPTS
Prepares students in the foundation theories and perspectives of human communication, and in the application to modern professional practice, in order to proceed to advanced theoretical study.
Credit Points: 12 Contact Hours: 3 per week

CMP10 JOURNALISTIC WRITING
This is a new writing and reporting subject designed for Graduate Diploma students to 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. News values; reporting techniques; and journalistic writing: style and convention.
Credit Points: 12 Contact Hours: 3 per week

CMP125 ORGANISATIONAL COMMUNICATION
Focuses on how people relate with each other in modern organisational settings, from small businesses to multinational organisations in the public and private sector. It has a problem-solving, interdisciplinary approach to communication up, down and across the organisation, among divisions and work units, among different professional and vocational specialities and within work teams. It is designed to help students prepare for internships and other work experience, as well as eventual professional employment.
Credit Points: 12 Contact Hours: 3 per week

CMP352 FUNDRAISING PRINCIPLES
This subject is designed to cover the fundamentals of fundraising. It starts with the preparation of the case statement, introduces planning methods, and then moves through the various techniques of fundraising. Introductory segments on public relations, advertising, marketing and management also form part of this subject. Major topics include philosophy of fundraising, its role in society, budget, fundraising, major gift and capital campaigns, planned giving, researching and establishing prospect bases, procedures of solicitation, team building of boards and volunteers, role of foundations.
Credit Points: 12 Contact Hours: 3 per week

CMP401 COMMUNICATION THEORY 1
Examination of the two of the main approaches to the study of communication theory - behavioral theory based on empirical research and systems interactive theory. Topics include the process and effects of mass communication; role of the media in society; theories of violence in the media; systems thinking; theories of human interaction and involvement network theory and analysis.
Credit Point: 12 Contact Hours: 3 per week

CMP402 COMMUNICATION THEORY 2
The subject builds on the cultural studies theory that students have learned in three subjects with cultural studies components in the undergraduate degree by teaching advanced cultural studies (10 weeks) and also provides an understanding of advanced rhetoric (3 weeks). It also leads into the cultural studies strand of the masters degree. Theories examined will include advanced semiotics, structuralism, discourse analysis and rhetoric. Applications will largely be to film and television. Readings will be from theorists such as Stuart Hall, Saussure, Eco, Wollacott and Hawkes.
Survey of classical rhetoric and application of contemporary rhetoric.
Credit Points: 12 Contact Hours: 3 per week

CMP403 COMMUNICATION RESEARCH METHODOLOGIES
This subject provides a foundation for understanding the empirical research studies students will read in the honours degree and for conducting empirical research for masters and doctoral theses should they choose to undertake graduate studies. Theory and research - developing research models and hypotheses, review of basic research principles - measurement issues, operationalisation concepts, validity and reliability, sampling, questionnaire design, codebook, univariate statistics, simple cross-tabulations, experimental designs, tests of significance and measures of association; statistical analysis - multivariate techniques (including table elaboration, multiple regression, analysis of variance, path analysis, factor analysis); evaluation research, historical and comparative research, ethical issues in research, exercises in scale construction; using SPSS- x for analysis of survey and experimental results.
Credit Points: 12 Contact Hours: 3 per week

CMP404 ADVERTISING SEMINAR
The major topics in advertising and promotion management; the questions of purpose, planning, profit contribution and selective communication strategies as they apply to audience and market segmentation; the consistent relationship of the promotional component to the advertising component and how these two communication functions need to be integrated for prime efficiency. Research methods and media planning will be considered against the basic thrust of this binary communication model.
Credit Points: 12 Contact Hours: 3 per week

CMP405 JOURNALISM SEMINAR
The subject provides a professional focus in the Honours / Masters Qualifying Year through the exploration of theories, methodologies, models and topics appropriate for individual academic research projects in journalism. Students do literature reviews in preparation for dissertations and theses. Topics include five concepts of the press; the new world information order; the social contract in Australia; empirical research in journalism; the press and
governmental processes; the press and public opinion; legal and ethical issues in journalism.
Credit Points: 12 Contact Hours: 3 per week

CMP406 PUBLIC RELATIONS SEMINAR
To provide honours students with a focus on research within the public relations field. Students will examine theories and methodologies that have been applied to public relations and develop an understanding and direction for their honours dissertation. The subject will examine the function and practice of public relations. Practitioners will be invited to present issues which are relevant to research interests. Australian and overseas studies in public relations and related research will be drawn together to develop paths appropriate to student dissertations. Areas of study would include; Organisational Communication, Community Relations, Law, Journalism/Media, Advertising/PR/Marketing mix, Ethics/Persuasion.
Credit Points: 12 Contact Hours: 3 per week

CMP407 COMMUNICATION POLICY ENVIRONMENT
The public policy environment is associated with all aspects of communication practice and with all communication industries; social, legal, political and technical environment in Australia and neighbouring countries; policy structures and processes; current issues; the participating and critical views.
Credit Points: 12 Contact Hours: 3 per week

CMP408 COMMUNICATION TECHNOLOGIES & SOCIETY
The history of technology; technological determinism; technological assessment; social impacts; new technologies—digital, microprocessors, fibre and satellites; convergence new applications – ISDN, HDTV, electronic publishing, computer-supported—cooperative work.
Credit Points: 12 Contact Hours: 3 per week

CMP409 DISSERTATION
This subject is the culmination of the honours degree in that students apply the theory and research material covered in earlier subjects to explore in some depth an applied or theoretical topic in the field of communication. The dissertation will be based on information from secondary sources and will consist of a written report of approximately 10,000 words in length.
Credit Points: 12 Contact Hours: 3 per week

CMP421 NATIONAL MEDIA INSTITUTIONS
The aim of this course is to introduce students to the major media institutions within Australia. The organisation of the subject matter falls into two main categories. Industry development and structure: this includes ownership of radio, television, newspapers, and advertising agencies; networking; government control and regulation; intra-industry organisations such as FACTS and the unions, technological developments, future changes in technology. Industry practices: these are highly specialised, and some use will be made of public relations in Australia. Topics covered could include the presentation of news, the difference between radio and television advertising, TV programming schedules, radio's response to FM and V, the impact of satellites. Also important here are the roles played by the interaction between an industry and its audiences, audience research and ratings.
Prerequisite: CMB161
Credit Points: 12 Contact Hour: 3 per week

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CMP500 ADVANCED COMMUNICATION SEMINAR
This subject provides a professional focus through the exploration of theories and methodologies appropriate for individual academic research projects in advertising, journalism or public relations. Students do work that is a preparation for their dissertation.
Credit Points: 12 Contact Hours: 3 per week

CMP562 ADVANCED TEXT ANALYSIS
This unit focuses on the products of the media, particularly film and television. The aim of the course is to enable students to better understand the nature of film and television as forms of communication. It uses the general range of cultural studies approaches: semiotics, structuralism, psychoanalytic theory, linguistics, film theory, and narrative theory. It examines media productions as 'texts', subjecting them to close analysis in order to read from them possible meanings for their audiences. The aim is for this methodology to complement more empirical approaches undertaken elsewhere in the course. Audiences, in particular, become key concepts for analysis. Unlike other approaches to the audience, this subject infers audiences from text analysis as well as talking about audiences as products of the particular medium of communication under analysis.
Credit Points: 12 Contact Hours: 3 per week

CMP590 FUNDRAISING CAMPAIGNS
Practical experience in planning and implementing a fundraising campaign; planning a complete fundraising program; defining relevant constituencies and pinpointing appropriate vehicles for linking to these target markets; budgeting and managing campaign elements; working successfully with Boards and volunteers where appropriate; and evaluating fundraising efforts. Students will undertake a practical group project in the form of a small scale fundraising program. Major topics covered in the supporting lectures include: strategic planning, advanced management, financial issues, ethics and evaluation techniques.
Prerequisite: CMP352
Credit Points: 12 Contact Hours: 3 per week

CSA165 COMPUTING
The BASIC language; computer utilisation and organisation; problem solving; analysis of numerical and non-numerical problems; a brief introduction to FORTRAN and the differences between it and BASIC.
Credit Points: 7 Contact Hours: 2 per week

CSA259 INTRODUCTION TO COMPUTING
A broad overview of the many facets of computing ranging from the impact of computers on society through to the details involved in data base organisation and the interrelationship between these facts. The emphasis of the course is on demystifying computers; the student will gain an understanding of the abilities of computers and, in particular, their role in health science.
Credit Points: 6 Contact Hours: 2 per week

CSR100 INTRODUCTION TO COMPUTER SCIENCE
Establishes a basis for the major computing topics to be covered in later subjects; provides students with a disciplined and structured approach to algorithm design, and introduces a range of problem-solving methods and a variety of programming languages.
which can be used to process information in a computer.
Credit Points: 9  Contact Hours: 3 per week

**CSB101 COMPUTER SYSTEMS I**
The physical organisation of a computer system: the control and flow of information within the system, the representation of data in a computer system, and the design of elementary digital electronic circuits. Topics covered include Boolean algebra; state concepts; data representation; processor organisation; memory organisation; input/output devices; machine language; and assembly language.
Credit Points: 9  Contact Hours: 3 per week

**CSB110 PROGRAMMING PRINCIPLES**
Extending material introduced in CSB100; structured program design techniques; advanced algorithms and methods of proving program correctness.
Prerequisite: CSB100
Credit Points: 9  Contact Hours: 3 per week

**CSB155 INTRODUCTION TO COMPUTING**
The computer as a processor of information; an overview of computers, computer organisation, systems software, programs and the range of programming languages; the design of algorithms using structured techniques and stepwise refinement; implementation and execution of such algorithms using PASCAL.
Credit Points: 8  Contact Hours: 3 per week

**CSB181 INTRODUCTION TO COMPUTER SCIENCE**
Provides a disciplined and structured approach to algorithm design and problem-solving methods; introduces a variety of programming languages which can be used to process information in a computer. On completion of the subject, students should be able to solve a variety of problems in different application areas.
Credit Points: 12  Contact Hours: 3 per week

**CSB191 INTRODUCTION TO COMPUTING**
Introduction to technical computer programming; teaching programming techniques for the writing of correct and efficient programs for limited, but typical engineering problems; using structured programming techniques to write, modify and enhance program applications on selected computer systems using the PASCAL programming language.
Co-requisites: MAB193, CEB184
Credit Points: 4  Contact Hours: 2 per week

**CSB200 FOUNDATIONS OF COMPUTING I**
The study of abstraction: data abstraction as a technique for dealing with complex data interrelationships, and procedural abstraction as a way of expressing complex operations on such structures; it focuses on the concept of the abstract data type (ADT) and introduces a number of important examples of ADTs and associated algorithms; also includes topics such as the analysis of algorithmic complexity, and proofs of correctness.
Prerequisite: CSB110
Credit Points: 9  Contact Hours: 3 per week

**CSB201 COMPUTER SYSTEMS II**
Organisation of simple computer systems, and the way in which hardware provides the basic facilities for the machine; techniques involved in the programming of input-output operations, and the interrupt structure which underlies operating system organisation in uniprocessor systems.
Prerequisite: CSB101
Credit Points: 9  Contact Hours: 3 per week

**CSB210 FOUNDATIONS OF COMPUTING II**
Analysis of algorithms, the various styles of programming language and the abstractions which they support; languages with notable features designed for special computer classes of problems; searching and sorting algorithms; recursion and iteration; algorithms; and space and time requirements.
Prerequisite: CSB200
Credit Points: 9  Contact Hours: 3 per week

**CSB212 LANGUAGES & LANGUAGE PROCESSING**
Theory and practice of language processing; the design and recognition of small languages for command processors and other interactive programs; and advanced data structures and algorithm design.
Prerequisite: CSB200
Credit Points: 9  Contact Hours: 3 per week

**CSB213 SCIENTIFIC APPLICATIONS**
Provides students a thorough knowledge of FORTRAN and C, and teaches the solving of advanced scientific (e.g., mathematical and engineering) problems.
Prerequisite: CSB110
Credit Points: 9  Contact Hours: 3 per week

**CSB259 LABORATORY COMPUTING I**
Computer organisation; hardware, software; computer-programming including BASIC; data organisation, information storage and retrieval; computer systems including hospital and clinical systems; and social implications.
Credit Points: 6  Contact Hours: 2 per week

**CSB262 COMPUTING**
Computer utilisation; computer organisation; programming in BASIC; problem solving; analysis of numerical and non-numerical problems; introduction to FORTRAN.
Credit Points: 6  Contact Hours: 2 per week

**CSB280 PROGRAMMING PRINCIPLES**
Continuation of the material introduced in CSB155; develops structured program design techniques, and introduces advanced algorithms and methods of proving program correctness.
Prerequisite: CSB155
Credit Points: 12  Contact Hours: 4 per week

**CSB281 COMPUTER SYSTEMS I**
Physical organisation of the control and flow of information in, and the representation of data in, a computer system; topics covered are: Boolean algebra, state concepts, data representation, processor organisation, memory organisation, input/output devices, machine language, and assembly language.
Credit Points: 12  Contact Hours: 4 per week

**CSB282 COMPUTER SYSTEMS II**
Organisation of simple computer systems, and the way in which the hardware provides the basic facilities for the machine; techniques involved in the programming of input-output operations; and the interrupt structure which underlies operating system organisation in uniprocessor systems.
Prerequisite: CSB281
Credit Points: 12  Contact Hours: 4 per week
CSB283 SCIENTIFIC APPLICATIONS
Provides a thorough knowledge of FORTRAN, and teaches the solving of advanced scientific (eg, mathematical and engineering) problems; FORTRAN programming to an advanced level including aspects of portability arising from differences in standards and compiler implementation; and mathematical software.
Prerequisite: CSB155
Credit Points: 12 Contact Hours: 3 per week

CSB290 FOUNDATIONS OF COMPUTING I
Data abstraction as a technique for dealing with complex data interrelationships, and procedural abstraction as a means of expressing complex operations on such structures; concept of the abstract data type (ADT); important examples of ADTs and associated algorithms; analysis of algorithmic complexity; and proofs of correctness.
Prerequisite: CSB280
Credit Points: 12 Contact Hours: 4 per week

CSB291 INTRODUCTION TO FORTRAN
Mainframe and industry standard micro-based systems; applying the programming techniques acquired in CSB191 to the FORTRAN programming language.
Prerequisite: CSB191
Credit Points: 4 Contact Hours: 2 per week

CSB292 FOUNDATIONS OF COMPUTING II
Analysis of algorithms, the various programming languages styles; and the abstractions which they support; languages with notable features designed for special computer classes of problems; searching and sorting algorithms; recursion and iteration; algorithms; and space and time requirements.
Prerequisite: CSB280
Credit Points: 12 Contact Hours: 4 per week

CSB294 COMPUTER PROGRAMMING
An introduction to algorithms, programs and computers; basic programming; program structure; programming and computer systems; debugging and verification of programs; data presentation; special programming topics.
Co-requisite: SVC121
Credit Points: 6 Contact Hours: 3 per week

CSB301 OPERATING SYSTEMS
Structure of operating systems and real-time software; process and resource management functions of such software and its realisation in terms of a hierarchy of abstract machines, each of which depends on the set of facilities provided by the abstract machine immediately below it in the hierarchy; considerable emphasis on practical work.
Prerequisites: CSB200, CSB201 OR CSB282, CSB290
Credit Points: 9 Contact Hours: 3 per week

CSB302 SOFTWARE ENGINEERING
Techniques essential to the production of software systems which are reliable, within budget, fully documented, and well tailored to their users; practical work to apply these techniques in the organisation; management and development of software projects with emphasis on modern programming languages supporting software engineering (eg, Ada, Modula-2).
Prerequisite: CSB200 or CSB290
Credit Points: 9 Contact Hours: 3 per week

CSB311 ADVANCED COMPUTER ARCHITECTURES
Organisation of contemporary computer systems, and the variety of different structures which may be used for specific tasks; theory and case studies based on existing machines of practical or theoretical importance.
Prerequisite: CSB201 or CSB282
Credit Points: 9 Contact Hours: 3 per week

CSB319 SPECIAL STUDIES

CSB320 SPECIAL STUDIES

CSB321 GRAPHICS
The nature of computer graphics hardware and software; thorough grounding in the design and implementation of computer graphics software so as to enable students to implement graphic systems in their particular application areas.
Prerequisites: CSB213 or CSP213 or CSB283
Credit Points: 9 Contact Hours: 3 per week

CSB323 DATA SECURITY
Combines the subjects of complex computer systems and data communications; builds upon the data communications and computer systems material; provides students with an insight into an area of rapidly expanding career opportunities.
Prerequisites: INB270 or INP270 or INB285
Credit Points: 9 Contact Hours: 3 per week

CSB324 ARTIFICIAL INTELLIGENCE
Artificial intelligence in the computing industry; aspects of artificial intelligence which have given rise to commercial products; background research efforts which promise to have major impact on the use of computers in the near future.
Prerequisites: CSB210 or CSP214 or CSB292
Credit Points: 9 Contact Hours: 3 per week

CSB325 EXPERT SYSTEMS
Expert systems in the AI context; knowledge representation techniques; inference methods; uncertainty; the expert system development process; case studies of existing expert systems; the human/expert system interface; limitations and social implications of expert systems; current international knowledge-based system programs and future perspectives.
Prerequisite/Co-requisite: CSB210 or CSP214 or CSB292
Credit Points: 9 Contact Hours: 3 per week

CSB326 SYSTEMS PROGRAMMING
UNIX operating system at the user and systems programming levels: a study of shell programming and of the UNIX/C programming environment; a detailed examination of UNIX process and device management, UNIX security and UNIX administration; and some time spent relating the parallelism and inter-process communication features of UNIX/C to similar features in the languages Modula-2 and Ada.
Prerequisite: CSB301 or CSP213
Credit Points: 9 Contact Hours: 3 per week
CSN200 COMPUTER SECURITY
Selected theoretical and/or practical work to complement and/or supplement other subjects being studied.
Credit Points: 3
Contact Hours: 1 per week

CSN210 DISTRIBUTED SYSTEMS
Provides a thorough understanding of the rationale for distributed computer systems, their domain of application and the principles of distributed control underlying their construction. A number of representative systems will be examined throughout the subject.
Prerequisites: CSN301 (or equivalent) and CSN311 (or equivalent)
Credit Points: 12
Contact Hours: 3 per week

CSN220 ARTIFICIAL INTELLIGENCE
Artificial intelligence in the computing industry; aspects of artificial intelligence which have given rise to commercial products; background research efforts which promise to have major impact on the use of computers in the near future.
Prerequisites: CSB324 or equivalent
Credit Points: 12
Contact Hours: 3 per week

CSN300 THEORY OF COMPUTING II
Formal language theory; investigation of various types of simple automata and pushdown automata and their relation to context free languages; discussion of some aspects of computational complexity.
Prerequisite: CSP212 or equivalent
Credit Points: 12
Contact Hours: 3 per week

CSN310 PARALLEL PROCESSING
The modelling of parallel systems and the design methodologies used in their construction; examination of a range of applicable software systems and methodologies; the formal analysis of concurrent systems is based on the theory of Communicating Sequential Processes.
Prerequisite: CSN210
Credit Points: 12
Contact Hours: 3 per week

CSN320 FORMAL SECURE SYSTEMS
The formal mechanisms required in the design of secure systems; study of formal models of secure systems, e.g., Bell La Padula model; the relationship between formal methods of computer science and the design of formally verifiable computer systems.
Prerequisites: CSN100, CSN200
Credit Points: 12
Contact Hours: 3 per week

CSN330 NATURAL LANGUAGE PROCESSING
This subject treats an important specialisation within the field of artificial intelligence and its applications.
Prerequisite: An introductory subject in natural language processing
Credit Points: 12
Contact Hours: 3 per week

CSN340 COMPILER LABORATORY
In-depth treatment of topics of contemporary translator construction in a practical setting; code generation methods for advanced computer architectures.
Prerequisite: CSN110
Credit Points: 12
Contact Hours: 3 per week

CSN350 ADVANCED GRAPHICS I
Advanced level extension of the material in the undergraduate curriculum; the use of facilities provided by existing graphics systems.
Prerequisite: CSB321 (or equivalent)
Credit Points: 12
Contact Hours: 3 per week
1111 CSN360 ADVANCED GRAPHICS II
Specialized areas of computer graphics. Topics will be agreed between staff and students.
Prerequisite: CSN350
Credit Points: 12 Contact Hours: 3 per week

1111 CSP210 SPECIAL TOPIC
Aspects of scientific interest at that time. See School noticeboards for further information.
Prerequisite: To be advised
Credit Points: 12 Contact Hours: 3 per week

1111 CSP112 SOFTWARE PRINCIPLES
Study and 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.
Prerequisite: Completion of a qualifying PASCAL programming subject prior to entry to the course
Credit Points: 12 Contact Hours: 3 per week

1111 CSP211 SYSTEMS ARCHITECTURE & OPERATING SYSTEMS
Computer organisation; the nature and role of system software and the nature of microcomputers and computer graphics; computer systems architecture; micro-operations; instruction formats; microprocessor types; machine language; system software including operating systems features, assemblers, compilers, loaders.
Prerequisites: CSP112
Credit Points: 12 Contact Hours: 3 per week

1111 CSP212 LANGUAGES & LANGUAGE PROCESSING
Theory and practice of language processing; the design and recognition of small languages for command processors and other interactive programs; advanced data structures and algorithm design.
Prerequisite: CSP112
Credit Points: 12 Contact Hours: 3 per week

1111 CSP213 SCIENTIFIC APPLICATIONS
Provides a thorough knowledge of FORTRAN and C, and teaches the solving of advanced scientific (e.g. mathematical and engineering) problems.
Prerequisite: CSP112
Credit Points: 12 Contact Hours: 3 per week

1111 CSP214 PROGRAMMING LANGUAGES & STRUCTURES
Continues the material introduced in the prerequisite subjects; the analysis of algorithms; the various styles of programming languages and the abstractions which they support.
Credit Points: 12 Contact Hours: 3 per week

1111 CSP960 PROJECT WORK A
Students, either individually or in small groups, undertake a substantial project relevant to the needs of industry and designed to give insight into industrial requirements. Each project is carried out under the supervision of a staff member whose interests lie in the field of the project. Before work commences on the project, student(s) and supervisor must agree on the topic of the project and the scope of the work to be attempted.
Prerequisites: Successful completion of all other core subjects of the Graduate Diploma in Computing Science
Credit Points: 12 Contact Hours: 3 per week
software packages; transducers and peripheral devices; hardware and software integration.

Credit Points: 4  
Contact Hours: 2 per week

- **EEB302 ELECTROTECHNOLOGY**
  Magnetic circuits; magnetic materials; transformers and electro-magnetic devices; heating and cooling of electrical equipment and plant; protection; power distribution, three phase, balanced and unbalanced loads, power and measurement.
  Prerequisites: EEB202 [R], EEB203 [R]
  Credit Points: 6  
  Contact Hours: 3 per week

- **EEB303 NETWORK THEORY I**
  The basic theory of network analysis covering Laplace and Fourier analysis; four terminal network theory, frequency behaviour and transient response of networks.
  Prerequisites: EEB203 [R], MAB193 [R]
  Co-requisite: MAB493
  Credit Points: 7  
  Contact Hours: 3 per week

- **EEB361 SIGNALS & SYSTEMS**
  A detailed study of Fourier theory applied to signals; an overview of systems and their representation, response of systems to signals.
  Prerequisites: EEB203 [R], MAB193 [R]
  Co-requisite: MAB493
  Credit Points: 7  
  Contact Hours: 3 per week

- **EEB371 ELECTRONIC DEVICES**
  Theory of operation and characteristics of semiconductor devices including various types of diodes, the bipolar junction transistor and the field effect transistor; development and practical applications of small signal models.
  Prerequisite: EEB101 [R]
  Credit Points: 5  
  Contact Hours: 3 per week

- **EEB372 SEQUENTIAL LOGIC**
  Flip-flops, counters; shift registers; asynchronous and synchronous sequential machines; realisation of sequential machines using PROMs, GALS etc.
  Prerequisite: EEB272 [R]
  Co-requisite: EEB371
  Credit Points: 7  
  Contact Hours: 3 per week

- **EEB400 ELECTRICAL POWER SYSTEMS**
  Introduction to electrical power systems calculations; the technology of overhead lines and cables; elementary electrical engineering economics.
  Prerequisite: EEB302 [R]
  Credit Points: 6  
  Contact Hours: 3 per week

- **EEB401 NETWORK THEORY II**
  General transform theory; stability and realisability of networks; the synthesis of networks and filters; an introduction to non-linear analysis techniques for simple networks.
  Prerequisite: EEB303 [R]
  Co-requisite: EEB361
  Credit Points: 6  
  Contact Hours: 3 per week

- **EEB404 ELECTRICAL MACHINES**
  The fundamentals of torque production in rotating machines; the theory of operation and characteristics of most commonly used machines are then derived from common foundations.
  Prerequisite: EEB302 [R]
  Credit Points: 6  
  Contact Hours: 3 per week

- **EEB406 INDUSTRIAL EXPERIENCE II**
  Students should engage in at least five weeks' employment, approved by the Head of School; for the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
  Contact Hours: 5 weeks

- **EEB430 ENGINEERING FIELDS**
  Electrostatic and magnetic fields; Maxwell's equations and electromagnetic waves.
  Prerequisites: MAB193 [R], PHB132 [R], PHB232 [R]
  Credit Points: 6  
  Contact Hours: 3 per week

- **EEB471 ELECTRONICS**
  A detailed study of transistor circuits and their applications; circuits, fundamental to the understanding of integrated circuit amplifiers, are studied in detail.
  Prerequisite: EEB371 [R]
  Credit Points: 7  
  Contact Hours: 3 per week

- **EEB472 MICROPROCESSORS**
  Microprocessor architecture; instruction sets, assembly language programming; memories, input/output devices and interrupt systems.
  Prerequisite: EEB372 [R]
  Credit Points: 6  
  Contact Hours: 3 per week

- **EEB473 INTEGRATED CIRCUITS**
  The fundamental theory of operation of integrated circuits and the generalised concepts of feedback in electronic circuits; various operational amplifier configurations; oscillators and timing circuits.
  Prerequisite: EEB471 [R]
  Credit Points: 6  
  Contact Hours: 3 per week

- **EEB520 CONTROL ENGINEERING**
  Survey of measurement transducers, amplifiers, signal processors and final control elements; selection of system components; application of microcomputers to closed-loop control; examples of closed-loop systems; system transfer function and time domain performance.
  Prerequisite: EEB302 [R]
  Co-requisite: EEB401
  Credit Points: 6  
  Contact Hours: 3 per week

- **EEB531 ELECTRICAL POWER TRANSMISSION**
  Equivalent circuits of power equipment; the pu method; power flows in networks, solution by Gauss-Seidel; sequence components, fault analysis by sequence methods; power system harmonics; transients due to switching. Transmission plant parameters.
  Prerequisite: EEB400 [R]
  Credit Points: 6  
  Contact Hours: 3 per week

- **EEB553 ELECTRICAL POWER EQUIPMENT**
  Ratings of equipment; insulation, distribution switchgear and protection; a.c. generators; power measurement and metering; power conversion.
  Prerequisite: EEB400 [R]
  Credit Points: 6  
  Contact Hours: 3 per week

- **EEB561 ANALOGUE COMMUNICATIONS**
  Analogue modulations and demodulations hardware, including discrete and integrated electronic methods. AM-SSB-FM modulation and demodulation methods. Heterodyne receivers - image and spurious responses of double and single conversion receivers.
  Distributed networks - radio and transmission-line link effects and modulated signals.
  Prerequisites: EEB361 [R], EEB303 [R]
  Credit Points: 6  
  Contact Hours: 3 per week

- **EEB562 TRANSMISSION & PROPAGATION**
  Transmission line theory, terminated line, Smith Circle Chart usage and lattice diagram. Propagation
modes in wave guides and optical fibres. Free-space propagation, ionospheric and ground wave propagation. Basic antenna parameters.

**Prerequisites:** EEB361 [R], EEB430 [R]

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

**EEB573 INDUSTRIAL ELECTRONICS**
The study of a wide range of modern electronic devices and circuits with particular emphasis to industrial application.

**Prerequisite:** EEB471 [R]

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

**EEB587 DESIGN I**
General principles of electronic circuit and electrical equipment design and the realisation of typical electronic circuits and equipment.

**Prerequisites:** EEB401 [R], EEB361 [R], EEB400 [R]

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

**EEB594 SYSTEMS PROGRAMMING LANGUAGES**
The syntax and facilities of the C programming language are studied and applied to systems programming.

**Prerequisite:** EEB472 [R]

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

**EEB600 STARTING A TECHNOLOGY BASED BUSINESS**
Introduction to business structures; forming a business team; marketing and market research; financing new high risk business; selling yourself with business plans and presentation skills; product development; manufacturing and distribution, inventions; useful people to talk to.

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

**EEB601 REALTIME OPERATING SYSTEMS**
Theory and practical aspects of the use of microprocessors and computers as components in time critical engineering applications; methods of guaranteeing computer response within a specifiable time; applications related to embedded systems and some business applications; design of new systems and study of existing systems.

**Prerequisite:** EEB591 [R]

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

**EEB602 SIGNAL PROCESSING**
Sampling and reconstruction, z-transforms description of discrete-time signals; digital filtering – FIR, IIR; discrete Fourier transform and relationship with z-plane; leakage effects and window functions; discrete Hilbert transform relationships.

**Prerequisites:** EEB361 [R], EEB401 [R], MAB893 [R]

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

**EEB606 INDUSTRIAL EXPERIENCE III**
Students should engage in at least five weeks' employment, approved by the Head of School; for the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.

**Contact Hours:** 5 weeks

**EEB620 CONTROL SYSTEMS ANALYSIS**
Time-domain, frequency-domain, and complex-domain analysis of systems; closed-loop control system performance and system compensation; digital computer control of closed-loop systems; analogue and digital simulation of systems.

**Prerequisite:** EEB520 [R]

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

**EEB621 ADVANCED CONTROL SYSTEMS**
System performance specification format; selection of control system elements; design of linear system compensation using analogue and digital techniques; techniques for dealing with system non-linearities and non-linear system analysis and design; examples of typical control systems.

**Prerequisite:** EEB620 [R]

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

**EEB652 POWER ELECTRONICS**
Review of modern switching components, characteristics and device control methods; principles of operation of controlled rectifiers and chopper techniques for d.c. motor control; quasisquare and PWM invertors for induction and synchronous motor control; static switches for induction motor soft start control and static VAR compensation; induction motor drive and d.c. motor drive control strategies; harmonic analysis and waveform modelling analysis.

**Prerequisite:** EEB573 [R]

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

**EEB661 INFORMATION THEORY & NOISE**
Information in discrete and continuous channels, coding efficiency, statistical description of noise, effects of transformations on signal parameters, error rates, effect of noise on information transfer.

**Prerequisites:** MAB493 [R], EEB361

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

**EEB662 MICROWAVE & ANTENNA TECHNOLOGY**
Propagation in rectangular and circular guides; guide components; microwave active devices; high frequency techniques; various types of antennas; antenna arrays; computer-aided antenna design; antenna measurements.

**Prerequisite:** EEB562 [R]

**Credit Points:** 7  **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.

**Prerequisite:** EEB531 [R]

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

**EEB742 POWER SYSTEMS ENGINEERING**
Substation engineering; protection of plant; substation earthing; system overvoltages; insulation coordination; HV switchgear.

**Prerequisite:** EEB531 [R]

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

**EEB761 STATISTICAL COMMUNICATIONS**
PCM quantisation noise in uniform and non-uniform quantisation; effects of channel noise on S/N; delta modulation and delta-sigma modulations; threshold extensions, spread spectrum, matched filtering and correlation.

**Prerequisite:** EEB661 [R]

**Credit Points:** 7  **Contact Hours:** 3 per week
EEB788 DESIGN II
Design principles and practice of more complex electronic circuits and electrical equipment and systems used in industry.
Prerequisites: EEB587 [R], EEB561 [R], EEB520 [R], EEB400 [R]
Credit Points: 8 Contact Hours: 3 per week

EEB789 PROJECT
An individual engineering project on a specified subject. The work requires design, computing, construction, experimental work and practical testing with the submission of appropriate reports. The subject is selected from any area which involves electronics, computing, control, communication and educational power and may include programming, circuit and system design.
Co-requisite: This subject must be done in the final year of course.
Credit Points: 15 per semester Contact Hours: 6 per week

EEB820 ENGINEERING MANAGEMENT
Economic analysis of electrical engineering projects; present worth and annual cost calculations; assessment of tenders; project management, critical paths and linear programming methods; contract administration; engineering case studies.
Credit Points: 8 Contact Hours: 3 per week

EEB821 PRODUCTION TECHNOLOGY & QUALITY
The methodology of electronic system design; the range of production processes in electronic manufacture; the quality control procedures required in electronic manufacturing at both prototype and full production stages.
Prerequisites: EEB587 [R], EEB788 [R]
Credit Points: 6 Contact Hours: 3 per week

EEB887 DESIGN III
Detailed design and realisation of typical electronic and power based sub-systems used in all areas of electronic systems and power systems engineering.
Prerequisites: EEB788 [R] EEB602 [R], EEB620 [R], EEB472 [R], EEB400 [R], EEB971 [R], or EEB531 [R]
Co-requisite: EEB968 or EEB742
Credit Points: 6 Contact Hours: 3 per week

EEB888 DESIGN IV
System design techniques and practice in these techniques on typical electronic systems and power systems, taking into account such factors as realisability, reliability, complexity, economic considerations and optimisation.
Prerequisite: EEB887 [R]
Credit Points: 10 Contact Hours: 3 per week

EEB890 ADVANCED INFORMATION TECHNOLOGY TOPICS
The content of this subject depends on current technology and availability of suitable specialist lecturers. Subjects could include artificial intelligence, computer graphics, database systems, computer-aided engineering, super computing and parallel processing.
Prerequisite: EEB591 [R]
Credit Points: 8 Contact Hours: 3 per week

EEB901 INDUSTRIAL EXPERIENCE I
Students should engage in at least five weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
Contact Hours: 5 weeks

EEB902 INDUSTRIAL EXPERIENCE II
Students should engage in at least five weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
Contact Hours: 5 weeks

EEB903 INDUSTRIAL EXPERIENCE III
Students should engage in at least five weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
Contact Hours: 5 weeks

EEB922 COMPUTER CONTROLLED SYSTEMS
Computer control of typical process control systems; numerical control of machine tools and an introduction to robotics; optimal control and self-adaptive control systems; sequential control systems.
Prerequisites: EEB621 [R], EEB620 [R]
Credit Points: 7 Contact Hours: 3 per week

EEB944 POWER STATION ENGINEERING
The electrical and mechanical plant found in power stations and with associated instrumentation and control equipment.
Credit Points: 7 Contact Hours: 3 per week

EEB951 HIGH VOLTAGE EQUIPMENT
Review of modern insulating materials; high voltage test methods and apparatus; characteristics of electrical insulation theories of breakdown in dielectrics; non-destructive testing methods; dielectric loss angle, partial discharge; voltage surge distribution in power equipment; overhead line insulation and lightning.
Co-requisite: EEB742
Credit Points: 7 Contact Hours: 3 per week

EEB954 ELECTRICAL ENERGY UTILISATION
Power reticulation in building; energy management; fire protection systems; illumination technology; air conditioning plant; building supervising and control systems; lifts.
Prerequisite: EEB553 [R]
Credit Points: 7 Contact Hours: 3 per week

EEB961 COMMUNICATION TECHNIQUES
Modern communication techniques including switched networks, broadcast, point-to-point systems; microwave and optical links; radio navigation and radar; associated electronic devices.
Prerequisite: EEB661 [R]
Credit Points: 7 Contact Hours: 3 per week

EEB962 MICROWAVE SYSTEMS ENGINEERING
Microwave thermionic and semiconductor devices, amplifier design using scattering parameters; passive microwave devices including non-linear networks and ferrites; array theory and design, microwave antennae.
Prerequisite: EEB662 [R]
Credit Points: 7 Contact Hours: 3 per week

EEB967 DIGITAL COMMUNICATIONS
The theory and applications of digital communications technology. Baseband digital signals; pulse
1111 EEP120 NETWORKS
Credit Points: 12 Contact Hours: 3 per week

Detailed examination of the structure of realtime systems; the development of programming skills, orientated towards realtime applications; programming exercises for realtime applications using assembler and high level languages.

Co-requisite: EEP102
Credit Points: 12 Contact Hours: 3 per week

EEP120 NETWORKS & DISTRIBUTED COMPUTING

The ISO OSI model of computer interconnections and common techniques for layers 3 to 7; this includes protocols, software and packages and the computers which support these layers. A lighter treatment of layers 1 and 2 is also included.

Prerequisite: EEP103, EEP104
Credit Points: 12 Contact Hours: 3 per week
EET270 ELECTRONICS I
An introduction to the fundamentals of electronic devices and transistor circuits; the characterising and application of these devices to basic electronic circuits; applications include: transistor amplifiers including differential and tuned stages, current sources, oscillators and simple fault finding techniques. Prerequisites: EET111 [R], EET100 [R]
Co-requisite: EET211
Credit Points: 7 Contact Hours: 3 per week

EET350 ELECTRICAL ENGINEERING III
Magnetic circuits, single phase transformers and equivalent circuits, power losses, regulation and efficiency; three phase theory balanced and unbalanced loads, measurement of power; electrical safety earthings, fault levels and protection equipment; electrical machines review of principles of operation and characteristics of a range of a.c. and d.c. machines; costs of electricity tariffs. Prerequisite: EET211 [R]
Credit Points: 7 Contact Hours: 3 per week

EET420 CONTROL SYSTEMS I
Distinction between open and closed loop, discrete and continuous control; typical nonlinearities; transducers for temperature, pressure, fluid flow rate, level, velocity, position, strain; survey of summation and amplifying techniques for electronics (revision), pneumatic and hydraulic systems; motors, control valves, actuators and a brief survey of commercial controllers; the use of negative feedback; improvement in linearity, speed of response etc; survey of hardware employing negative feedback. Philosophy of mathematical modelling; introduction to differential equations; laplace transforms and transfer functions; block diagrams; responses in the time domain; introduction to frequency domain analytical techniques. Prerequisite: EET211 [R]
Credit Points: 7 Contact Hours: 3 per week

EET460 TELECOMMUNICATIONS
The nature of signals; elementary Fourier analysis; the concept of modulation; amplitude and angle modulation; pulse modulation; multiplexing; signal processing and noise; the nature of links; noise and links; mixing and superhet principles; digital and data transmission and fibre optics. Prerequisites: EET100 [R], EET211
Credit Points: 7 Contact Hours: 3 per week

EET490 COMPUTER PACKAGES
Use of computer packages such as word processors, spreadsheets, database packages and commonly used engineering packages such as Mathlab and Spice hardware interconnection. Credit Points: 7 Contact Hours: 3 per week

EET500 ELECTRICAL TECHNOLOGY
Introduction to electric motors, generators, transformers and three phase systems. Credit Points: 6 Contact Hours: 3 per week

EET522 CONTROL SYSTEMS II
Process control system terminology and symbols; chart recorders; sizing of control valves; measurement of mass flowrate, humidity and chemical composition; analogue data transmission standards; three term controllers and other appropriate techniques; examples of process control configurations, such as cascade, ratio and feedforward control; controller tuning; system performance for reference, noise and load disturbances; accuracy, steady state errors, effect of type number on performance; stability and more advanced frequency domain analysis: machine control systems, such as d.c. motor speed controllers, variable frequency controllers, servo systems, performance of machine control systems. Prerequisite: EET420 [R]
Credit Points: 7 Contact Hours: 3 per week

EET560 COMMUNICATIONS ENGINEERING I
Advanced signal analysis using Fourier methods; AM generation and detection, the effects of filtering and noise; FM and PM generation and demodulation, effects of noise, FM threshold, SSB methods; phase locked loop principles; radio receiver circuits, double conversion, spurious responses; pulse analogue modulation, PAM, PWM, PPM, circuits and spectra. Prerequisites: EET270 [R], EET460 [R]
Credit Points: 7 Contact Hours: 3 per week

EET570 ELECTRONICS II
Introduction to integrated circuit amplifiers and their applications; power amplifiers; optoelectronic devices; voltage regulators and a survey of semiconductor switching devices. Prerequisite: EEET270 [R]
Credit Points: 7 Contact Hours: 3 per week

EET590 MICROPROCESSOR SYSTEMS
Assembly language programming and use of microprocessors as electrical engineering hardware; interfacing of microprocessors to instrumentation and external equipment. Prerequisites: CST390, EET676
Credit Points: 7 Contact Hours: 3 per week

EET642 ELECTRICAL POWER SYSTEMS I
Single line diagrams; pu systems; transmission line equivalent circuits; fault balanced calculations; power flow calculations; overhead line and underground cable characteristics; power system insulation. Prerequisite: EET350 [R]
Credit Points: 7 Contact Hours: 3 per week

EET650 ELECTRICAL EQUIPMENT
Three phase transformers, multiwinding, auto; special types of a.c. machines including three phase and single phase induction motors, synchronous machine construction and operation. Prerequisite: EET350 [R]
Credit Points: 7 Contact Hours: 3 per week

EET676 DIGITAL ELECTRONICS
Introduction to the basic concepts of digital combinational and sequential logic circuits; logic gates. Boolean algebra, minimisation of logic functions, counters, shift registers, address, ADCs, DACs and logic families; code converters and binary arithmetic. Co-requisite: EET270
Credit Points: 7 Contact Hours: 3 per week

EET678 APPLIED ELECTRONICS
Introduction to the integrated circuit approach to electronic systems design; further treatment of integrated circuits with practical applications: amplifiers (all the common configurations), oscillators, special purpose circuits such as peak detectors, sample and hold circuits, active filters. Prerequisite: EET570 [R]
Credit Points: 7 Contact Hours: 3 per week
**EET690 COMPUTER ORGANISATION**
A comparative study of computer architectures and operating systems from microprocessors up to super computers; virtual machines, interpreters, compilers, linkers, loaders, disc operating systems and executive; instruction sets, addressing modes and instruction prefetch cycles; a survey of memory management techniques such as memory maps, virtual memory, cache memory, and interleafing; exception processing methods such as interrupts, autovectors, bus errors and supervisor states; multiprocessor systems and computer communications standards, networks and protocols; parallel computing, pipelines, single instruction multiple data and multiple instruction multiple data machines.

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

**EET720 MODERN CONTROL TECHNOLOGY**
Onstream analysers; intelligent analytical equipment; sequence control and programmable logic controllers; robot sensors and control systems; computer numerical controlled machines; distributed control systems; sampling theory and algorithm development; communication between intelligent control systems (such as MAP and TOP); adaptive and automatic tuning controllers; advanced testing instruments.

**Prerequisite:** EET420 [R]  
**Co-requisite:** EET522 [R]

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

**EET737 TRANSMISSION & PROPAGATION**
Transmission lines, study of waves; reflections; matching; using Smith circle and computer-aided techniques; electromagnetic waves in free space and at the boundary between media; basic antenna parameters and properties, waveguide theory and microwave techniques and an introduction to optical fibre technology.

**Prerequisite:** EET460 [R]

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

**EET753 TESTING & COMMISSIONING TECHNIQUES**
The philosophy of testing, the concepts of quality assurance and the principles of commissioning; test methods and techniques for various electrical tests; application of test methods and techniques to a range of electrical plant; principles of earthing in a power system; safety procedures.

**Prerequisite:** EET350 [R]

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

**EET760 COMMUNICATIONS ENGINEERING II**
Sampling, reconstruction, spectra; quantisation, dynamic range and noise; PCM methods and circuitry, companding; delta modulation; digital transmission, TDM, FDM, modulation methods. Data coding for error correction and data communication protocols.

**Prerequisite:** EET650 [R]

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

**EET790 COMPUTER PROGRAMMING I**
Digital computers, their construction and operation, description of machine languages and the various programming languages in common use such as FORTRAN, COBOL, ALGOL; program writing in FORTRAN and other languages, use of flow charts, debugging, the development of algorithms and preparation of data, to be selected from a range of areas.

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

**EET791 COMPUTER PROGRAMMING II**
Development of the concepts introduced in EET390 to include the full range of features in this language; an introduction to the features of FORTRAN.

**Prerequisite:** CST390 [R]

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

**EET840 SUBSTATIONS AND PROTECTION SYSTEMS**
Insulation coordination principles; substation layout and equipment including circuit breakers; current and voltage transformers and their characteristics; an introduction to substation components and fault calculations; a description of different types of protection systems and their integration with the power system, especially substations.

**Prerequisite:** EET642 [R]

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

**EET860 COMMUNICATIONS TECHNOLOGY**
Broadcast radio and TV, terrestrial and satellite; specialised broadcast systems, eg, police, taxi; point to point radio communications; telemetry; switched systems; circuit and packet switching, exchanges, traffic; use of different frequency ranges, VLF, MF, HF, VHF, UHF and SHF for radio communications; a number of compulsory industrial visits are arranged.

**Prerequisites:** EET570 [R], EET576 [R]

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

**EET870 INDUSTRIAL ELECTRONICS**
Electronic devices and circuits associated with industrial control systems; power switching devices and their applications are studied together with electronic measurement systems and their associated transducers.

**Prerequisite:** EET570 [R]

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

**EET880 DESIGN**
The main concepts of electrical designs; relevant specifications and standards; further work is in the form of design projects in which a written report must be submitted.

**Prerequisites:** Major subjects in selected modules  
**Co-requisites:** Major modules 1 (d) and 2 (d)

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

**EET891 ADVANCED COMPUTING TECHNIQUES**
Applications of computers and microprocessor systems to data collection supervisory and active control functions; realtime operating systems and software development in both low level languages and appropriate high level language such as C or MODULA 2.

**Prerequisite:** CST390 [R]

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

**ENB103 GENERAL ELECTIVE**
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.

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

Credit Points: 3 each
Contact Hours: 15 weeks each

ENSA100 ENGINEERING SKILLS
Practical sessions in each of the four Engineering Schools for three weeks. Civil – working in the concrete laboratory, water laboratory and structures laboratory; Electrical – practical sessions; Mechanical – looking at the combustion engine, an air compressor, the petrol engine; learning welding and casting; Surveying – an introduction; qualitative and quantitative activities in photogrammetry; remote sensing.

Credit Points: 6  Contact Hours: 3 per week

ESB101 EARTH SCIENCE IA
Basic geologic principles, physical geology, geomorphology, weathering, erosion, river and coastal environments, groundwater, deserts and aeolian processes. Practical work includes exercises based on the interpretation of topographic and geologic maps and aerial photographs. Field excursions to local areas of geologic interest.

Credit Points: 8  Contact Hours: 3 per week

ESB102 EARTH SCIENCE IB
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 rock specimens, structural exercises and map interpretation.

Credit Points: 8  Contact Hours: 3 per week

ESB201 HISTORICAL GEOLOGY
Geologic history of the Earth; interpretation of past geologic events emphasizing the geologic development of Australia and the evolution of life; principles of stratigraphy; radiometric dating; paleontology and biostratigraphy. Practical work includes stratigraphic interpretations, study of fossils, and map interpretation. Field excursions to local areas of interest.

Credit Points: 8  Contact Hours: 3 per week

ESB220 PRINCIPLES OF MINERALOGY
Introductory crystallography; fundamentals of crystal chemistry; mineral stability and reactions; crystallisation, growth and habit; geologic framework of minerals; classification of minerals; systematic treatment of the physical, chemical, and structural properties of different mineral groups; practical work includes symmetry, mineral analysis (SEM, TEM, EMP); x-ray diffraction; examination and identification of mineral specimens. Field excursions to sites of mineralogic interest.

Credit Points: 8  Contact Hours: 3 per week

ESB311 MANAGEMENT OF EARTH RESOURCES
An introduction to geological materials, emphasising chemical concepts and processes. Aspects studied include the origin and constitution of the earth, inintroductory mineralogy, igneous, sedimentary and metamorphic petrology, study of physical and structural geology, geomorphology, stratigraphy and economic geology. Field excursions as required.

Credit Points: 8  Contact Hours: 3 per week

ESB317 OPTICAL MINERALOGY & MINERALOGRAPHY
The theory and identification of minerals in both transmitted and incident light. Introduction to mineralogy; theory of reflected light; optical properties of ore minerals; identification of minerals in thin section, polished section, and grain mounts.

Prerequisite: ESB220
Credit Points: 8  Contact Hours: 3 per week

ESB357 STRUCTURAL GEOLOGY
Stress-strain relationships, rock deformation by brittle fracture and by ductile flow, study of structural geology, geochronology, stratigraphy and economic geology. Field excursions as required.

Prerequisites: ESB101, ESB102, ESB201
Credit Points: 8  Contact Hours: 3 per week

ESB367 ECONOMIC MINERAL DEPOSITS
The distribution of metalliferous and industrial mineral deposits of economic value, in Australia and the rest of the world. Geological occurrence, genetic models, supply and demand, extraction methods. Laboratory techniques for evaluating mineral deposits.

Prerequisites: ESB101, ESB102, ESB220
Credit Points: 8  Contact Hours: 3 per week

ESB377 LAND LAW & MINING APPLICATIONS
Introduction to English law; the historical background and political framework of mining law; the legal meaning of ‘mine’ and ‘minerals; Mining Acts and Miner’s Rights; licensing procedures for prospecting search and exploration; mining leases on Crown Lands and mining on private land; the enforcement of mining interests; petroleum legislation in Australia; professional ethics; environmental impact studies; practical work involves applications for exploration licences, claim and leases.

Credit Points: 8  Contact Hours: 3 per week

ESB397 FIELD TECHNIQUES
Methods used in the accumulation, analysis and interpretation of geological field data. Geological mapping, sampling and presentation of reports. Excursions and day trips to areas of geological interest.
are assessable by means of a combination of reports, assignments, and examinations.

**Prerequisites:** ESB101, ESB201

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

### ESB403 GEOCHEMISTRY

**Description:** Distribution of elements in nature. Geochemical associations, mobility and dispersion. Sampling assignments, and examinations.

**Prerequisites:** ESB101, ESB201

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

### ESB417 PETROGRAPHY

**Description:** The description and classification of igneous, metamorphic, and sedimentary rocks in thin section and hand specimen; optical mineralogy, textures; practical work involves identification of minerals in thin section; description of textures; classification of rocks. Field excursions of short duration are normally required.

**Prerequisites:** ESB317

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

### ESB437 GEOPHYSICS

**Description:** An introduction to the theory of exploration geophysics. Gravity, magnetic, radiometric, well logging, seismic refraction and reflection, electrical resistivity, induced polarization and electromagnetic techniques. Practical studies of the main techniques, together with limited field work.

**Prerequisites:** 8 credit points of first level physics and ESB397

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

### ESB453 APPLIED GEOMORPHOLOGY

**Description:** The nature, origin and development of landforms and their relationships to underlying structures. The applied aspects concern problems related to economic alluvial deposits, landslides, coastal erosion, river development and environmental geology. Terrain evaluation by aerial photograph interpretation and satellite imagery is central to the practical work.

**Prerequisites:** ESB397

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

### ESB487 GEOLOGICAL FIELD STUDIES

An extended excursion (five or more days) with the possible addition of weekend commitments to areas of geological interest. The main emphasis is on mapping. For the extended excursion, students will be required (individually or in groups) to map the geology of an assigned area. Assessment will be based on the production of a geological map to the prescribed scale, together with supporting explanatory notes.

**Prerequisites:** ESB397

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

### ESB497 SEDIMENTOLOGY

**Description:** Principles of sedimentation, including processes of generation, accumulation and redistribution of sedimentary deposits. Sedimentary depositional environments and the role of tectonism and diagenetic processes in redistribution and lithification of sedimentary deposits. Sedimentary basins, their geometric and structural components. Study of primary sedimentary structures and textures, and their application to environmental interpretation. Economic geology as related to sedimentary rocks, including both minerals and energy resources.

**Prerequisites:** ESB317, ESB201

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

### ESB517 MINERAL EXPLORATION

An introduction to a range of relevant aspects and references to develop an awareness of their importance, and to provide a foundation for further development during the students' future professional lives. The aspects introduced are: exploration programs, crustal evolution and mineralisation, ore distribution in space and time, wall rock alteration, gossans, mineral potential of the sea bed, isotope studies, geothermometry, clay technology. Additional topics are dealt with in seminars.

**Prerequisites:** ESB367

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

### ESB519 GEOLOGY FOR ENGINEERING

**Description:** An introduction to the basic principles and theories of geology, emphasizing the way in which mineralogy and petrology, geologic structures, geomorphology and groundwaters interact with, and are related to engineering design and construction. The engineering properties of rock are considered, and the effect of geologic hazards on engineering construction are examined. The course incorporates a number of case histories to demonstrate and extend the relevance of various aspects of geology to the civil engineer's workplace.

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

### ESB520 APPLIED GEOCHEMISTRY

**Description:** Techniques for establishing regional geochemical patterns. The application of geochemistry to the discovery of ore deposits and to the solution of environmental problems. Primary and secondary dispersion patterns. Optimum design of geochemical surveys and statistical rationalisation of geochemical data. The application of multipurpose regional geochemical mapping to land use evaluation and environmental impact studies. The relation of selected trace elements to health and disease in plants and animals. Practical work includes an industry oriented field project requiring several days of field work and also case history assignments based upon environmental and exploration problems.

**Prerequisite:** ESB403

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

### ESB537 EXPLORATION GEOPHYSICS

**Description:** The reduction and manipulation of geophysical data, and their interpretation in geological terms; field data acquisition and computer modelling. Experience in a variety of geophysical methods is gained during a field excursion.

**Prerequisite:** ESB437

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

### ESB547 IGNEOUS & METAMORPHIC PETROLOGY

**Description:** The origin, formation, and geologic history of igneous and metamorphic rocks as determined from field and laboratory studies of occurrences, mineral assemblages, rock composition, and texture. Interpretation of rock and mineral compositional diagrams; application of experimental investigations. Practical work examines the petrography and geochemistry of igneous and metamorphic suites. Field excursion.

**Prerequisites:** ESB417, ESB403

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

### ESB557 PETROLEUM GEOLOGY

**Description:** Origin and physio-chemical characteristics of petroleum (oil and gas); principles of petroleum generation, migration and accumulation through time and space; development of structural, stratigraphic combina-
An extended (five or more days) excursion, with the possible addition of weekend commitments, to areas of geological interest, the emphasis being on economic geology. Students will be assessed on the bases of field attitude, the production of their individual original written report, and any other requirements of the examiner (e.g., oral or written examination, seminar etc.).

**Prerequisite:** ESB577
**Credit Points:** 8  **Contact Hours:** 3 per week

### ESB687 GEOLOGICAL INVESTIGATIONS

Students are required to produce an original detailed map of a designated area, collect representative samples, observe and collate relevant information (e.g., structures, mineralisation, lithological variation, geomorphic variations etc.). Appropriate laboratory and office work follows from the initial field work. Assessment based on the production of a final detailed report which will include maps. Each student is assigned to an adviser.

**Prerequisites:** ESB357, ESB517, ESB547, ESB497 and ESB437
**Credit Points:** 8  **Contact Hours:** 3 per week

### ESB697 MINING FEASIBILITY STUDIES

Economics of mine development and operation; problem solving involving concepts of value, cash flow, payback, depreciation, annuity, taxation, forecasting and marketing; sampling and tonnage grade calculations, cut-off grade, ore reserves and sensitivity analyses; sources and costs of capital. Practicals utilise computer programs and spreadsheets for DCFOI calculations.

**Prerequisite:** ESB517
**Credit Points:** 8  **Contact Hours:** 3 per week

### ESB699 SELECTED STUDIES IN EARTH SCIENCE

Students are required to complete an assignment that examines in detail a topic in Earth Science. Topics will be selected in consultation with an advisor. Emphasis will be given equally to geological content and communication skills. The assignment will involve extensive literature search. Assessment will be made by written report and oral presentation.

**Prerequisite:** Completion of second level geology
**Credit Points:** 2

### ESP700 PROJECT

All students undertaking honours are required to select and undertake, in consultation with a supervisor, a substantial project in an appropriate area. Each project will be assessed on the basis of an extensive written report and an oral presentation.

**Credit Points:** 48 per semester

### ESP702 GEOLOGICAL CASE STUDIES

Preparation of case history assignments of one or several projects from inception to completion. This will include the philosophy of the project, project development, project results. The case history should be selected to complement the student's project thesis. The study includes literature research from published and unpublished sources and if possible, interviews with project personnel. Presentation of the case history may include some or all of the following: relevant maps, sections, geochemical synthesis, and appropriate specimen material. Assessment includes the preparation of a publication quality report and an oral presentation.

**Credit Points:** 10  **Contact Hours:** 3 per week
ESP704 ADVANCED SEDIMENTARY & ENVIRONMENTAL GEOLOGY
Advanced aspects of sedimentology and environmental geology, as related to rational assessment and development of economic resources. The topics that will be addressed include: historical development of sedimentology and environmental geology; sedimentological models (including facies concepts) and their application to basin analysis and mineral/fuel exploration; advanced field and laboratory-based techniques for sedimentological and environmental investigations; economic resources in sedimentary strata; role of sedimentology in scientific assessment of environmental issues, such as land degradation, dryland salting, coastal erosion, fluvial-estuarine sedimentation and water quality deterioration.
Credit Points: 6 Contact Hours: 28 total

ESP705 ADVANCED RESOURCE GEOLOGY
Metallogenic epochs and provinces; ore genesis models; advanced basin analysis; isotope geology; fluid inclusions and geothermometry; advanced mineralogy; resource geochemistry; resource petrology - new materials, aspects of special rocks, alteration zones, paragenesis; resource trends, exploration philosophy; resource assessment - geostatistics, pattern drilling methodology.
Credit Points: 6 Contact Hours: 28 total

ESP706 ADVANCED ENGINEERING GEOLOGY
Principles and scientific basis underlying the theory of engineering geological investigations and the application of modern techniques in analysis and investigation. Coursework is structured around engineering geology topics being pursued in the current year, but includes: application of continuous seismic profiling, engineering behaviour on normally consolidated Holocene sediments, engineering geology of open pit mines, slope and underground opening stability, slope stability in tropical residual soils, geotechnical problems in damsite foundations.
Prerequisite: ESB653 or equivalent
Credit Points: 6 Contact Hours: 28 total

ESP707 PETROCHEMISTRY
The petrology, geochemistry, and petrogenesis of igneous and metamorphic rocks. Topics may vary according to student interest but will include field, petrologic, geochemical, isotopic and experimental aspects of magma generation and/or metamorphism. Quantitative modelling of magmatic processes using phase chemistry, major and trace element geochemistry, stable and radiogenic isotopes. Petrographic analysis of igneous and metamorphic textures.
Prerequisite: ESB547, ESB403 or equivalent
Credit Points: 6 Contact Hours: 28 total

ESP708 GLOBAL PLATE TECTONICS
Investigation of recent advances in global plate tectonics; the petrology, sedimentology, structural, geophysical and resource geology of divergent and convergent plate margins; application of plate tectonic concepts to the Australian continent.
Credit Points: 6 Contact Hours: 28 total

ESP720 ADVANCED TOPICS IN EARTH SCIENCE I
A program of advanced study on a specific geologic topic selected to complement a student's research thesis. Topics may be chosen from the fields of resource geology, igneous petrology, mineralogy, sedimentology, environmental geology, engineering geology, and/or related disciplines.
Credit Points: 12 Contact Hours: 27 total

ESP721 ADVANCED TOPICS IN EARTH SCIENCES II
A program of advanced study on a specific geologic topic selected to complement a student's research thesis. Topics may be chosen from the fields of resource geology, igneous petrology, mineralogy, sedimentology, environmental geology, engineering geology, and/or related disciplines.
Credit Points: 12 Contact Hours: 27 total

ESP730 COMPUTER APPLICATIONS IN EARTH SCIENCE
A program of advanced study designed to enhance a student's knowledge and use of computer applications in geological investigations. Assessment is based upon an extensive project.
Credit Points: 12 Contact Hours: 27 total

EST219 ENGINEERING GEOLOGY
A brief introduction to the definitions and principles of engineering geology, an appreciation of the range of rock types and the effects of weathering leading to soil formation, identification of common mineral and rock types, the occurrence and nature of rock defects or discontinuities; the flow and control of groundwater by stratigraphy; rock structure and surface profile; and the effects of rivers and coastal wave action in erosional/sedimentary cycles.
Credit Points: 6 Contact Hours: 12 total

IFB880 PROJECT IN INFORMATION MANAGEMENT/SURVEYING
Students undertake a project requiring research, investigation or design of some topic or problem of interest to the profession.
Prerequisite: Successful completion of subjects totalling not less than 120 hours of weekly contact time
Credit Points: 12 per semester
Contact Hours: 3 per week
of special interest to the candidate. In particular, it is expected that project work will be conducted across the wide variety of applications in areas serviced by the course. Most projects will be work-related and will have associate supervision from commercial/industrial sources. It is envisaged that, where appropriate, projects may be jointly supervised by staff of the Schools or Departments involved in the course.

Credit Points: 8  Contact Hours: 2 per week
- INB001 COMPUTING PRACTICE (N.O.T.E.) I
- Credit Points: 6  Contact Hours: 1 per week
- INB002 COMPUTING PRACTICE (N.O.T.E.) II
- Credit Points: 6  Contact Hours: 1 per week
- INB009 ENGLISH FOR ACADEMIC PURPOSES

Semester 1
- INB100 PRACTICE I (INJ232)
- INB200 PRACTICE III (CSJ128)
- INB201 PRACTICE III (ISJ210)
- INB202 PRACTICE III (ISJ243)

Semester 2
- INB150 PRACTICE II (INJ232)
- INB250 PRACTICE IV (CSJ128)
- INB251 PRACTICE IV (ISJ210)
- INB252 PRACTICE IV (ISJ243)
- INB302 PRACTICE V (CSJ128)

Semester 2
- INB110 PRACTICE IB (INJ232)
- INB130 PRACTICE IB (IFJ222)
- INB160 PRACTICE IB (INJ232)
- INB180 PRACTICE IB (IFJ222)
- INB210 PRACTICE IIIB (CSJ128)
- INB211 PRACTICE IIIB (ISJ210)
- INB212 PRACTICE IIIB (ISJ243)
- INB260 PRACTICE IVB (CSJ128)
- INB261 PRACTICE IVB (ISJ210)
- INB262 PRACTICE IVB (ISJ243)
- INB275 PRACTICE IV A (IFJ222)
- INB281 PRACTICE IVB (IFJ222)
- INB322 PRACTICE VB (CSJ128)

Semester 2
- INB270 DATA COMMUNICATIONS

The role of data communications and on-line systems in a modern computing environment; the design, implementation and management of data communications networks; basic concepts and terminology; the International Standards Organisation reference model for open systems interconnection; communications equipment; data communications network design and management; network architectures; local area networks; Telecom facilities; transaction processing systems; distributed processing systems.

Credit Points: 6  Contact Hours: 2 per week
- INB270 DATA COMMUNICATIONS

Semester 1
- INB100 PRACTICE I (INJ232)
- INB125 PRACTICE IA (IFJ222)
- INB155 PRACTICE IIA (INJ232)
- INB205 PRACTICE IIIA (CSJ128)
- INB206 PRACTICE IIIA (ISJ210)
- INB207 PRACTICE IIIA (ISJ243)
- INB225 PRACTICE IIIA (CSJ128)
- INB255 PRACTICE IVA (CSJ128)
- INB256 PRACTICE IVA (ISJ210)
- INB257 PRACTICE IVA (ISJ243)
- INB312 PRACTICE VA (CSJ128)

Semester 1
- INB100 PRACTICE I (INJ232)
- INB125 PRACTICE IA (IFJ222)
- INB155 PRACTICE IIA (INJ232)
- INB205 PRACTICE IIIA (CSJ128)
- INB206 PRACTICE IIIA (ISJ210)
- INB207 PRACTICE IIIA (ISJ243)
- INB225 PRACTICE IIIA (CSJ128)
- INB255 PRACTICE IVA (CSJ128)
- INB256 PRACTICE IVA (ISJ210)
- INB257 PRACTICE IVA (ISJ243)
- INB312 PRACTICE VA (CSJ128)

Semester 2
- INB110 PRACTICE IB (INJ232)
- INB130 PRACTICE IB (IFJ222)
- INB160 PRACTICE IB (INJ232)
- INB180 PRACTICE IB (IFJ222)
- INB210 PRACTICE IIIB (CSJ128)
- INB211 PRACTICE IIIB (ISJ210)
- INB212 PRACTICE IIIB (ISJ243)
- INB260 PRACTICE IVB (CSJ128)
- INB261 PRACTICE IVB (ISJ210)
- INB262 PRACTICE IVB (ISJ243)
- INB275 PRACTICE IV A (IFJ222)
- INB281 PRACTICE IVB (IFJ222)
- INB322 PRACTICE VB (CSJ128)

Semester 2
- INB270 DATA COMMUNICATIONS

The role of data communications and on-line systems in a modern computing environment; the design, implementation and management of data communications networks; basic concepts and terminology; the International Standards Organisation reference model for open systems interconnection; communications equipment; data communications network design and management; network architectures; local area networks; Telecom facilities; transaction processing systems; distributed processing systems.

Credit Points: 6  Contact Hours: 2 per week
- INB270 DATA COMMUNICATIONS

Semester 1
- INB100 PRACTICE I (INJ232)
- INB125 PRACTICE IA (IFJ222)
- INB155 PRACTICE IIA (INJ232)
- INB205 PRACTICE IIIA (CSJ128)
- INB206 PRACTICE IIIA (ISJ210)
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Semester 1
- INB100 PRACTICE I (INJ232)
- INB125 PRACTICE IA (IFJ222)
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- INB207 PRACTICE IIIA (ISJ243)
- INB225 PRACTICE IIIA (CSJ128)
- INB255 PRACTICE IVA (CSJ128)
- INB256 PRACTICE IVA (ISJ210)
- INB257 PRACTICE IVA (ISJ243)
- INB312 PRACTICE VA (CSJ128)
teaching contribution of one hour per week throughout the first semester from the School of Communication, designed to develop the student's communication skills.

Prerequisite: Successful completion of at least the equivalent of two-thirds of Bachelor of Business (Computing) and CMB104
Credit Points: 12 per semester
Contact Hours: 4 per week

**INN301 PROJECT WORK**

Students, either individually or in small groups, undertake a substantial 6 month project relevant to the needs of industry and designed to give insight into industrial requirements. Each student, or group of students, undertakes a different project and is supervised by a member of staff who provides guidance throughout the project.

Prerequisite: Successful completion of the first two years of Bachelor of Business – Computing/Bachelor of Laws joint degree course.
Credit Points: 12

**INN200 RESEARCH METHODOLOGY**

Topic of research by agreement between the student and a Faculty staff member acting as project supervisor. Students must attend lectures/seminars of approximately 1 hour every two weeks (on average). They will also engage in a literature search and generally other design aspects of their research project.
Credit Points: 12
Contact Hours: Not applicable

**INN201 RESEARCH METHODOLOGY**

Topic of research by agreement between the student and a Faculty staff member acting as project supervisor. Students must attend lectures/seminars of approximately 1 hour every two weeks (on average). They will also engage in a literature search and generally other design aspects of their research project.
Credit Points: 12

**INN202 COMPUTER SECURITY**

Ensures that students recognise the requirement to design, implement and manage facilities in a manner consistent with an overall organisational security policy. Development of security plan; risk analysis; access control; cryptography; network security and encryption; key management; database security; secure operating systems and access control. On completion of this subject, 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.
Credit Points: 12
Contact Hours: 3 per week

**INN210 HONOURS PROJECT II**

This is a continuation and completion of the research project initiated for INN200.
Prerequisite: INN200
Credit Points: 12
Contact Hours: Not applicable

**INN211 HONOURS PROJECT**

This subject is a continuation and completion of the research project initiated for INN201.
Credit Points: 12

**INN300 MINOR PROJECT**

**INN301 MINOR PROJECT**

**INN302 MINOR PROJECT**

**INN303 MINOR PROJECT**

Students may undertake a number of minor projects so that they can pursue specialised areas of interest, or broaden their knowledge in areas of relevance to their employment. Topics are to be decided by agreement between the student and a Faculty staff member acting as supervisor.
Credit Points: 12
Contact Hours: 3 per week

**INN310 ADVANCED DATA COMMUNICATIONS**

This subject deals with advanced material in data communications. Topics covered include data communications network design and management (techniques and case studies); performance modelling of communications networks; comparative evaluations of data communications products and services; data communications software design and implementation; provision of integrated communications services (voice, data, video etc.); network security; communications industry policy (eg, deregulation vs regulation).
Prerequisite: INN270 (or equivalent)
Credit Points: 12
Contact Hours: 3 per week

**INN400 MAJOR PROJECT – PART I**

This subject comprises the first semester of a two-semester major project which enables students to pursue a specialised topic in greater depth than is possible in a single semester. Topics are to be decided by agreement between the student and a Faculty member acting as supervisor.
Prerequisite: Completion of eight subjects of the Master of Applied Science (Computing)
Credit Points: 12
Contact Hours: 3 per week

**INN401 MAJOR PROJECT – PART II**

Students may undertake a major project as an alternative to minor projects to pursue in depth a topic of interest in keeping with the course objectives. Project topics are to be determined after discussion between the student and a Faculty Staff Member acting as supervisor.
Prerequisite: Completion of at least 50 per cent of the Master of Information Technology
Credit Points: 48

**INN450 MAJOR PROJECT – PART II**

This subject forms the second half of the major project component of the Master of Applied Science (Computing) course, and is a continuation of the same topic commenced in INN400.
Prerequisite: INN400
Credit Points: 12
Contact Hours: 3 per week

**INN500 DISSERTATION**

Comprises the undertaking and writing up of a significant piece of research work. The research will examine some aspect of concepts and principles dealt with in the course work components of the program. These topics may be negotiated in the course of discussions between the student and a Faculty staff member who will act as supervisor. Each student will present a seminar on his or her dissertation topic.
Prerequisite: Completion of at least 50 per cent of the Master of Information Technology
Credit Points: 48

**INP270 DATA COMMUNICATIONS**

This subject describes the role of data communications in a modern computing environment. It examines in some detail, aspects of the design, implementation and management of data communications networks. Topics to be discussed include basic telecommunications concepts, communications protocols, the ISO Reference Model for Open Systems Interconnection, wide area networks,
local area networks and communications network security.

Prerequisite: CSP112 or ISP100
Co-requisite: ISP100 (for students in the Graduate Diploma in Commercial Computing)
Credit Points: 12  Contact Hours: 3 per week

ISB101 APPLICATION SYSTEMS
This subject examines the way business operates and the nature of business application systems. It also examines the features of some non-business applications. On completion of the subject, students will be able to describe the generalised applications needed to support of business; be aware of the need for custom designed systems; and be aware of career prospects in the information technology industry in Australia.
Credit Points: 9  Contact Hours: 3 per week

ISB102 REPRESENTATION OF INFORMATION
This subject will provide students with the ability to develop an abstract model of a real situation, being the first step in the process of creating a computer-based information system. The subject therefore forms the basis for the subsequent development of the concepts associated with the design and implementation of information systems.
Credit Points: 9  Contact Hours: 3 per week

ISB113 PRINCIPLES OF INFORMATION MANAGEMENT
This subject serves as an introduction to the core elements of information management and introduces information as an essential organisational resource required by management to meet organisational goals and objectives. The subject examines the nature and creation of information, storage media, organisation for storage, retrieval techniques, transfer, effects of internal and external environments, security and obsolescence.
Credit Points: 9  Contact Hours: 3 per week

ISB115 INFORMATION MANAGEMENT SYSTEMS
This subject will examine the principles and technologies involved in the collection, analysis and presentation of information to aid management decision making. It will provide an overview of effective management information systems; and cover decision making underlying effective MISs; computer hardware and software for effective MISs; development, implementation and control of effective MISs. It will include a case study on major systems comprising a MIS.
Credit Points: 12  Contact Hours: 3 per week

ISB156 COMPUTER APPLICATIONS
This subject will provide a basic understanding of commercial microcomputer systems as they apply to building and exposure to microcomputer applications, specifically a spreadsheet and a database package. This will include the design and implementation of spreadsheet models and creation of reusable templates; the use of a database management system (DBMS) including design of data files, creation of data views and reports; an introduction to problem definition, solution design and modular programming in conjunction with the DBMS.
Credit Points: 4  Contact Hours: 2 per week

ISB182 REPRESENTATION OF INFORMATION
This subject will provide students with the ability to develop an abstract model of a real situation, being the fundamentals and syntax of a procedural computer programming language (eg COBOL) and its use in the implementation of information systems (in particular database systems). Apart from developing techniques in commercial programming, the subject provides an appreciation of the advantages and disadvantages of a database approach.
Prerequisites: CSB100, ISP102
Credit Points: 9  Contact Hours: 3 per week

ISB201 INFORMATION SYSTEMS ANALYSIS & DESIGN I
This subject provides a grounding in the methodology and techniques of systems analysis and design.
Prerequisite: ISB102
Credit Points: 9  Contact Hours: 3 per week

ISB202 DATABASE & PROCEDURAL LANGUAGES
The fundamentals and syntax of a procedural computer programming language (eg COBOL) and its use in the implementation of information systems (in particular database systems). Apart from developing techniques in commercial programming, the subject provides an appreciation of the advantages and disadvantages of a database approach.
Prerequisites: CSB100, ISP102
Credit Points: 9  Contact Hours: 3 per week

ISB203 ADVANCED DATABASE
This subject covers relational and network database architectures and the facilities provided by a database management system. The issues in the database area which impinge on on-line systems design will be discussed and students will be introduced to the relationship between database management systems and 4GL software.
Prerequisite: ISB102
Credit Points: 9  Contact Hours: 3 per week

ISB210 INFORMATION SYSTEMS ANALYSIS & DESIGN II
This subject teaches a complete method for developing an Information System, from initial analysis of the problem through to a working computer system. Emphasis is given to the practical application of the techniques, using a wide range of real life problems.
Prerequisite: ISB201
Credit Points: 9  Contact Hours: 3 per week

ISB214 THE INFORMATION RESOURCE
Methodologies for analysing information resources within an organisation with particular reference to information mapping techniques; comparisons between institutions that concentrate on one information function, and institutions that utilise a range of internal and external functions; the effect of convergent technologies on such use.
Prerequisite: MNB302
Credit Points: 9  Contact Hours: 3

ISB215 EXTERNAL SOURCES OF INFORMATION
This subject encompasses the scanning of the environment using various information sources, technologies, avenues and methodologies. It will also provide practical skills including on-line searching. It will also provide practical skills including on-line searching. It will cover the definition of external information sources (personal and recorded); types of information provided by Government sources, industrial sources, academic sources and business sources; the publishing industries; on-line searching techniques; storage and retrieval media; computer conferencing.
Credit Points: 9  Contact Hours: 3 per week
ISB216 POLITICAL & SOCIAL ASPECTS OF INFORMATION TECHNOLOGY
This subject introduces the major political and legal aspects of information technology. Government policies relevant to the information industry will be examined and comparisons drawn between policies adopted by different countries. The social consequences of technological convergence will be examined in particular with emphasis on the changing nature of work and the evolution of the information professions will be discussed.
Credit Points: 9 Contact Hours: 3 per week

ISB219 ADVANCED COBOL
This subject provides students with the opportunity of gaining greater proficiency in writing complex commercial programs in the COBOL language. A major programming project will be implemented to facilitate the above.
Prerequisite: ISB202 or ISB283
Credit Points: 9 Contact Hours: 3 per week

ISB263 INTRODUCTION TO COMPUTERS & INFORMATION SYSTEMS
This subject is designed to enable students to identify the necessary computing concepts involved in the design and use of information systems; to apply computing concepts in the area of nursing practice; and to demonstrate competence in using systems creation and retrieval techniques via a computer-based project.
Credit Points: 6 Contact Hours: 2 per week

ISB281 INFORMATION SYSTEMS ANALYSIS & DESIGN I
This subject provides a grounding in the methodology and techniques of systems analysis and design, and aims to develop competence in techniques and application of methodologies of information systems development.
Prerequisite: ISB182
Credit Points: 12 Contact Hours: 4 per week

ISB283 DATABASE & PROCEDURAL LANGUAGES
This subject introduces the fundamentals and syntax of a procedural computer programming language (eg COBOL) and examines its use in the implementation of information systems (and in particular database systems). Apart from developing techniques in commercial programming, the subject provides an appreciation of the advantages and disadvantages of a database approach.
Prerequisites: CSB181, ISB182
Credit Points: 12 Contact Hours: 4 per week

ISB290 INFORMATION SYSTEMS ANALYSIS & DESIGN II
This subject extends coverage of techniques of analysis and design to further develop competence in methodologies, skills and techniques used by systems analysts. It will teach a complete method for developing an information system, from initial analysis of the problem through to a working computer system. Emphasis will be given to the practical application of the techniques, using a wide range of real life problems.
Prerequisite: ISB281 or ISB492
Credit Points: 12 Contact Hours: 4 per week

ISB301 ADVANCED INFORMATION SYSTEMS
This subject introduces students to the concept and practice of Decision Support Systems (DSS). It covers foundations architecture and developing DSS; the DSS environment, applications of DSS and the role of DSS in an organisation; end-users and DSS; human factors in DSS; DSS and Management Information Systems; intelligent DSS.
Prerequisite: ISB281 or ISB283
Credit Points: 9 Contact Hours: 3 per week

ISB302 DATABASE MANAGEMENT
This subject focuses on the practical issues associated with the implementation and management of the database designs developed in previous subjects. It specifically addresses issues such as relational design and the performance and tuning of databases, as well as control issues such as integrity. It is intended to provide students with an appreciation of some of the more significant commercial implementations of database architectures.
Prerequisite: ISB202 or ISB283
Credit Points: 9 Contact Hours: 3 per week

ISB303 OFFICE INFORMATION SYSTEMS
This subject examines the development and implementation of information systems in the office context. It includes an assessment of the computer hardware, software and telecommunications products available to support the automated office. The subject is intended to extend students' competence in the design and management of data communications networks and to examine techniques and systems contributing to automation of the modern office.
Prerequisite: ISB270
Credit Points: 9 Contact Hours: 3 per week

ISB305 PROJECT
Students, either individually or in small groups, undertake a substantial six month project relevant to the needs of industry and designed to give insight into industrial requirements. Each student, or group of students, undertakes a different project and is supervised generally by a member of staff who provides guidance throughout the duration of the project.
Prerequisite: Successful completion of at least the equivalent of two-thirds of the normal course program and CMB104.
Credit Points: 12 Contact Hours: 3 per week

ISB313 EXPERT INFORMATION SYSTEMS
This subject examines the role of expert systems in the commercial area and their impact on business information systems; provides an understanding of how expert systems could be used in the development of advanced business information systems; and gives some practical experience in developing and implementing information systems containing such techniques; includes discussion on social implications of expert systems.
Prerequisite: ISB202 and ISB210 or ISB283 and ISB290
Credit Points: 9 Contact Hours: 3 per week

ISB314 INFORMATION SYSTEMS MANAGEMENT
This subject is designed to develop a knowledge of the functions and practices of management in a computer installation, and to give competence in the evaluation and acquisition of a computer system. It will cover the data processing management process; criteria and techniques for selecting computer hardware, software and services; the RFP, project and operations management; site selection, evaluation of computing contracts and professional ethics.
Prerequisite: Completion of two-thirds of the relevant Bachelor of Business course
Credit Points: 9 Contact Hours: 3 per week
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Description</th>
<th>Credit Points</th>
<th>Contact Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISB316</td>
<td>INFORMATION SUPPORT SYSTEMS</td>
<td>Methods of describing information for the computer database; introduction to principles of content analysis, vocabulary control and thesaurus maintenance of indexing systems; planning and implementation of such systems together with database systems and software upgrades by an information centre, along with the establishment of such a centre and its interactions within an organisation.</td>
<td>9</td>
<td>3 per week</td>
</tr>
<tr>
<td>ISB317</td>
<td>SPECIAL TOPIC – INFORMATION MANAGEMENT</td>
<td>This subject will cover at each offering aspects of information management of specific interest at that time. The subject makes allowance for significant developments or emphasis in information management not included in the remainder of the course program.</td>
<td>9</td>
<td>3 per week</td>
</tr>
<tr>
<td>ISB318</td>
<td>STRATEGIC INFORMATION MANAGEMENT</td>
<td>This subject integrates all learning occurring throughout the Information Management degree in the context of the working environment. The importance of strategic planning by organisations and the contribution of the information manager to this process is stressed. The subject covers methods of intelligence analysis and environmental scanning in support of strategic planning. The value of information to the strategic positions being adopted by the organisations is also covered.</td>
<td>9</td>
<td>3 per week</td>
</tr>
<tr>
<td>ISB319</td>
<td>MINOR STUDIES</td>
<td>Students will undertake theoretical and/or practical work under supervision. Topics will be related to other coursework.</td>
<td>3</td>
<td>1 per week</td>
</tr>
<tr>
<td>ISB320</td>
<td>MICROCOMPUTER APPLICATIONS</td>
<td>This subject aims to provide a basic understanding of commercial microcomputer systems as they apply to Science. It includes an introduction to three major microcomputer applications; the design and implementation of spreadsheet models and creation of reusable templates; the use of a database management system (DBMS) including design of data files, creation of data views and reports; an introduction to problem definition, solution design and modular programming in connection with the DBMS; understanding the basic capabilities of word processing packages and their applications.</td>
<td>9</td>
<td>3 per week</td>
</tr>
<tr>
<td>ISB325</td>
<td>MICROCOMPUTER SOFTWARE APPLICATIONS</td>
<td>This subject is designed to provide an understanding of commercial computing, its terminology, hardware and software components; familiarity with specific electronic data processing applications, an ability to design a simple business system and an ability to describe manipulation of information to produce a desired result; an exposure to microcomputer applications, specifically a spreadsheet package; and an introduction to information analysis techniques and database design concepts.</td>
<td>9</td>
<td>3 per week</td>
</tr>
<tr>
<td>ISB328</td>
<td>BUSINESS COMPUTING</td>
<td>This subject is designed to provide an understanding of commercial computing, its terminology, hardware and software components; familiarity with specific electronic data processing applications, an ability to design a simple business system and an ability to describe manipulation of information to produce a desired result; an exposure to microcomputer applications, specifically a spreadsheet package; and an introduction to information analysis techniques and database design concepts.</td>
<td>9</td>
<td>3 per week</td>
</tr>
<tr>
<td>ISB392</td>
<td>COMPUTER BASED INFORMATION SYSTEMS</td>
<td>The subject is designed to introduce engineering students to commercial computer applications. Some time will be spent on introducing systems concepts, file management and database systems. As practical work, the combination of database/spreadsheet package ‘VP-Planner’ has been selected.</td>
<td>4</td>
<td>3 per week</td>
</tr>
<tr>
<td>ISB429</td>
<td>COMPUTERISED ACCOUNTING SYSTEMS</td>
<td>This subject is designed to introduce students planning a career in accounting to the nature and operation of computerised accounting systems. Students will study the basic concepts underlying such systems, features of common applications (e.g. general ledger, sales) and the process of analysing and designing such systems. Practical experience in the use of the SYBIZ microcomputer accounting package will be provided.</td>
<td>12</td>
<td>4 per week</td>
</tr>
<tr>
<td>ISB493</td>
<td>BUSINESS COMPUTER PROGRAMMING</td>
<td>This subject introduces COBOL as a business programming language and develops competence in modern commercial programming techniques. It examines programming principles, structured design, fundamentals of COBOL, commercial data processing systems, algorithms for business applications, data structures and file processing. It includes practical projects in COBOL on HP3000 or VAX.</td>
<td>12</td>
<td>4 per week</td>
</tr>
<tr>
<td>ISB8998</td>
<td>SPECIAL TOPIC – BUSINESS COMPUTING</td>
<td>These subjects are designed to allow for the significant development of or emphasis in business computing not dealt with in other course subjects. Selected topics and study areas will be offered as required and when the necessary expertise is available. See School announcements for full details of special topics being offered.</td>
<td>9</td>
<td>3 per week</td>
</tr>
<tr>
<td>ISB8999</td>
<td>SPECIAL TOPIC – BUSINESS COMPUTING</td>
<td>These subjects are designed to allow for the significant development of or emphasis in business computing not dealt with in other course subjects. Selected topics and study areas will be offered as required and when the necessary expertise is available. See School announcements for full details of special topics being offered.</td>
<td>9</td>
<td>3 per week</td>
</tr>
</tbody>
</table>
| ISN100      | INFORMATION SYSTEMS I                           | This subject deals with advances in information system development approaches and techniques. It examines the theoretical basis underlying current approaches to decision support. A special focus is on the
impact on information systems development of increased user involvement.

Prerequisite: ISB201 (or equivalent)
Credit Points: 12  Contact Hours: 3 per week

- **ISN110 FORMAL SYSTEMS SPECIFICATION**
  The description of information systems by means of formal languages; the concepts of formal specification, compared to informal specification languages such as Structured English. As well as being taught how to formally specify a system, students will be shown how to prove properties of that system, how to develop an executable implementation of the system and how to prove the equivalence of the two.

Prerequisites: ISB201, ISB302 (or equivalent)
Credit Points: 12  Contact Hours: 3 per week

- **ISN120 DATABASE SYSTEMS**
  Examines aspects of database performance, data distribution and the special problems of storing unformatted data. Database performance is discussed in terms of query optimisation, whereby access statement and database written in SQL, are analysed so that they are executed efficiently. The advantages and disadvantages of distributed databases are presented, covering topics such as whether data should be replicated over a number of sites. Also deals with the special requirements of databases which contain unformatted data, such as text, voice and image data.

Prerequisite: ISB302
Credit Points: 12  Contact Hours: 3 per week

- **ISN130 OBJECT-ORIENTED SYSTEMS**
  Object-oriented systems as an alternative to traditional procedurally based systems; looks at their benefits and weaknesses, including key concepts of data abstraction and encapsulation and the techniques of inheritance, polymorphism and genericity. Students learn to identify and design object classes. Builds competence in selection of strategies appropriate to improved systems design leading to lower long-term maintenance costs.

Prerequisite: ISB210
Credit Points: 12  Contact Hours: 3 per week

- **ISN150 COMPUTER SECURITY RISK MODELLING**
  The tasks of identifying, valuing and securing data assets are fundamental to modern information systems security. Those tasks are explored in terms of the current state of computer risk model research and implementation. Several traditional models are compared to demonstrate sources of data for model development: asset identification and evaluation, threat, vulnerability and dependency analysis, and collection of supporting data. Students are introduced to modern risk modelling software and techniques, and are guided in the adoption of appropriate standards and methodologies.

Prerequisites: ISN110, ISB313 (or equivalent)
Credit Points: 12  Contact Hours: 3 per week

- **ISN160 KNOWLEDGE-BASED SYSTEMS**
  This subject assumes a background in conventional systems concepts, programming and database, and an exposure to fundamental expert systems concepts. It explores four major themes in knowledge-based systems: (a) conceptual; problem selection and structure, inference and knowledge representation; (b) technical: declarative and functional programming; (c) pragmatic: improving the yield from existing information bases; and (d) methodological: questions associated with the definition, design and control of knowledge-based systems.

Prerequisites: ISN110, ISB313 (or equivalent)
Credit Points: 12  Contact Hours: 3 per week

- **ISN170 SPECIAL STUDIES**
  Students are offered the opportunity to study specific topics which are not dealt with elsewhere in the course and which are seen at the time of offering to be significant to business information systems. The subject takes account of the very dynamic nature of the information systems field in allowing treatment of newly emerged topic areas. It also permits utilisation of new specialist knowledge and skills among the Information Systems staff at the time.

Prerequisite: See School announcements
Credit Points: 12  Contact Hours: 3 per week

- **ISN180 HUMAN COMPUTER INTERFACE (HCI)**
  Addresses the most significant issues and activities of the Human Computer Interface (HCI) and software design; includes the perceptual basis to the presentation of visual information, the special problems of visual information processing, and facets of representation of knowledge; examines the development of expert systems and how they will change the nature of interaction between person and machine and reviews features of interactions with systems, eg, keyboards through to advanced input modes. On completion of this subject, students should be able to apply principles from the current research in different aspects of HCI interactions and will be aware of future developments possible in this emerging field.

Prerequisite: ISP101
Credit Points: 12  Contact Hours: 3 per week

- **ISN190 COMPARATIVE STUDY OF INFORMATION AGENCIES**
  Philosophies and modes of information provision which apply in different cultures and countries; comparative methods and studies and an investigation of sources relating to information agencies – including both libraries and computer-based information agencies worldwide. Students review and analyse examples of existing studies, services offered by different types of agencies and their community impact, national and international standards of services, the structure of the information professions, professional associations, literature, ethics and legal responsibilities in relation to national information policies and emerging trends in information provision.

Credit Points: 12  Contact Hours: 3 per week

- **ISN200 MAJOR ISSUES IN INFORMATION TECHNOLOGY**
  Explores aspects of Information Technology of great potential significance to Information Systems professionals, such as the status of software 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.

Credit Points: 12  Contact Hours: 3 per week

- **ISN210 AUTOMATED SYSTEMS MANAGEMENT**
  Identification of management challenges entailed by automated systems; the development of system specifications and Request for Proposal; evaluation of proposals; contracts and legal responsibilities; staff training and development; the effect on management structure of centralised versus distributed systems and
The implications of introducing/upgrading automated systems.
Credit Points: 12  Contact Hours: 3 per week

**ISN220 BUSINESS COMPETITOR INTELLIGENCE**
The use of competitor intelligence to enhance effectiveness of business strategies and the various methodologies and analytical techniques for obtaining and using competitor intelligence in support of strategic planning; competitor intelligence and strategic planning; the interrelationship between intelligence and planning in corporate decision making; the organisation framework; establishing an intelligence collection network; analytical techniques; applications in different strategic environments, and sources and types of competitor intelligence.
Prerequisite: ISB215
Credit Points: 12  Contact Hours: 3 per week

**ISN240 CLASSIFICATION**
The theory and practice of the classification of knowledge and its role in the advancement of knowledge; selected schemes and their applications, research into automated classification, and creation of schemes for special situations will be considered.
Prerequisite: ISP432
Credit Points: 12  Contact Hours: 3 per week

**ISN250 THE INFORMATION INDUSTRIES**
The nature of the information industries and information policies; the social and legal issues involved in the expansion of these industries; the information industries in the information economy, public policy, Queensland as an information economy; information industry development abroad, Information Law, Intellectual Property, Privacy/Freedom of Information Computer Crime Transborder Data Flow/Sovereignty issues, social justice and equity issues in the information industry and education for the information society.
Prerequisite: ISB216
Credit Points: 12  Contact Hours: 3 per week

**ISN260 EVALUATION OF INFORMATION SERVICES & ORGANISATIONS**
Techniques applicable to the evaluation of libraries and other information centres; including the statistics collected, their usefulness, and the means used to collect them as well as non-statistical methods and their value. Previous research will be studied to determine applicable methods and isolate trends, especially those which may have implications for the future.
Prerequisite: INN201
Credit Points: 12  Contact Hours: 3 per week

**ISN270 SOCIAL IMPACTS OF INFORMATION TECHNOLOGY**
The significant issues in the realm of speculative information systems and technologies; scenarios of information rich/poor sectors within and without organisational environments are examined. Emerging issues in Information Technology and the implications for information systems and organisational structures are defined and predicted. A compact synthesis for an organisational system, incorporating environmental and societal integration is considered.
Credit Points: 12  Contact Hours: 3 per week

**ISN280 ORGANISATIONS, SYSTEMS & INFORMATION**
The structure of organisations, systems and information; theoretical aspects of environmental and managerial influences are explored and common linkages identified. Socio-technical areas and system failures are defined. Appropriate strategies to deal with system failures are formulated and presented. The role of information in organisations is illustrated and the symbiotic relationship established. This enables interface constraints to be identified and alternative solutions to be proposed.
Credit Points: 12  Contact Hours: 3 per week

**ISN300 INFORMATION SYSTEMS II**
This subject provides an advanced treatment of contemporary issues of information system development. It deals particularly with the issues of development of corporate information systems.
Prerequisite: ISN100
Credit Points: 12  Contact Hours: 3 per week

**ISP100 THE COMPUTER SYSTEM**
This subject is designed to provide an overview of the computer as a tool to be applied to a variety of problems concentrating on applications in commerce; to develop the perception for the process necessary in systems development: software engineering; and to develop skills in program development and to develop competence in the use of a number of hardware and software; an introduction to software engineering; computational linguistics; algorithm development and implementation in PASCAL.
Credit Points: 12  Contact Hours: 3 per week

**ISP101 DATA DESIGN & PROCESSING**
This subject is designed to introduce the theory of data modelling and the techniques associated with development of database solutions for a variety of information problems and in conjunction with the above, to familiarise students with modern post-procedural approaches to database retrieval and manipulation.
Co-requisite: ISP100 or CSP112
Credit Points: 12  Contact Hours: 3 per week

**ISP113 PRINCIPLES OF INFORMATION MANAGEMENT**
This subject serves as an introduction to the core elements of information management and emphasises information as an essential organisational resource required by management to meet organisational goals and objectives. The subject examines the nature and creation of information, storage media, organisation for storage, retrieval techniques, transfer, effects of internal and external environments, security and obsolescence.
Credit Points: 12  Contact Hours: 3 per week

**ISP200 SYSTEMS ANALYSIS & DESIGN**
This subject is designed to give students an understanding of methodologies for undertaking the development of a computer-based business system; to develop competence in the use of a number of techniques of systems analysis and design; to develop understanding of design considerations related to important business application areas; and to extend the understanding of the application of data modelling.
Prerequisite: ISP101
Credit Points: 12  Contact Hours: 3 per week

**ISP301 ADVANCED DATABASE**
On completion of this subject, students should be able to accomplish the following: discuss the functions of a DBMS; describe the relational and network approaches to database construction; describe one DBMS in detail; design a database to support the
outputs required of some information systems; distinguish between databases and knowledge bases, and describe the features expected of a 4GL and how they facilitate the use of prototyping.

Prerequisite: ISP101 or ISP182

Prerequisite/Co-requisite: ISP400 (for students in the Graduate Diploma Commercial Computing)

Credit Points: 12 Contact Hours: 3 per week

ISP303 PROGRAMMING

This subject is designed to develop advanced algorithms and implement these algorithms; structured program design techniques for commercial applications; practical aspects of program testing, debugging and style; and competence in the 'C' programming language. The subject will cover structured program design (top-down development); advanced data structures and algorithm development; and sound program development, testing and debugging using Pascal and C. It will include practical work on VAX, PCs or HP9000.

Prerequisites: ISP100 and ISP101

Credit Points: 12 Contact Hours: 3 per week

ISP313 EXPERT INFORMATION SYSTEMS

This subject examines methodologies and techniques for selecting computer hardware, software and telecommunications products available to support the automated office. The subject is intended to extend students' competence in the design and management of communication networks and to examine techniques and systems contributing to automation of the modern office.

Prerequisite: ISP100

Credit Points: 12 Contact Hours: 3 per week

ISP304 ADVANCED PROGRAMMING

This subject is designed to examine and study the implementation of business information systems in COBOL. It will cover a review of programming principles; fundamentals of COBOL; commercial data processing systems; software implementation, or the solution to a particular problem in computer business applications.

Prerequisite: ISP100

Credit Points: 12 Contact Hours: 3 per week

ISP401 COMPUTER PROJECT

A major project allocated to or proposed by the student in any of the specialist areas (covered or otherwise) in the course, eg, a development of project, software implementation, or the solution to a particular problem in computer business applications.

Prerequisite: Completion of six subjects of the Graduate Diploma in Commercial Computing

Credit Points: 12 Contact Hours: 3 per week

ISP414 LIBRARY SERVICES TO YOUNG PEOPLE

Introduces the most important aspects of library services to children and young adults; covers 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.

Prerequisites: ISP431, ISP433

Credit Points: 12 Contact Hours: 3 per week

ISP419 GOVERNMENT DOCUMENTS

The production, acquisition and organisation of government documents, and issues related to their use. Topics include why governments publish, the range of subjects, the value of government information, bibliographic control, freedom of information, commercialisation/privatisation of government information, and organisation of government documents collections. Australian, United States, United Kingdom, and international government documents are studied.

Prerequisite: ISP433

Credit Points: 12 Contact Hours: 3 per week

ISP427 SPECIAL TOPIC - LIBRARY SCIENCE

This subject is designed to allow for significant development of or emphasis in library science nat
dealt with in other course subjects. Selected topics and study areas will be offered as required and when the necessary expertise is available.

Prerequisite: See School announcements
Credit Points: 12  Contact Hours: 3 per week

ISP428 FIELD EXPERIENCE
This subject is 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. During this period, they should have substantial experience in at least two different areas of library work under the supervision of professionally qualified librarians.
Prerequisite: Completion of 50 per cent of other subjects
Credit Points: 4

ISP431 COLLECTION BUILDING & ACQUISITIONS
The concept of information and its relationship to information resources and needs; the various formats by which information is communicated are compared and appropriate selection criteria discussed; the characteristics of the book and other media trades, and the methods by which these media are acquired; collection building in light of the needs of the immediate clientele to be served and of the wider Australian community. Other topics include procedures for keeping collections current, evaluating their usefulness, and the legal and ethical dimensions of collection building.
Credit Points: 12  Contact Hours: 3 per week

ISP432 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 will be mentioned briefly, eg, LCC, MARC, ABN, and other cooperative efforts.
Credit Points: 12  Contact Hours: 3 per week

ISP433 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 and microcomputers and reference work.
Credit Points: 12  Contact Hours: 3 per week

ISP437 SPECIAL TOPIC
This subject allows for significant development of or emphasis in library science not dealt with in other course subjects. Selected topics and study areas will be offered as required and when the necessary expertise is available.
Prerequisite: See School announcements
Credit Points: 8  Contact Hours: 2 per week

ISP441 ONLINE INFORMATION SERVICES
Teaches students to act as the interface between users and information they may require, using a variety of available resources, systems, and technologies; includes development of online information services, database producers, search strategies, services offered by major vendors, in-house systems (including CD-ROM), and trends and issues in computer assisted retrieval of information.
Credit Points: 12  Contact Hours: 3 per week

ISP442 LIBRARY PROGRAMS MANAGEMENT
Patterns of administrative organisation in libraries; authority relationships and the nature of the library as a bureaucracy; position classification and personnel administration; the management of library finances; applications of computer technology in library management; and change in organisations; the management functions of planning, organising, staffing, directing, and controlling; the concepts of leadership and professionalism.
Credit Points: 12  Contact Hours: 3 per week

ISP451 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 subject indexes, and automated indexing.
Prerequisite: ISP432
Credit Points: 12  Contact Hours: 3 per week

ISP452 INDIVIDUAL STUDY
Students can pursue in depth a personal interest in library science not covered by the Graduate Diploma course core or other elective subjects. On completion of this subject students should be able to demonstrate a detailed knowledge of the area chosen.
Prerequisite: To be determined by the nature of the study
Credit Points: 8  Contact Hours: 2 per week

ISP453 INTRODUCTION TO RECORDS MANAGEMENT
An introduction to 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.
Credit Points: 8  Contact Hours: 2 per week

ISP454 LIBRARY PROGRAMS & SERVICES
An introduction to the evaluation of users' informational needs and the development of library programs and services to meet the needs of special groups in the community, eg, young people, elderly people, disabled people, ethnic minorities, business people etc.
Credit Points: 8  Contact Hours: 2 per week

ISP998 SPECIAL TOPIC - COMMERCIAL COMPUTING
This subject is designed to allow for significant development of or emphasis in commercial computing not dealt with in other course subjects. Selected topics and study areas will be offered as required and when the necessary expertise is available.
Prerequisite: See School announcements
Credit Points: 12  Contact Hours: 3 per week

ISP999 SPECIAL TOPIC - COMMERCIAL COMPUTING
This subject is designed to allow for significant development of or emphasis in commercial computing not dealt with in other course subjects.
The roles of planners (statutory, pluralist, advocate, consultant); different 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.

Credit

Consultant); different 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.

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Contact Hours: 3 per week

Contact Hours: 2 per week

Contact Hours: 2 per week

Contact Hours: 1 per week

Contact Hours: 3 per week

Contact Hours: 2 per week

Contact Hours: 3 per week

Contact Hours: 3 per week
Open space theory and the principles of spatial design. Studio: a medium scale intensive/multi-
ple use project which demands re-design and rehabilitation will be undertaken to apply concurrent theory
lectures and seminars. Students will be expected to make time available outside studio hours to visit
project site(s) and carry out site surveys and ‘client’ interviews as necessary to establish project
briefs and carry out the design project. Expectations of an advanced level of professional presentation will
attend to the project output.
Credit Points: 10  Contact Hours: 3 per week

LPP204 LANDSCAPE PLANNING
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 deriving landscape management options in the
form of policies, guidelines, and implementation strategies. The studio will incorporate a lecture/semi-
inar program which will promote an understanding of the theoretical framework of landscape planning.
Credit Points: 10  Contact Hours: 4 per week

LPP205 LANDSCAPE DESIGN
Landscape design problems of increased scope, complexity and constraint. There will be at least one
one-day esquisite project in addition to the primary theme project extending for the duration of the sub-
ject. Emphasis will be on the consistent resolution of design from broad concept through to the most
detailed level. Matters of appropriate style and mor-
phology will be dealt with in depth with the selected
theme applied consistently through scale and or-
The relationship between management and construc-
tion: a portfolio of advanced case studies. Principles of contract law, forms of contract,
standard conditions of contract with engagement, contract administration, professional
presentation.
Credit Points: 10  Contact Hours: 2 per week

LPP208 LANDSCAPE PRACTICE
Practical experience for a period of at least three weeks in landscape architectural office or offices as
approved by the Course Coordinator. This experience may be prerequisite or co-requirement with the second
part of the subject. Experience will be logged as directed. Principles of contract law, forms of contract,
standard conditions of contract with engagement, contract administration, professional
presentation.
Credit Points: 6  Contact Hours: 2 per week

LPP210 LANDSCAPE MANAGEMENT A
Assessment and evaluation including environmental impact analysis and an outline of current Common-
wealth and State environmental assessment procedures and applications. Visual and scenic quality assessment techniques. An introduction to computerised three-dimensional modelling. Ecosys-
tem protection, corridor and catchment management. An introduction to broadscale computerised monitor-
ing and management programs including a range of case studies. Rural land use issues and systems.
Credit Points: 10  Contact Hours: 4 per week

LPP211 LANDSCAPE MANAGEMENT B
The relationship between management and construction: Management created/dependent landscapes and
construction created landscapes. Specifying and programing both construction and management as a
part of design implementation. Monitoring. The role of horticultural, agricultural and environmental sciences;
specialisations and appropriate case studies. Horticulture, urban horticulture, arboriculture,
pliances. Bushland management (including the Bradley method), regeneration, and monitoring.
Catchment and watercourse management, eco-
ment stabilisation. Coastal management and monitoring, particularly in use areas.
Credit Points: 10  Contact Hours: 2 per week

LPP212 ADVANCED GRAPHICS
Applications of larger format design presentation; case studies and examples; advanced colour techni-
ques; relating verbal and visual material; relating design concepts to visual themes.
Credit Points: 4  Contact Hours: 2 per week

LPP213 ADVANCED LANDSCAPE CONSTRUCTION
Introduction to theory and techniques of a range of types of landscape construction including platforms,
live stability and stabilisation, clearing and demolition, earth dams, lakes and flood levees, broadscale stormwater drainage and control, sports facilities and swimming pools, irrigation systems. Introduction to
the types of documentation used for the implementation of landscape works including working drawings,
specifications, bills and schedules of quantities and methods of production. Students will be required to
produce a set of working drawings and specification of a competent standard for inclusion in their personal
portfolios.
Credit Points: 9  Contact Hours: 3 per week

LPP214 LANDSCAPE ENGINEERING
Common philosophies of civil engineering designs; site influences on structural form; residential sub-
divisions - structural and engineering design, services, design standards, controls; major road sys-
tems - hierarchy, route selection, design parameters, noise constraints, associated services/facilities; waste
disposal – land fill; large dams, canals, marinas, coas-
The emphasis is on building graphical data and at­

The Field Trip will be a

The development of skills and application of com­

ill LPP217 COMPUTER

Ill LPP215

employment, health, housing, income and education.

The genesis of social welfare policies in Australia­

interstate or in Queensland away from Brisbane. En­

work and issues for discussion may relate to any or all

parameters, standards, erosion control methods; air­

skills using the Autocad system.

Creative, scientific method and planning method.

 ideas and theories in planning; theory as a basis for

LPP404 INTRODUCTION TO THEORIES

ideals and theories in planning; theory as a basis for

LPP405 PROCEDURAL PLANNING

Theory, explanation and prescription and the develop­

LPP406 PROFESSIONAL PROCEDURES

The nature and role of a profession and profes­

LPP407 URBAN POLICY PROCESSES

Models of public decision making: rational, inc­

LPP408 SOCIAL & POLITICAL

The focus and exercise of power in society; analysis of

LPP411 PLANNING PRACTICE & LAW

This subject takes the form of a problem-solving

Credit Points: 4 Contact Hours: 2 per week

Credit Points: 2 Contact Hours: 2 per week

Credit Points: 2 Contact Hours: 1 per week

Credit Points: 2 Contact Hours: 1 per week

Credit Points: 3 Contact Hours: 1 per week

Credit Points: 4 Contact Hours: 1 per week

Credit Points: 6 Contact Hours: 2 per week

Credit Points: 6 Contact Hours: 2 per week

Credit Points: 6 Contact Hours: 2 per week

Credit Points: 6 Contact Hours: 2 per week

Credit Points: 4 Contact Hours: 2 per week

Credit Points: 4 Contact Hours: 1 per week

Credit Points: 4 Contact Hours: 1 per week

Credit Points: 4 Contact Hours: 1 per week

Credit Points: 14 Contact Hours: 4 per week
LPP412 PLANNING PRACTICE & LAW (REGIONAL & STRATEGIC)
The regional concept and its relevance to planning; aims of regional and strategic planning, e.g., integration of urban and rural development, reduction of regional disparities, resource development; statutory basis of strategic planning; the case of Queensland. Strategy and policy formulation in a group project relating to a specific region.  
Credit Points: 12  Contact Hours: 4 per week

LPP413 ADVANCED URBAN STRUCTURE
Critique of models of urban land use; justice, equality and welfare in the urban context; marginalisation and polarisation of groups within society; issues related to the problems and requirements of groups such as women, children, the aged, disabled, ethnic minorities, and access to housing, transport etc.; relevance to and implications for planners.  
Credit Points: 4  Contact Hours: 1 per week

LPP414 RESOURCE MANAGEMENT
Credit Points: 6  Contact Hours: 2 per week

LPP415 RESEARCH METHODS & INDIVIDUAL PROJECT
The place of objectives in research method; delimitation of areas of concern; structuring the research program; identification of primary and secondary sources; purposes and limitations of analysis; inference, uncertainty and exclusion of false conclusions; selection and adaptation of techniques. Preparation of an individual research study 10-12,000 words in length (or equivalent).  
Credit Points: 10  Contact Hours: 2 per week

LPP416 URBAN POLICY IMPLEMENTATION
Overview of the roles of the three levels of government in Australia as they impact on urban policy making and implementation. Statutory Authorities. The roles of the private sector, through pressure groups, development proposals and the like. Implementation and evaluation in the urban planning process. The general problems of change, implementation and evaluation: motivation, conflict, coordination, flexibility, information, resources etc. Development of skills for improving the implementation of urban policies, including conflict resolution and negotiation skills. As far as possible material will be linked to case studies.  
Credit Points: 4  Contact Hours: 1 per week

LPP418 COMPUTER APPLICATIONS IN PLANNING
Information storage and retrieval; sources of information and data bases (census, local surveys, networked data bases etc.), the use of information in decision making; manipulation of information by use of statistical packages, spread sheets and data bases; Computer Information Systems, and CAD, including 'hands on' experience with drafting, digitising etc, and the specific use of Land Information Systems; and planning techniques including the use of programs developed in the Department and linked to material being taught in other current subjects in the GDURP.  
Credit Points: 6  Contact Hours: 2 per week

LPP420 DEPARTMENTAL FIELD TRIP
One field course of approximately 7 - 10 days duration to provide a comparative dimension to students' studies and to develop skills in observation, data collection, recording and interpretation.  
Credit Points: 4  Contact Hours: 7 - 10 days

LPP501 THEORY OF SITE PLANNING
Exploration of open space theory at regional and local scales; definition of spatial characteristics by edges, nodes, landmarks, districts, and paths. Sense of place; structure and form; legibility; imageability; etc; human responses and expectations and their effects on site planning decisions.  
Credit Points: 2  Contact Hours: 1 per week

LPP502 SITE PLANNING TECHNIQUES
Introduction to the processes of site planning and detailed site design that lead to defendable and accountable solutions; role and objectives of survey and analysis phases; types of information required and the methods of processing the resultant data; data analysis, its scope and documentation; the use of data analysis to generate and evaluate possible problem solutions in conceptual form as a basis for strategic and master planning and the value of these processes as a long-term mechanism for adaptation of master planning to meet changing needs.  
Credit Points: 2  Contact Hours: 1 per week

LPP503 HISTORY OF LANDSCAPE DESIGN
The form and content, influencing factors, and implication of the creation and development of historically, regionally, and religiously significant consciously designed landscape throughout the world; the evolutionary processes in development of cultural landscapes.  
Credit Points: 2  Contact Hours: 1 per week

LPP504 PLANTING DESIGN
Design characteristics and criteria. The use of plants as structural and design elements within landscape. Principles of planting design. Scale. Design for change, growth, replacement, and maintenance. Planting design in typical schemes such as streets, highways, parks, urban forecourts and interior plantscapes, gardens, and broadscale regeneration and stabilisation.  
Credit Points: 3  Contact Hours: 1 per week

LPP505 CONSERVATION THEORY
Credit Points: 3  Contact Hours: 1 per week

LPP506 USER & CHARACTER DESIGN STUDIES
The first project will be concerned with user behaviour and requirements using two or three city centre pedestrian spaces. The second project uses the same locations to analyse the spaces in the light of both their own inherent characters and the user needs.
and responses defined earlier. As an introduction to the concept of abstraction, a final project may be held consisting of individuals or small groups of students making sculptures or models expressing the spirit of the places studied earlier in the semester.

Credit Points: 8 Contact Hours: 3 per week

LPP507 SITE PLANNING
Application of site planning principles and theory at all scales and types of projects; site utilisation and selection; application of site survey and analysis techniques; natural and man-made influences in physical design; environmental and social implications of design decisions; siting and integrating activities, structures, and services; landform manipulation. Emphasis will be given to alternative concept formulation, evaluation and evolution as a critical decision-making phase of the design process.

Credit Points: 11 Contact Hours: 3 per week

LPP508 INTRODUCTION TO PRACTICE
The concept of professionalism and contemporary social expectations of the environmental design professions. Current issues and controversies in environmental design and planning in Australia. Roles, ranges of employment and activities within the profession. Organisation and activities of the professional Institute. The future directions, potentials, and opportunities. Introduction to the range of professions associated with Landscape Architecture. Introduction to the importance and techniques of CVs and portfolios.

Credit Points: 4 Contact Hours: 2 per week

LPP509 QUANTITIES & COSTS
Measurement and costing of time, resources, and materials for professional services, production of documents, and implementation of projects. The techniques and tools available for both preliminary and detailed measurement and costing and their control. Time and percentage measurement and costing related to the professional services. Costs of documents, including relative costs of different methods of production. Units of management and costing of broad development types and for more detailed landscape architectural and urban design projects.

The techniques of cost control.

Credit Points: 2 Contact Hours: 1 per week

LPP510 INTRODUCTION TO LAW
Laws, regulations and their interpretation. A review of the Australian and Queensland acts, local authority by-laws and regulations of statutory authorities as they affect the built environment. Legal aspects of land and land transfer. Planning and land use regulations. Introduction to professional liability, design registration, and copyrights.

Credit Points: 2 Contact Hours: 1 per week

LPP511 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, personal space, territoriality, environmental meaning and cognition, cognitive ways and waysfnding, intercultural and intracultural differences. Application via examination and analysis of an urban environment or an artefact with respect to its sociocultural function.

Credit Points: 4 Contact Hours: 2 per week

LPP512 INTRODUCTION TO PLANT SCIENCE
Consideration of plants as living organisms; survey of the plant kingdom emphasising evolutionary trends - complexity of organisation and integration of structural elements, evolution of specialised organs such as leaves, roots, flowers, and propagules; consideration of plant systematic and taxonomy as scientific approaches to coping with diversity, the concept of classification, and the development and use of keys for identification. Values and use of numerical classification techniques are introduced; an introduction to physiological processes - photosynthesis and respiration, responses to light, temperature, nutrients, water balance and stress, nutrient and mineral deficiencies, and diseases and pathogens.

Credit Points: 4 Contact Hours: 2 per week

LPP513 INTRODUCTION TO PLANT ECOLOGY
The individual organism as an ecological unit; life forms as an expression of environmental influences; the concept of 'species' in plants and animals; population and population regulation; limiting factors; life cycles; pollination and dispersal; life history patterns; concept of 'niche'; resources, competition, dynamics of plant communities; herbivory and other interactions with the fauna; introduction to ecosystems and energy and nutrient flows.

Credit Points: 4 Contact Hours: 2 per week

LPP514 LANDSCAPE ECOLOGY
Broad divisions of the earth related to climate and soils - biomes, formations, alliances, associations, and societies; ecosystem concept and its development and application historically and in Australia; plant communities as expressions of ecosystems; energy and water balance; concepts of community ecophysiology and growth equations; vegetation classification in Australia and its functional significance; ecological biogeography of Australian vegetation; classification of landscape - concepts of biogeographic regions, provinces, land systems, and land units; landscape structure and function and significance for nature conservation and conservation planning; landscape ecology and landscape planning practice.

Credit Points: 9 Contact Hours: 3 per week

LPP515 IMPACTS & ASSESSMENT
Decision-making and conflict resolution techniques relevant to land and other natural resource planning and management; analysis of ecological processes which structure and maintain the major terrestrial and aquatic ecosystems as background to assessing impact of human activities of urbanisation, resource exploitation, mining, and other landscape changes; forms of impact assessment and analysis considering ecological, social, and economic issues; statutory assessment systems especially those pertaining to Queensland and under Federal legislation.

Credit Points: 4 Contact Hours: 2 per week

LPP516 VISUAL COMMUNICATION - GRAPHICS
Studio sessions focus on lettering, layout, and visual themes in display communication. Scale, emphasis, readability, and organisation of various types of information (photos, diagrams, text, sketches, plans etc.). Sessions demonstrate and develop the use of diagrams as major tools to explore and communicate all types of information from concepts through to physical relationships. Exercises introduce and develop the range of sketch types and their appropriateness to different types of work such as exploration of form, analysis, and communication of concepts.

Credit Points: 6 Contact Hours: 3 per week
LPP517 ORAL COMMUNICATION SKILLS
Formal oral communication techniques including meetings, conferences, interviews and speeches (informative and persuasive).
Credit Points: 2  Contact Hours: 1 per week

LPP518 REPORT PREPARATION
Formal writing techniques, including reports, instructions, progress, specifications, correspondence and essays. Report writing. Structure and content of reports. Summaries and subdivision of material. Precis. Use of tables, charts, and illustrations in written presentation. Clarity and the selection and management of relevant data.
Credit Points: 2  Contact Hours: 1 per week

LPP520 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.
Credit Points: 4  Contact Hours: 2 per week

LPP521 MAP & AIR PHOTO INTERPRETATION
Types, sources, use, 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.
Credit Points: 4  Contact Hours: 1 per week

LPP522 MEASUREMENT OF SITES
Introduction to basic equipment for site measurement - levels, staffs, chains and tapes, prismatic compass, optical square, clinometer, range poles -- and their uses in horizontal and vertical measurement. Introduction to recording of field data and the preparation of measured site drawings from recorded data.
Credit Points: 2  Contact Hours: 1 per week

LPP523 LANDSCAPE CONSTRUCTION
Introduction to structures. Definition of terms; basic actions/reactions of beams, columns, slabs, structural units and types of structures; loadings and types (including wind loading). Understanding of the properties of common construction materials and their application in landscape construction; establishment of sound techniques of technical drawing in the preparation of construction documents. Topics covered include the common materials; an understanding of foundation soils; basic services of site stormwater drainage, water and electrical services; applied systems including paving, steps and ramps; and construction for planting and small water features.
Credit Points: 6  Contact Hours: 3 per week

LPP524 LAND GRADING
Manual techniques of land surface manipulation including the construction of platforms for building, carparks, sports ovals, and other features; and the associated provision of surface drainage.
Credit Points: 6  Contact Hours: 3 per week

LPP525 LAND USE GENERATION
Changing patterns of urban land use, medieval to industrial revolution; segregation of land uses in planned settlements of the twentieth century; planning for urban diversity; the logic of design from values through activities to land uses; the formation of value system; analysis and projection of activity systems; electronic communications, urban decentralisation, and emerging settlement patterns in the western world.
Credit Points: 7  Contact Hours: 2 per week

LPP526 INTRODUCTION TO GRAPHICS
Freehand sketching of objects from observation, rendering textured surfaces, design development graphics, understanding two-dimensional layout and competence in presentation of two-dimensional design in reports and drawings.
Credit Points: 5  Contact Hours: 2 per week

LPP527 SITE PLANNING DATA & TECHNIQUES
Natural influences in physical planning -- geology, climate, topography, hydrology, soils and vegetation etc. Ecological considerations in design and development processes. Impact of natural hazards and other physical constraints on design, including air, water, and noise pollution. Impacts of development on the natural environment. Landscape evaluation techniques.
Credit Points: 3  Contact Hours: 1 per week

LPP528 SITE PLANNING PRACTICE
Layout of lots, buildings, roads and services; the retention of existing desirable features of the site; use of trees and other plant material; modification of land surface eg, cut and fill; subdivision design; planning application and approval process.
Credit Points: 12  Contact Hours: 3 per week

LPP529 THEORY OF SITE PLANNING
Exploration of open space theory at regional and local scales; definition of spatial characteristics by edges, nodes, landmarks, districts, and paths. Sense of place; structure and form; legibility; imageability etc.; human responses and expectations and their effects on site planning decisions.
Credit Points: 3  Contact Hours: 1 per week

LPP530 PROFESSIONAL COMMUNICATION
Credit Points: 5  Contact Hours: 2 per week

LPP531 TRANSPORT PLANNING
Movement and its alternative modes: foot, cycle, car, bus, train, plane, pipeline, inland waterway and marine modes. The origin and destination approach to traffic management and change study. Inter-urban traffic and regional transport planning. This relationship between land use and traffic generation.
Credit Points: 3  Contact Hours: 1 per week

LPP532 POPULATION & URBAN STUDIES
Basic urban definitions, spread and characteristics of urbanisation, the structure of cities and the economic and social processes at work within cities, particular aspects such as housing and gentrification, basic concepts of population and demography, recent and historical analyses of the Australian population, familiarisation with the role of ABS and with statistical and data analysis of population, world demographic trends.
Credit Points: 10  Contact Hours: 3 per week

LPP533 APPLIED NATURAL SCIENCE
Applied studies in geology and geomorphology, climate and micro-climate, soils and hydrology, the basic soil and plant community associations. The
influence of these systems collectively and separately on environmental design decisions.

Credit Points: 5  Contact Hours: 2 per week

LPP560 HISTORY OF PLANNING
The links between society, ideas and urban form. Urban evolution from ancient to modern times in Africa, Asia, Europe, America and Australia. The Industrial Revolution and its effect on urban form and on planning ideas. Australian urban history and the development of environmental management and town planning in Australia.

Credit Points: 3  Contact Hours: 1 per week

LPP561 INTRODUCTION TO URBAN DESIGN
Design method, visual thinking; principles of perception and spatial arrangements; the vocabulary of design and urban imagery; design elements; the evolution of designer theory; techniques for analysing the quality of existing built environments; analysis of examples. Urban design project.

Credit Points: 18  Contact Hours: 3 per week

LPP562 ECONOMICS OF TOWN PLANNING
Introduction to economics—the factors of production and their organisation. Demand and supply. The free market and its imperfections. The market as an allocator of preferences; concepts of private and public interest. Market failure. Social objectives and the role of government. Economic growth and stability—the enabling of development. The problem of negative externalities—the economic justification of the public control of development. Economic methodology, such as regional accounting, cost benefit analysis. Economics of land use; land as an economic concept, public and private costs. The features and operation of the real property market. Theories of land value. Land valuation theories and techniques. Land tenure—the rights of ownership—resumption by the Crown—problems of compensation and recoupment of betterment. Land use controls.

Credit Points: 5  Contact Hours: 2 per week

LPP563 INTRODUCTION TO COMPUTERS IN PLANNING
Introduction to the use of computers in planning, including their potential benefits and problems; the computing facilities available at QUT, particularly PCs. The course provides an overview of computers including: their structure, development and uses in the modern world; problems and advantages of computer use; introduction to the 'hands on' experience in using QUT's computer facilities; gaining access, file structures, information storage and retrieval, editing, and related utility functions; introduction to flow-charting and programming logic. Simple programming exercises. Spreadsheets and databases. Introduction to Geographical Information Systems. Word processing on microcomputers. Class sessions will include 'hands on' tutorial experience.

Credit Points: 4  Contact Hours: 2 per week

LPP564 INTRODUCTION TO MAPS & AIR PHOTOS
Types of maps, their uses and limitations. Orientation, scale, cartographic symbols, representation of relief etc., grid coordinates. Vertical and oblique air photos: black and white, colour, false colour. Mosaics and stereopairs. Introduction to stereoscopy and simple mapping from air photos. Introduction to various types of remote sensing imagery available to planners.

Credit Points: 3  Contact Hours: 1 per week

LPP565 URBAN LAND DEVELOPMENT
Structural and engineering design requirements in urban development—local physical services, roads and drainage, sewers, water, gas, electricity and Telecom services. Design and control systems, design standards, the effects of standardised requirements and alternative approaches. The roles of statutory authorities—gas, electricity, water, telephone, public transport, railways, waterways, road construction authorities. Development teams—the roles of associated disciplines—civil, municipal and transport engineers, earth and environmental scientist, and others. The role of the private developer.

Credit Points: 3  Contact Hours: 1 per week

LPP566 HOUSING & COMMUNITY SERVICES
Population, dwellings and households. Techniques of analysis and projection of housing stock. 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—schools, colleges, universities. Share use of facilities. Location and space standards. Social and welfare services and their role in the community. Planning and management aspects of welfare.

Credit Points: 5  Contact Hours: 2 per week

LPS102 INTRODUCTION TO TOWN PLANNING
The concept and administrative procedures of town planning; the objectives of town planning; conflicts in land use; development control; planning criteria; planning schemes; development applications and decision making.

Credit Points: 2  Contact Hours: 2 per week

LWB101 INTRODUCTION TO LAW
The purpose of the course is to introduce students to the institutions of the law—the courts, Parliament, the judiciary, the legal profession—and their working, and the doctrines and methodology of the Law, including the doctrine of precedent and the principles of statutory interpretation.

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

LWB102 LAW OF CONTRACT
The substantive principles of contract law, as taught, include: definition of the Law of Contract, outline of remedies; formation of contract—agreement equitable estoppel; contents of a contract express and implied terms; factors vitiating contracts; capacity to contract; privity of contract; discharge of contract; breach of contract.

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

LWB103 TORTS
At its most general level this branch of the law is concerned with the question of compensation to be given by a person causing a loss to a person suffering a loss. Areas of everyday conflict which may be resolved by principles of tort liability include damage sustained as a result of a motor-vehicle collision, and injury to a person's reputation from publication of defamatory material. The rules are examined to ascertain whether they satisfy the critical test: functional adequacy in terms of contemporary values.

Credit Points: 12 per semester  Contact Hours: 3 per week
An introductory subject to teach students basic legal research methodology, and how to write assignments and solve legal problems. It includes a study of the hierarchy of the courts, the history of law reporting and the doctrine of precedent; how to use a law library effectively; and gives students practice in handling the most important research materials. An introduction to the use of computerised legal research also is included.

Credit Points: 4 per semester  
Contact Hours: 1 per week

LWB201 LAND LAW
The principles relating to the law of Real Property in Queensland – the rights, interests and obligations which can exist in relation to land; and the methods of creating, enforcing, assigning and extinguishing such rights, interests and obligations. The course encompasses: the concept of real property; the doctrines of tenure and of estates; equitable interests; the Torrens system; easements; mortgages; leasehold interests; covenants affecting land; co-ownership; future interests and perpetuities; building units title and group title; time-sharing; and Crown leasehold.

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

LWB202 CRIMINAL LAW & PROCEDURE
The criminal law in force in Queensland, encompassing (inter alia) criminal responsibility, parties to offences, and major indictable offences. The wider context of the operation of the criminal law is considered, introducing students to penal principles and the justifications for imposing punishment by the State, to aspects of the disposition of offenders in the sentencing part of a criminal trial, and to a consideration of imprisonment and release procedures.

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

LWB203 CONSTITUTIONAL LAW
A study of the extent of power of the institutions which make, administer or apply the law – particularly important in a federation such as the Commonwealth of Australia. The federal constitution divides power between the State and Commonwealth governments, and between the legislative, executive and judicial branches of the Commonwealth government and actions which ignore these divisions can be challenged successfully in courts of law.

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

LWB301 EQUITY
Equitable doctrines were developed to complement the sometimes inflexible rules of the common law. In Semester 1, students are introduced to basic equitable principles, including a study of equitable estates and interests. Unconscionable dealings are also studied in some detail. In Semester 2, major areas of study include the law of trusts and equitable remedies (including some defences).

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

LWB302 FAMILY LAW
An examination of 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. Subjects examined include the family as a legal phenomenon; annulment of marriages; dissolution of marriages; and consequences of separation and divorce, such as maintenance, adjustment of interests in property and custody.

Credit Points: 12  
Contact Hours: 3 per week

LWB303 COMMERCIAL LAW
The legal rules which govern mercantile dealings in personal property. The course encompasses the legal framework, the various kinds of personal property recognised in the Australian legal system, and rules which especially affect commercial transactions. Matters considered in detail include: nature and sources of commercial law; personal property; negotiable instruments including bills of exchange and cheques; bailment; sale of goods; and consumer protection under the Trade Practices Act 1974; insurance.

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

LWB305 JURISPRUDENCE
Jurisprudence (the 'philosophy of law' or 'legal theory') involves the application of insights gained from philosophy – in particular, from logic and from moral, political and social philosophy – to the study of law. The course includes the following topics: historical background to modern theories, sociological and historical descriptions of law and legal change, and theories of limited or unlimited government power, of recognition of valid law and legal systems, of legal reasoning, and of the proper objects of law and the proper direction of legal change.

Credit Points: 12  
Contact Hours: 3 per week

LWB306 LOCAL GOVERNMENT LAW
The course considers the source of legal authority for the government of cities, towns and shires, with particular reference to the City of Brisbane; the laws relating to town planning and subdivision, including the principles applicable to the rezoning of land; uses of land; the control exercised over subdivision of land by local authorities; rights to object to developments; the control exercised over subdivision of land by local authorities; rights of appeal from local authority decisions; and the structure, purpose and procedure of the Local Government Court.

Credit Points: 8  
Contact Hours: 2 per week

LWB307 INSOLVENCY LAW
The course consists of two parts. The first deals with the insolvency of individuals and involves a study of the Bankruptcy Act 1966 (Cth). The second part of the course covers winding up of companies, procedures other than winding up which may be open to an insolvent company, and the law relating to receivership of an insolvent company's assets – this includes a consideration of the relevant provisions of the Companies (Queensland) Code.

Credit Points: 8  
Contact Hours: 2 per week

LWB308 INDUSTRIAL LAW
The Industrial Law course examines the rights and duties of employers and employees under the law of employment, breach of these duties, and the remedies of both parties; a worker's entitlement to workers compensation, and the benefits available; the law governing the operation of trade unions and the rights of members; and settlement of industrial disputes in the Commonwealth and State spheres by conciliation and arbitration.

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.
Credit Points: 8  Contact Hours: 2 per week

**LWB311 ADMINISTRATIVE LAW**
An examination of the basis on which the courts review both administrative action taken by governments and delegated legislation, and of the remedies available and restrictions on judicial review. The alternative means of review (the Ombudsman and the Administrative Appeals Tribunal) and access to government information are examined also. The special position of the Crown and the question of government liability in contract and tort are also considered.
Credit Points: 12 per semester  Contact Hours: 3 per week

**LWB312 LAND CONTRACTS**
This course examines in detail the principles involved in the construction of Contracts for the sale of land, with special emphasis upon the current standard REIQ Contract in use in Queensland. Special consideration is given to statutory requirements as they affect such contracts, including those relating to building units and group titles conveyancing.
Credit Points: 12  Contact Hours: 3 per week

**LWB313 DISCRIMINATION/EQUAL OPPORTUNITY LAW**
An examination of the law and policy with respect to discrimination and equal opportunity in Australia; relevant international treaties and Australian legislation such as the Racial Discrimination Act, Sex Discrimination Act, Human Rights and Equal Opportunity Commission Act and Privacy Act are considered; the practice and procedure of the Human Rights Commission and state bodies.
Credit Points: 12  Contact Hours: 3 per week

**LWB401 COMPANY LAW & PARTNERSHIP**
Company Law dominates the course and is mostly concerned with registered companies. The law relating to proprietary companies is dealt with fully, that relating to public companies in outline only. Topics dealt with include: nature of registered companies, including procedure to obtain registration, and classification of registered companies; prospectuses; general meetings; enforcement of directors' and controlling members' duties; shares, share capital and dividends; and winding-up.
Credit Points: 12 per semester  Contact Hours: 3 per week

**LWB402 EVIDENCE**
The rules and principles that relate to the presentation and proof of facts to a Court of Law. Litigation largely involves the application of substantive law to the facts that are determined according to the rules of evidence – students’ knowledge of the substantive law is assumed. In addition to the technical rules that are considered during the course, students are encouraged to view the principles in the context of the adversary system and to recognise the problems of applying rigid rules within that system.
Credit Points: 12  Contact Hours: 3 per week

**LWB403 TAXATION LAW**
The course examines the Income Tax Assessment Act 1936 (Cth) and some related statutes. Matters dealt with in income tax include the administrative structure and scheme of the Act, residence of taxpayers, determining assessable income and deductions, taxation of partnerships, trusts and companies, capital gains tax; tax planning; liability of tax advisors, and some aspects of fringe benefit tax.
Credit Points: 12 per semester  Contact Hours: 3 per week

**LWB404 CIVIL PROCEDURE**
The procedure by which Courts resolve civil disputes. The course emphasises (but is not restricted to) the practice in the Supreme Court of Queensland, covering the rules of that Court and principles of law arising from them. Topics studied include commencement of proceedings, interlocutory applications, costs, appeals and execution of orders and judgements. The course is relevant to anyone dealing with jurisdictions based on the judgement system.
Credit Points: 12 per semester  Contact Hours: 3 per week

**LWB405 SOLICITORS’ TRUST ACCOUNTS**
Credit Points: 8  Contact Hours: 2 per week

**LWB406 PUBLIC INTERNATIONAL LAW**
An examination of 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, human rights, the law of armed conflict); the problem of the status of the law itself; comparative approaches to international legal thinking.
Credit Points: 12  Contact Hours: 3 per week

**LWB407 CONFLICT OF LAWS**
An in-depth analysis of the body of law governing the resolution of private legal problems with a significant foreign element. It includes: 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.
Credit Points: 12  Contact Hours: 3 per week

**LWB409 PROFESSIONAL CONDUCT**
All LLB students, whether they intend to become barristers or solicitors, must study both parts of this subject. Barristers – Lectures cover conduct and etiquette at the Bar, and deal specifically with the character of practice at the Bar; regulation of practice at the Bar in Queensland; and the respective duties of Barristers to the Law, the Court, the public, the client and the opponent. Solicitors – Matters dealt with include professional courtesies, division of the profession in Queensland, the Solicitors’ Ombudsman; professional conduct; duties of a solicitor, respective functions of barristers and solicitors, a solicitor acting for more than one party, advertising fees, trust accounts and legal professional negligence.
Credit Points: 2  Contact Hours: 2 per week for 5 weeks (10 hours)

**LWB410 TRADE PRACTICES LAW**
This elective course deals with the law established by the Trade Practices Act 1974 (Cth), as amended, and related State Laws. The course studies: background to, and need for, the legislation; constitutional basis of the Commonwealth Act; administrative arrange-
ments and enforcement procedures; control of "restrictive" practices; prohibition of "unfair" practices; and jurisdictional problems and remedies.
Credit Points: 12 Contact Hours: 3 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 will be the property of the Faculty of Law and may be placed in the Law Library. A student wishing to undertake the Research and Writing Project should discuss the matter as early as possible in the semester immediately before that in which he/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 will be undertaken, and the proposal will be accepted or refused — and the student notified accordingly — not later than the first day of that teaching semester.
Credit Points: 12

- LWB414 DRAFTING & LEGAL TRANSACTIONS
A study of the general principles of drafting and analysis of instruments commonly used in practice including deeds; special conditions in Torrens Title conveyancing contracts, options to purchase and renew, Land Act contracts, and business contracts and leases. The course includes an introductory study of stamp duty and its applications, and an examination of securities and trust instruments. Drafting covers mortgages, unit trusts and discretionary trusts, together with stamp duty implications.
Credit Points: 8 per semester Contact Hours: 2 per week

- LWB415 LEGAL RESEARCH & WRITING II
This advanced subject revises, extends and tests students' legal research skills acquired in the introductory subject. Sources from other jurisdictions such as the UK, Canada, New Zealand and the USA are included. An important section of this subject is the researching/writing of an assignment based on a problem which involves a number of subjects studied during the LLB course, including researching recent developments in the law in those areas.
Credit Points: 4 per semester Contact Hours: 1 per week

- LWB480 MEDIA LAW
The laws which shape the news media, their industry structure and their message content. Topics include journalists and their sources of information, defamation, contempt, confidential information, access to information, the Broadcasting Tribunal, and regulation of advertising and of ownership.
Credit Points: 12 Contact Hours: 2 per week

- LWB481 MINERAL LAW
Predominantly, the law governing and affecting the mining of "hard" minerals. The course begins with a short explanation of basic concepts, and then analyses mining legislation — with particular emphasis on Queensland legislation — and other legislation which has an impact on mining. The structure of mining ventures is also considered. Specific topics considered include: ownership of minerals; State agreements; securities; mining on private land; administration of mining legislation: Wardens' Courts; and environment protection legislation.
Credit Points: 12 Contact Hours: 3 per week

- LWB482 COMPUTERS & THE LAW
Computers and their impact upon the law including: use of computers in the individual legal practice; computerisation of the Titles Office, Companies Register, Parliamentary Drafting, Government Printer, Supreme Court; computer contracts; computer records as evidence; and implications of data storage for privacy, and freedom of information. The course includes instruction in the use of Computerised Legal Information Retrieval System (CLIRS).
Credit Points: 12 Contact Hours: 3 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.
Prerequisites: LWB101, LWB103
Credit Points: 8 Contact Hours: 2 per week

- LWD001 LAW FOR NURSES
Introduction to the Australian legal system; Commonwealth and State powers concerning health; consent and treatment/restraint of patients; negligence; the relationship between employer and employee; removal of patients from life support equipment and the law on euthanasia; abortion; transplantation of organs and tissue; medical records and confidentiality; control of poisons; the Coroners Act (Qld).
Credit Points: 3 Contact Hours: 2 per week

- LWN001 ADVANCED COMPANY LAW
This course studies various aspects of the current Australian Trade Practices Act 1974, not only from a purely professional viewpoint but also from a wider viewpoint of the policy issues involved. No knowledge of economics is required, although some readings will be drawn from economics. Topics dealt with include: the common law doctrine of restraint of trade; the economics of competition; markets, competition and market power; mergers; price fixing; misleading and deceptive conduct in general, and specifically; enforcement, remedies and authorisations under the Act.
Credit Points: 10 per semester Contact Hours: 2 per week
LWN007 COMMERCIAL ARBITRATION
Commercial arbitration - Australian and international. Course content includes: nature and conduct of arbitration proceedings, court control of arbitration, awards and their enforcement, and international commercial arbitration.
Credit Points: 10 per semester
Contact Hours: 2 per week

LWN008 COMMERCIAL LEASES
A detailed examination of the principles underlying modern commercial leases in the light of recent case law and Queensland statutory provisions affecting those interests, particularly the Retail Shop Leases Act, 1984. Included are sessions from specialist practitioners on drafting techniques and registration practice.
Credit Points: 10 per semester
Contact Hours: 2 per week

LWN011 LITIGATION
Successful litigation is a product of both favourable substantive law rights and a thorough knowledge and application of the rules of procedure and evidence. The course examines current issues in the litigation process which present interest or difficulty in legal practice. The emphasis is on procedure and evidence in the Supreme Court of Queensland, although other jurisdictions are considered.
Credit Points: 10 per semester
Contact Hours: 2 per week

LWN013 COMMERCIAL REMEDIES
The main emphasis is on study of judicial remedies in civil actions relating to commercial transactions. The course examines the theory and function of remedies and the application of the principles as they are developed in case law. Topics include: general principles of damages; equitable remedies; restitutionary remedies; and some statutory claims, and some statutory remedies. A knowledge of the substantive law giving rise to the existence of a right to seek a remedy is assumed, and the focus is on the process of selecting remedies to best enforce the particular right.
Credit Points: 10
Contact Hours: 2 per week

LWN017 RESTITUTION
A restitutionary claim is allowed when a defendant obtains a benefit which must be restored to the plaintiff. The basis on which restitution is made is that the defendant has been enriched at the plaintiff's expense and that it would be unjust to allow the defendant to retain the benefit. Liability lies outside the traditional areas of civil obligation, contract and tort. The course will examine the principles of restitution, that is those circumstances in which a remedy is allowed on the basis of unjust enrichment.
Credit Points: 12
Contact Hours: 2 per week

LWN019 TAXATION OF BUSINESS ENTITIES
The consequences of a sole trader setting up business in partnership with others, carrying on business activities by way of a business trust and a corporation. Approximately three-quarters of the course will be devoted to the carrying on of business activities through a corporation.
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.
Credit Points: 12
Contact Hours: 2 per week

LWN021 BANKING & FINANCE LAW I
Lending on the security of goods and priorities in relation to chattel securities; lending on the security of proceeds, assignment of choses in action and chattel paper, credit cards; financing through negotiable instruments, promissory notes and letters of credit; utilisation and property financing; project financing.
Credit Points: 12
Contact Hours: 2 per week

LWN022 BANKING & FINANCE LAW II
Securitisation of debts; SWAP transactions; international financing (including capital adequacy requirements); corporate restructurings; tax based finance transactions.
Credit Points: 12
Contact Hours: 2 per week

LWN023 INTERNATIONAL TRADE LAW
Origins, sources and modern developments; harmonisation of law; international commercial transactions; international sale of goods; countertrade; marketing arrangements; financing international transactions; carriage of goods by sea; carriage of goods by air; litigation; international commercial arbitration; other alternative dispute resolution; export assistance; investment protection; ANZCERTA; globalisation of legal services; principles of international business conduct; examination of the trade law of a selected trading partner of Australia.
Credit Points: 24
Contact Hours: 2 per week

LWN024 SELECT PROBLEMS OF TRIBUNALS & ENQUIRIES
Legal questions associated with principles and procedures of various public tribunals, at both Federal and State levels, including bodies such as Royal Commissions of Inquiries by parliamentary Committees.
Credit Points: 12
Contact Hours: 2 per week

LWN025 RESEARCH PROJECT I
A supervised research project over one semester approved by the Post-Graduate Studies Committee.
Credit Points: 12
Contact Hours: Variable supervision equivalent to two per week.

LWN026 RESEARCH PROJECT II
A supervised research project over the whole year approved by the Post-Graduate Studies Committee.
Credit Points: 24
Contact Hours: Variable supervision equivalent to two per week.

LWN032 CREDIT FOR UQ SUBJECT I
Under the course rules, a coursework student may, with the prior approval in writing of the Deans of the Faculties of Law of the Queensland University of Technology and of the University of Queensland, undertake one whole year or two one-semester subjects offered in the LLM degree by Coursework at the University of Queensland. This subject code represents a one-semester subject taken pursuant to that course rule at the University of Queensland.

LWN033 CREDIT FOR UQ SUBJECT II
Under the course rules, a coursework student may, with the prior approval in writing of the Deans of the Faculties of Law of the Queensland University of Technology and of the University of Queensland, undertake one whole year or two one-semester subjects offered in the LLM degree by Coursework at the University of Queensland. This subject code represents a one-semester subject taken pursuant to that course rule at the University of Queensland.
LWN034 CREDIT FOR UQ SUBJECT III
Under the course rules, a coursework student may, with the prior approval in writing of the Deans of the Faculties of Law of the Queensland University of Technology and of the University of Queensland, undertake one whole year or two one-semester subjects offered in the LL.M. degree by Coursework at the University of Queensland. This subject code represents a whole year subject taken pursuant to that course rule at the University of Queensland.

LWS001 MEDICINE & THE LAW
This subject seeks to teach students to appreciate the impact of some important fields of law upon the medical profession and upon hospital staff, patients and visitors. Introduction to law and the legal system. The Federal and State systems. General principles of the law of tort. Principles of negligence. Trespass. Liability of hospitals. Industrial law and industrial relations. Workers' compensation. Legal aspects of medical practice. Medical investigations. Medical ethics. A consideration of emerging legal issues surrounding surrogate motherhood and test-tube babies. Relevant Commonwealth and Queensland legislation and regulations will be introduced and court decisions will be studied.
Credit Points: 12  Contact Hours: 3 per week

LWS003 LAW & ENVIRONMENTAL HEALTH
How laws are made; statutory interpretation; contract; negligence; negligent advice given by professionals; local government law; evidence; conduct of a criminal trial; and civil court procedure.
Credit Points: 4  Contact Hours: 3 per week

MAA251 STATISTICS & DATA PROCESSING
A basic subject in statistics, including statistical terminology and organisation of data, elementary probability, binomial and normal distribution, sampling theory, regression and correlation.
Prerequisite: Approval of Head of School of Mechanical and Manufacturing Engineering
Credit Points: 8  Contact Hours: 3 per week

MAB001 MATHEMATICS FOR SCIENCE & TECHNOLOGY
Data handling; algebra; analytical geometry; trigonometry and calculus; vectors; complex numbers.
Credit Points: 12  Contact Hours: 21 per week over four weeks

MAB150 QUANTITATIVE TECHNIQUES
The interpretation of data and the application of numerical techniques.
Credit Points: 6  Contact Hours: 2 per week

MAB151 QUANTITATIVE TECHNIQUES
A basic mathematics unit with emphasis on the interpretation of data and the application of numerical techniques.
Credit Points: 6  Contact Hours: 2 per week

MAB156 STATISTICS
Organisation and analysis of data; introduction to statistical packages; probability and probability distributions; sampling theory; estimation; testing of hypothesis; regression and correlation; non-parameter statistics; analysis of variance.
Credit Points: 6  Contact Hours: 2 per week

MAB172 QUANTITATIVE METHODS IB
Organisation and analysis of data; probability and probability distributions; sampling theory; estimation: testing of hypothesis; regression and correlation.
Credit Points: 9  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 in the models and in addition they should be able to obtain solutions to these models.
Credit Points: 12  Contact Hours: 3 per week

MAB174 COMPUTER DATA ANALYSIS
Introduction to the use of a microcomputer in business, the use of the microcomputer for spreadsheet, word processing and descriptive statistical analysis; use of the ‘VP-Planner’ and ‘Word Perfect’ packages. Conducting surveys; analysis of survey sample data using the ‘Statgraphics’ package; the theoretical measures of statistics involving central tendency dispersion, probability and probability distributions.
Credit Points: 12  Contact Hours: 3 per week

MAB193 ENGINEERING MATHEMATICS I
Accuracy, relative and absolute errors; solution of systems of linear equations, determinants; vectors; complex numbers; elementary matrix algebra; differential and integral calculus of one variable, elementary multiple integrals; centre of gravity and moment of inertia.
Credit Points: 6 per semester  Contact Hours: 3 per week

MAB195 QUANTITATIVE METHODS I
Applications of plane and solid geometry in design, revision of basic geometry; construction and packing of solids; spherical geometry and its applications. Application of trigonometry in design; calculation of heights, distances, areas and volumes.
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.
Credit Points: 6  Contact Hours: 3 per week

MAB199 SURVEY MATHEMATICS I
Credit Points: 12  Contact Hours: 6 per week

MAB211 MATHEMATICS I A
Elementary functions; differentiation; integration; matrices.
Credit Points: 8  Contact Hours: 3 per week

MAB216 DISCRETE MATHEMATICS
Axiomatic systems; modular arithmetic; finite groups; elementary number theory.
Co-requisite: MAB211
Credit Points: 8  Contact Hours: 3 per week

Note: This subject is not compatible with MAB409; credit may not be retained for both.
MAB224 MATHEMATICS IB
Integration; elementary ordinary differential equations; partial differentiation; analytic geometry.
Prerequisite: MAB211
Credit Points: 8
Contact Hours: 3 per week

MAB225 MATHEMATICS IC
Introduction to vector algebra, complex numbers and in finite series.
Prerequisite: MAB211
Co-requisite: MAB224
Credit Points: 8
Contact Hours: 3 per week

MAB226 MATHEMATICS ID
Limits and continuity, vector geometry; curve sketching.
Prerequisite: MAB211
Credit Points: 8
Contact Hours: 3 per week

MAB227 STATISTICS
Data handling; probability; sampling; estimation; tests of hypothesis; regression and correlation; experimental design.
Prerequisite: MAB211
Credit Points: 8
Contact Hours: 3 per week

MAB251 MATHEMATICS I
Data handling; determinants and matrices; differentiation with applications; partial differentiation; integral calculus with applications; numerical methods.
Credit Points: 8
Contact Hours: 4 per week

MAB252 STATISTICS
Organisation and analysis of data; probability and probability distributions; sampling theory; estimation; tests of hypothesis; regression and correlation.
Prerequisite: MAB130 or MAB251
Credit Points: 4
Contact Hours: 2 per week

MAB258 EXPERIMENTAL DESIGN
Goodness of fit tests and tests of independence using Chi-square distribution; introduction to multiple regression; statistical quality control; analysis of variance, introduction to non-parametric methods.
Prerequisite: MAB232
Credit Points: 4
Contact Hours: 4 per week

MAB259 BIOMEDICAL STATISTICS
Goodness of fit tests and tests of independence using Chi-square distribution; introduction to multiple regression; statistical quality control; analysis of variance; introduction to non-parametric methods.
Prerequisite: MAB232
Credit Points: 6
Contact Hours: 2 hours per week

MAB297 MATHEMATICS FOR CONSTRUCTION
Data handling and basic algebra, geometry, trigonometry, vector techniques; introduction to financial mathematics; introduction to probability and statistics.
Credit Points: 4
Contact Hours: 2 per week

MAB298 MATHEMATICS & STATISTICS
Data handling, basic algebra, geometry, trigonometry, vector techniques; introduction to financial mathematics; introduction to probability and statistics.
Credit Points: 4
Contact Hours: 2 per week

MAB301 CALCULUS & ANALYSIS A
Real valued functions; differentiation; introduction to partial differentiation; integration; techniques of integration; elementary special functions.
Credit Points: 10
Contact Hours: 3 per week

MAB302 CALCULUS & ANALYSIS B
Infinite series; improper integrals; complex numbers; functions of complex variables, analyticity; introduction to differential equations.
Prerequisite: MAB301
Credit Points: 10
Contact Hours: 3 per week

MAB309 MODERN ALGEBRA
Sets; relations and functions; binary operations; number theory; group theory; rings and fields.
Credit Points: 10
Contact Hours: 3 per week

MAB310 LINEAR ALGEBRA
Matrices; vector spaces; linear transformations; eigenvalues and eigenvectors. Euclidean spaces; quadratic forms.
Credit Points: 10
Contact Hours: 3 per week

MAB317 MATHEMATICAL STATISTICS I
Collection and representation of data, parameters and statistics; introduction to the theory of probability and probability distributions; elementary treatment of sampling theory leading to the normal, t, F and chi-squared distributions; statistical estimation and tests of hypotheses based on the normal, t, F and chi-squared distributions.
Prerequisite: MAB301
Credit Points: 10
Contact Hours: 3 per week

MAB318 MATHEMATICAL STATISTICS IIA
Introduction to quality control, introduction to non-parametric tests of hypotheses; simple linear regression and introduction to multiple linear regression; correlation; fundamentals of one factor and two factor experimental design and the analysis of variance.
Prerequisites: MAB301, MAB317
Credit Points: 10
Contact Hours: 3 per week

MAB331 INTRODUCTORY VECTOR ANALYSIS
Introduction to determinants; addition and subtraction of vectors; vector products, physical and geometrical applications; differential geometry of curves; conic sections; kinematics of a particle; relative motion.
Credit Points: 10
Contact Hours: 3 per week

MAB342 MATHEMATICS OF FINANCE
Interest rates; solution of problems in compound interest; annuities; applications of annuities; capital redemption policies; valuation of securities; effects of taxation; introduction of basic modelling techniques.
Credit Points: 10
Contact Hours: 3 per week

MAB409 MODERN ALGEBRA
Set theory, relations and functions, binary operations, number theory, group theory; rings and fields.
Prerequisite: MAB211
Credit Points: 10
Contact Hours: 3 per week
Note: This subject is not compatible with MAB216; credit may not be retained for both.

MAB410 LINEAR ALGEBRA A
Matrices; vector spaces; linear transformations; eigenvalues and eigenvectors. Euclidean spaces; quadratic forms.
Prerequisite: MAB225
Credit Points: 10
Contact Hours: 3 per week

MAB411 MATHEMATICS IIA
Laplace transforms; ordinary differential equations; multivariable calculus; applications particularly relevant to physics.
Prerequisite: MAB225
Credit Points: 10
Contact Hours: 3 per week
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Title</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>MAB412</td>
<td>MATHEMATICS IIB</td>
<td>Fourier series; partial differential equations; vector analysis; applications particularly relevant to physics.</td>
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<td>Credit Points: 10</td>
<td>Contact Hours: 3 per week</td>
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<tr>
<td>MAB417</td>
<td>MATHEMATICAL STATISTICS A</td>
<td>Collection and representation of data, parameters and statistics; introduction to the theory of probability and probability distributions; elementary treatment of sampling theory leading to the normal, t, F and chi-squared distributions; statistical estimation and tests of hypotheses based on the normal, t, F and chi-squared distributions.</td>
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<td>Prerequisite: MAB224</td>
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<td>Credit Points: 10</td>
<td>Contact Hours: 3 per week</td>
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<tr>
<td>MAB418</td>
<td>MATHEMATICAL STATISTICS B</td>
<td>Introduction to quality control; non-parametric tests of hypothesis; simple linear regression and introduction to multiple linear regression, correlation; fundamentals of one factor and two factor experimental design and the analysis of variance.</td>
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<td>Prerequisite: MAB417</td>
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<td>Credit Points: 10</td>
<td>Contact Hours: 3 per week</td>
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<tr>
<td>MAB425</td>
<td>MATHEMATICS 2C</td>
<td>Partial differentiation, complex analysis, differential equations; special functions; applications particularly relevant to physics.</td>
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<td>Prerequisite: MAB411</td>
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<td>Credit Points: 10</td>
<td>Contact Hours: 3 per week</td>
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<tr>
<td>MAB442</td>
<td>FINANCIAL MATHEMATICS</td>
<td>Interest rates, solution of problems in compound interest, annuities and applications; capital redemption policies; valuation of securities, effects of taxation; introduction to basic modelling techniques.</td>
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<td>Prerequisite: MAB211</td>
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<td>Credit Points: 10</td>
<td>Contact Hours: 3 per week</td>
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<tr>
<td>MAB493</td>
<td>ENGINEERING MATHEMATICS II</td>
<td>Solution of systems of linear equations by direct and iterative methods, rank of a matrix; representation of a function by Taylor series, Maclaurin series, Fourier series; finite differences, polynomial interpolation, Newton-Gregory interpolation formula; solution of first and second order differential equations, operator-D and Laplace transform methods, Taylor series and Runge-Kutta techniques; basic descriptive statistics, probability theorems, distributions.</td>
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<td>Prerequisite: MAB193</td>
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<td>Credit Points: 6</td>
<td>Contact Hours: 3 per week</td>
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<tr>
<td>MAB495</td>
<td>SURVEY MATHEMATICS II</td>
<td>Calculus, Matrix algebra, Spherical trigonometry. Three-dimensional coordinate geometry.</td>
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<td>Prerequisite: MAB199</td>
<td>Contact Hours: 6 per week</td>
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<tr>
<td>MAB499</td>
<td>BASIC STATISTICS FOR SURVEYORS</td>
<td>Descriptive statistics, frequency distributions and their graphical representation, probability, sampling, estimation, tests of hypothesis, regression and correlation.</td>
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<td>Prerequisite: MAB199 [R]</td>
<td>Contact Hours: 2 per week</td>
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<tr>
<td>MAB601</td>
<td>MULTIVARIABLE CALCULUS A</td>
<td>Differentiation, extrema, double integrals, triple integrals, surface integrals, complex integration.</td>
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<td></td>
<td>Prerequisite: MAB301, MAB302, MAB331</td>
<td>Contact Hours: 3 per week</td>
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<tr>
<td>MAB602</td>
<td>MULTIVARIABLE CALCULUS C</td>
<td>Vector algebra; scalar and vector fields; line integrals; surface integrals; differential field operators; the integral properties of fields; curvilinear coordinates; application to potential theory, hydrodynamic theory and electromagnetic theory; calculus of variations, functionals; Euler's differential equation; variational problems with subsidiary conditions.</td>
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<td>Prerequisite: MAB331</td>
<td>Contact Hours: 3 per week</td>
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<tr>
<td>MAB608</td>
<td>MATHEMATICAL STATISTICS III</td>
<td>Properties and uses of the beta, gamma and exponential probability distribution; introduction to bivariate and multivariate distribution theory; multiple and curvilinear regression theory; three factor, factorial and fractional factorial experimental designs.</td>
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<td></td>
<td>Prerequisite: MAB318 Co-requisite: MAB601</td>
<td>Contact Hours: 3 per week</td>
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<tr>
<td>MAB610</td>
<td>APPLIED LINEAR ALGEBRA</td>
<td>Vector spaces and matrices; vector and matrix norms; discrete Markov chains with a finite number of states; vector spaces over finite fields; quadratic forms; least square solution of linear equations; random vectors and matrices.</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: MAB310 Co-requisite: MAB612</td>
<td>Contact Hours: 3 per week</td>
</tr>
<tr>
<td>MAB612</td>
<td>DIFFERENTIAL EQUATIONS</td>
<td>Vector spaces with inner product; linear operators in finite dimensional spaces; linear differential equations; series methods; Laplace transform; self adjoint boundary value problems and Fourier series; partial differential equations.</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: MAB301, MAB302 and MAB310</td>
<td>Contact Hours: 3 per week</td>
</tr>
<tr>
<td>MAB618</td>
<td>NUMERICAL ANALYSIS I</td>
<td>Errors; systems of linear equations (direct methods); solution of non-linear equations; interpolation and approximation; numerical quadrature; numerical solution of first order differential equations.</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: MAB301 [R], MAB310 [R] and CSB155</td>
<td>Contact Hours: 3 per week</td>
</tr>
<tr>
<td>MAB619</td>
<td>NUMERICAL ANALYSIS II</td>
<td>Systems of linear equations (iterative methods); solution of non linear equations; interpolation and approximation; numerical quadrature; eigenvalue problem; ordinary differential equations.</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: MAB618, MAB301 and MAB310</td>
<td>Contact Hours: 3 per week</td>
</tr>
<tr>
<td>MAB635</td>
<td>CLASSICAL THEORETICAL MECHANICS</td>
<td>Mathematical model of Newtonian mechanics; statics; conservation laws of dynamics; impulsive motion in one dimension; motion of a particle in one dimension. examples; motion of a particle in two dimensions, examples.</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: MAB302, MAB331</td>
<td>Contact Hours: 3 per week</td>
</tr>
<tr>
<td>MAB637</td>
<td>OPERATIONS RESEARCH IA</td>
<td>The simplex algorithm; simulation, replacement, maintenance and reliability; networks.</td>
</tr>
<tr>
<td></td>
<td>Prerequisite: MAB301, MAB317, MAB310 and CSB155</td>
<td>Contact Hours: 3 per week</td>
</tr>
</tbody>
</table>
MAB638 OPERATIONS RESEARCH II
The revised simplex method; transportation and transshipment; assignment; parametric analysis; inventory; introduction to queuing.
Prerequisite: MAB637
Credit Points: 10  Contact Hours: 3 per week

MAB641 ACTUARIAL MATHEMATICS
The life table; demographic techniques; pure endowments and annuities; assurances; policy values; laws of mortality; benefits depending on other contingencies; pension funds.
Co-requisite: MAB342
Credit Points: 10  Contact Hours: 3 per week

MAB710 LINEAR ALGEBRA B
Vector spaces and matrices; vector and matrix norms; discrete Markov chains with a finite number of states; vector spaces over finite fields; quadratic forms, least square solution of linear equations; random vectors matrices.
Prerequisite: MAB410
Credit Points: 10  Contact Hours: 3 per week

MAB718 NUMERICAL ANALYSIS A
Errors; systems of linear equations (direct methods); solution of non-linear equations; interpolation and approximation; numerical quadrature; numerical solution of first order differential equations.
Prerequisites: MAB224, CSB155
Credit Points: 10  Contact Hours: 3 per week

MAB719 NUMERICAL ANALYSIS B
Systems of linear equations (iterative methods); solution of non linear equations; interpolation and approximation; numerical quadrature; eigenvalue problem; ordinary differential equations.
Prerequisites: MAB718, MAB410
Credit Points: 10  Contact Hours: 3 per week

MAB735 MECHANICS
Mathematical model of Newtonian mechanics; statics; conservation laws of dynamics; impulsive motion in one dimension; motion of a particle in one dimension; motion of a particle in two dimensions.
Prerequisites: MAB411 and MAB226 or MAB412
Credit Points: 10  Contact Hours: 3 per week

MAB737 OPERATIONS RESEARCH A
The simplex algorithm, simulation; replacement, maintenance and reliability; networks.
Prerequisites: MAB417, MAB410 and CSB155
Co-requisite: MAB442
Credit Points: 10  Contact Hours: 3 per week

MAB738 OPERATIONS RESEARCH B
The revised simplex method; transportation and transshipment; assignment; parametric analysis; inventory; introduction to queuing.
Prerequisite: MAB737
Credit Points: 10  Contact Hours: 3 per week

MAB741 ACTUARIAL MATHEMATICS
The life table; demographic techniques; pure endowments and annuities; assurances; policy values; laws of mortality; benefits depending on other contingencies; pension funds.
Prerequisite: MAB211 Co-requisite: MAB442
Credit Points: 10  Contact Hours: 3 per week

MAB782 FIELD THEORY
Tensor analysis; curvilinear coordinates; application to potential theory, hydrodynamic and electromagnetic theory; calculus of variations, functionals.
Prerequisite: MAB425
Credit Points: 10  Contact Hours: 3 per week

MAB788 MATHEMATICAL STATISTICS
Properties and uses of the beta, gamma and exponential probability distribution; introduction to bivariate and multivariate distribution theory; multiple and curvilinear regression theory; three factor, factorial and fractional factorial experimental designs.
Prerequisites: MAB418, MAB411
Credit Points: 10  Contact Hours: 3 per week

MAB795 SURVEY MATHEMATICS III
Prerequisite: MAB495
Credit Points: 6  Contact Hours: 3 per week

MAB893 ENGINEERING MATHEMATICS III
Eigenvectors and eigenvalues, quadratic forms, determination of dominant eigenvalue by iteration; sampling theory, hypothesis testing, linear regression and correlation, analysis of variance; introduction to linear programming.
Prerequisite: MAB493
Credit Points: 6  Contact Hours: 3 per week

MAB894 ENGINEERING MATHEMATICS IV
Solution of linear systems of differential equations employing operator-D and Laplace transform methods, variation of parameters methods for non-homogenous equations; solution of partial differential equations; separation of variables method, introduction to numerical techniques; complex variables, Cauchy-Riemann equations, conformal mapping.
Prerequisite: MAB493
Credit Points: 6  Contact Hours: 3 per week

MAB906 TOPICS IN ANALYSIS
Topics selected from the following: measures; Lebesque integrals; product of measures; normed spaces; metric spaces; constrained optimisation, Gateaux and Frechet derivatives.
Prerequisites: MAB601, MAB612
Credit Points: 12  Contact Hours: 3 per week

MAB907 MATHEMATICAL STATISTICS IIIA
Distributions of functions of random variables; estimation theory; introduction to multivariate normal distribution theory.
Prerequisite: MAB608
Credit Points: 12  Contact Hours: 3 per week

MAB908 MATHEMATICAL STATISTICS IIIB
Experimental design; three factor designs, balanced incomplete designs, introduction to the analysis of covariance; introduction to stochastic processes; random walk, branching processes, Markov chains; sampling theory; random and stratified sampling; multi-stage sampling; probability proportional to size sampling.
Prerequisite: MAB608
Credit Points: 12  Contact Hours: 3 per week

MAB913 NUMERICAL ANALYSIS III
Approximation; numerical solutions of ordinary differential equations; partial differential equations; overview of finite element method.
Prerequisite: MAB619
Credit Points: 12  Contact Hours: 3 per week
MAB920 CODING & ENCRYPTION TECHNIQUES
Number theory, finite fields, linear shift registers, block coding theory, cyclic codes, BCH and Reed-Solomon codes, block coding techniques, convolutional codes, introduction to cryptography stream ciphers, block ciphers, public key systems, and secure speech communications.
Prerequisite: MAB610 or EEB661
Credit Points: 12 Contact Hours: 3 per week

MAB921 METHODS OF MATHEMATICAL PHYSICS A
Equations of mathematical physics; mathematical methods; separation of variables; transform method; conformal transformation; theory of distributions and applications to Green's function method; finite difference method; two-dimensional wave equations, examples; two-dimensional Laplace equation.
Prerequisite: MAB601, MAB612
Credit Points: 12 Contact Hours: 3 per week

MAB924 APPLIED STATISTICAL TECHNIQUES
The general linear model; errors in variables; autocorrelation; single equation problems; simultaneous equations problems; estimation methods.
Prerequisite: MAB608
Credit Points: 12 Contact Hours: 3 per week

MAB927 OPERATIONS RESEARCH IIA
Linear programming; integer and non-linear programming; dynamic programming; Heuristic methods.
Prerequisite: MAB638
Credit Points: 12 Contact Hours: 3 per week

MAB928 OPERATIONS RESEARCH IIIB
Simulation; queueing; decision analysis; implementation in operations research.
Prerequisite: MAB637
Credit Points: 12 Contact Hours: 3 per week

MAB929 STATISTICAL FORECASTING
Introduction; smoothing methods; decomposition methods; ARMA time series methods; Box-Jenkins method, causal models; quantitative and technological methods of forecasting; comparison and selection of forecasting methods.
Prerequisite: MAB608
Credit Points: 12 Contact Hours: 3 per week

MAB941 METHODS OF MATHEMATICAL ECONOMICS
Mathematical models in economics; macroeconomic models; techniques for dynamic economic models; introduction to stability theory; stability of non-linear systems; optimisation theory; the maximum principles of Pontryagin; optimal economic growth.
Prerequisites: MAB601, MAB612
Credit Points: 12 Contact Hours: 3 per week

MAB960 PROJECT WORK
Students, either individually or in small groups, undertake a substantial project which is relevant to the needs of industry and which is designed to give students insight into industrial requirements. Each student, or group of students, undertakes a different project and is supervised, generally by a member of staff, throughout the duration of the project.
Prerequisite: Successful completion of at least two third level optional units in addition to all mandatory mathematics units.
Credit Points: 12 Contact Hours: 3 per week

MAN255 STATISTICS
Development of a sound working knowledge of basic ideas and the application of this knowledge to situations frequently occurring in the fields of Analytical Chemistry.
Credit Points: 6 Contact Hours: 2 per week

MAP111 STATISTICAL METHODS IN QUALITY
Describing variation, frequency distribution, histogram, estimation of parameters. Important distributions useful in describing quality-related phenomena, binomial, hypergeometric, Poisson, normal, exponential, Weibull. Approximations, Poisson to binomial, normal to binomial etc. Sampling distributions, Interval estimation and tests of hypotheses. Type I and type II errors.
Credit Points: 6 Contact Hours: 3 per week

MAP121 STATISTICAL PROCESS CONTROL
Credit Points: 6 Contact Hours: 3 per week

MAP211 SAMPLING PROCEDURES
Basic concepts and principles in sampling. Attribute batch sampling, sampling plans (single, double and multiple), O.C. curves, AS1199, terminology and definitions, choice of plan and switching rules. Attribute batch sampling with rectifying inspection, Dodge Romig procedure, use of tables. Attribute continuous sampling and the Dodge system (CSV-1 etc). Sampling by variables, plans and procedures. AS2490, terminology and definitions, inspection rules.
Credit Points: 6 Contact Hours: 3 per week

MAP221 QUALITY PROBLEM SOLVING TECHNIQUES
Collection of data and use of check sheets. Histogram as a diagnostic tool. Pareto diagram, stratified data, use of weighted factors; Ishikawa chart, dispersion analysis and process classification type. Kepner Tregoe technique. Correlation analysis, scattergram and the Tukey corner test, independence and spurious correlation, regression equation and prediction. Design of experiments, principles and basic concepts, Latin Square design, factorial experiments, hierarchical designs.
Credit Points: 8 Contact Hours: 2 per week

MAP256 STATISTICS
Probability distributions; sampling techniques; statistical inference and hypothesis testing; basic experimental designs; regression analysis; correlation; non-parametric techniques.
Credit Points: 4 Contact Hours: 2 per week

MAS090 MATHEMATICS
This intensive subject is aimed at providing an appropriate background for those who may wish to undertake a tertiary course in science, business or other areas which require competence in certain mathematical areas prior to entry. Topics introduced include algebra, analytical geometry, trigonometry, differential and in-
This intensive subject is aimed at providing an appropriate background for those who may wish to undertake a tertiary course in science, business or other areas which require competence in certain mathematical areas prior to entry. Topics introduced include algebra, analytical geometry, trigonometry, differential and integral calculus, matrices and a selection of applications from elementary statics, kinematics, dynamics and statistics. The treatment assumes some initial knowledge of basic algebra, such as manipulation of indices and factorisation, and elementary trigonometry at a level equivalent to Year 10 Advanced Mathematics.

Credit Points: 12
Contact Hours: 6 per week, Semester 2; 21 per week, Summer School

MATH01 MATHEMATICS
This subject is aimed at providing a mathematical background pertinent to those who may wish to undertake a tertiary course in computing. Topics introduced include algebra, matrices, analytical geometry, trigonometry, propositions and truth tables, set theory. 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.

Credit Points: 6
Contact Hours: 3 per week

MATH10 DYNAMICS I
Simplified analysis and modelling methods; motion found in architecturally relevant machines and mechanisms; forces due to inertia, impacts, and collisions; damage and vibration arising from forces; fluids, transmission in pipes and channels, mechanisms of erosion, forces exerted on structures; methods of measurement and testing; physical modelling with readily available materials and easily constructed models.

Credit Points: 4
Contact Hours: 2 per week

MATH12 DYNAMICS II
Continuation of MATH10: further treatment of machines and mechanisms; unbalanced forces in rotating bodies; gyroscopic effects; vibrations due to unbalance; vibration control; earthquakes and their effects; interaction of fluids and structures under gusty conditions, ocean waves, and natural phenomena; further work on measurements; model studies of more realistic cases.

Prerequisite: MATH10
Credit Points: 4
Contact Hours: 2 per week

MATH31 MATERIALS TECHNOLOGY
A structure property approach to orthotic materials; plastics; rubber; metals; composites; modes of failure; strength; creep; fatigue; resilience; selection procedures.

Credit Points: 8
Contact Hours: 2 per week

MATH35 SAFETY TECHNOLOGY I
The importance and relevance of safety in the workplace; analysis of the accident process; the hazards associated with machinery and materials failure.

Prerequisites: BGB151, PNB230
Co-requisite: PNB211
Credit Points: 10
Contact Hours: 4 per week

MEB101 DESIGN I
Mechanical design: power transfer; V-belt drives; chain drives; gear drives; selection of machine components.

Prerequisites: MEB121, CEB184
Co-requisites: MEB133, CEB185, MEB111
Credit Points: 8
Contact Hours: 3 per week

MEB111 DYNAMICS
Basic concepts of 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.

Credit Points: 7
Contact Hours: 3 per week

MEB121 ENGINEERING GRAPHICS
Principles of geometric drawing; orthographic projection; auxiliary views; sectioning; component detailing; surface developments; assembly drawing; CAD.

Credit Points: 6
Contact Hours: 3 per week

MEB131 DYNAMICS II
Basic concepts of 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.

Credit Points: 7
Contact Hours: 3 per week

MEB171 INTRODUCTION TO MANUFACTURING
The role of manufacturing industry in the Australian economy; modern concepts in manufacturing systems design; interrelationship between design, materials selection, manufacturing, processes, marketing and information processing of products will be presented; choice of manufacturing technologies in relation to product quality and quantity.

Credit Points: 3
Contact Hours: 1.5 per week

MEB173 MANUFACTURING PRACTICE
The role of manufacturing industry in the Australian economy; modern concepts in manufacturing systems design; the interrelationship between design, materials selection, manufacturing processes, marketing and information processing of products; the choice of manufacturing technologies in relation to product quality and quantity; hands-on experience in manufacturing processes; metrology laboratory and systems modelling.

Credit Points: 7
Contact Hours: 3 per week

MEB200 INDUSTRIAL EXPERIENCE I
Students should engage in at least five weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both student and the employer.

Contact Hours: 5 weeks

MEB230 MATERIALS II
Solidification of ingots and castings; segregation; defects; properties of cast irons; steel and non-ferrous alloys. Properties of welded materials; arc characteristics; metal transfer; thermal diffusivity; cooling
rates and transformations; carbon equivalents; hot and cold cracking; residual stresses and dilution effects. Properties of wrought materials; strain hardening; anisotropy, preferred orientation; defects; toughness. Microstructures and properties of high strength low alloy steels. Important non-ferrous alloys.

Prerequisite: MEB133
Credit Points: 6 Contact Hours: 3 per week

- MEB31 MATERIALS III
  The structure and properties of polymers; composites and modern engineering ceramics; stress transformations; fibre and matrix properties; fibre density and orientation; role of mixtures; modern engineering polymers; properties and applications; fracture toughness of polymers, ceramics and metals; linear elastic fracture mechanics; applications to static and dynamic forces such as fatigue and stress corrosion cracking.
  Prerequisite: MEB132
  Credit Points: 6 Contact Hours: 3 per week

- MEB25 THERMODYNAMICS I
  The basics of engineering thermodynamics; reversibility; first and second laws of thermodynamics; applications to heat engines, compressors, engines testing etc; particular emphasis being given to single phase systems; field visit.
  Credit Points: 6 Contact Hours: 3 per week

- MEB25 THERMODYNAMICS II
  Steam plant; impulse and reaction turbines; gas turbines and refrigeration; field visit.
  Prerequisite: MEB250
  Credit Points: 6 Contact Hours: 3 per week

- MEB270 INDUSTRIAL EXPERIENCE I
  Students should engage in at least five weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
  Contact Hours: 3 weeks

- MEB300 INDUSTRIAL EXPERIENCE II
  Students should engage in at least five weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both the student and the employer.
  Contact Hours: 3 weeks

- MEB313 MECHANICS I
  Kinematic and dynamic analysis of linkages and mechanisms; linkage synthesis applied to spatial mechanisms and robotics; the design and synthesis of overlappings and the kinematic analysis of gears.
  Prerequisite: CEB184, MEB111, CEB185
  Credit Points: 6 Contact Hours: 3 per week

- MEB39 MATERIALS & MANUFACTURING PROJECT
  The project exposes the student to self-regulated but supervised research on a specific topic associated with materials or manufacturing engineering. A survey of relevant literature and organised experimental work resulting in conclusions presented in a formal report.
  Prerequisite: MEB230, MEB231
  Credit Points: 6 Contact Hours: 3 per week

- MEB361 FLUIDS I
  Fluid mechanics; forces in a fluid at rest and its action on submerged and floating bodies; manometry; pressure distribution in a liquid subjected to acceleration; different types of flow, momentum and energy-equations; flow through orifices and vortex flow.
  Prerequisite: MEB111, CEB182, MAB193
  Credit Points: 6 Contact Hours: 3 per week

- MEB370 MANUFACTURING SYSTEMS I
  Practical machining principles; mechanics of chip formation; speeds and feeds selection; practical applications in metrology; Numerical Control and parts programming; processing of plastics.
  Prerequisite: MEB171
  Credit Points: 6 Contact Hours: 3 per week

- MEB381 DESIGN II
  Methodology for mechanical design: design of machine elements; design for strength and fatigue; computer-aided design.
  Prerequisite: MEB121, MEB101, CEB184, CEB185
  Co-requisite: MEB313
  Credit Points: 6 Contact Hours: 3 per week

- MEB402 INDUSTRIAL EXPERIENCE III
  Students should engage in at least five weeks' employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both student and the employer.
  Contact Hours: 5 weeks

- MEB408 PROJECT A (MECHANICAL)
  Investigate in depth and present a formal report on a mechanical engineering problem; project may be industry based or arise from applied research.
  Prerequisite: MEB339 Co-requisite: MEB489
  Credit Points: 16 per semester
  Contact Hours: 6 per week

- MEB409 PROJECT B (MECHANICAL)
  Investigate in depth and present a formal report on a mechanical engineering problem; project may be industry based or arise from applied research.
  Prerequisite: MEB339 Co-requisite: MEB489
  Credit Points: 8 per semester
  Contact Hours: 3 per week

- MEB411 THEORY OF MACHINES
  Balancing of mechanisms and rotors; gyroscopic effects in mechanisms, rotors and vehicles; gear trains, simple and epicyclic; friction and centrifugal devices such as clutches and governors.
  Prerequisite: MEB111, CEB184, CEB185
  Credit Points: 7 Contact Hours: 3 per week

- MEB450 AIR CONDITIONING
  Psychrometry, cooling load calculations; air conditioning systems; vapour compression; refrigeration cycle analysis; multipressure systems; absorption refrigeration; field visit.
  Prerequisite: MEB251, MEB462
  Co-requisite: MEB550
  Credit Points: 7 Contact Hours: 3 per week

- MEB462 FLUIDS II
  Fluid flow in closed conduits; rotodynamic machines; hydraulic transmissions; water hammer in pipes; dimensional analysis and dynamic similarity.
  Prerequisite: MAB193
  Co-requisite: MEB361, MAB493
  Credit Points: 6 Contact Hours: 3 per week

- MEB463 TRIBOLOGY
  The fundamentals of tribology; specification and measurement of surface roughness; lubrication...
modes; lubricants; wear modes; bearing design; lubrication of machine elements; seals.
Credit Points: 6  Contact Hours: 3 per week

- MEB464 FLUIDS III
  Boundary layer theory; a general approach to viscous flow via the Navier-Stokes and Reynolds’ equations; Isentropic compressible flow; normal and oblique shock waves.
  Prerequisites: MEB462, MAB893
  Credit Points: 7  Contact Hours: 3 per week

- MEB470 INDUSTRIAL EXPERIENCE II
  Students should engage in at least five weeks’ employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both student and the employer.
  Contact Hours: 5 weeks

- MEB471 MANUFACTURING ENGINEERING I
  Practical machining principles and mechanics of chip formation; economics of machining; practical applications in metrology; NC part programming.
  Credit Points: 6  Contact Hours: 3 per week

- MEB472 MANUFACTURING SYSTEMS II
  Fundamentals and applications of plastic theory in the deformation of metals and plastics; concepts and applications of non-traditional machining and forming processes; introduction of numerical control technology and practical applications in NC part programming.
  Prerequisite: MEB370
  Credit Points: 6  Contact Hours: 3 per week

- MEB483 DESIGN III
  The design of mechanisms; welded structures; flexible components; journal bearings; computer-aided design.
  Prerequisites: MEB133, MEB111, CEB102, CSB191, MEB381
  Co-requisites: MEB411, MEB231, MEB313
  Credit Points: 7  Contact Hours: 3 per week

- MEB489 MECHANICAL DESIGN PROJECT
  A team approach to design: projects drawn from either QUT or industry; application of theoretical and practical design principles; design, draw and supervise manufacture of project; presentation of formal report.
  Prerequisites: MEB483, MEB610, MEB511, MEB773
  Co-requisites: MEB772, MEB911
  Credit Points: 7 per semester
  Contact Hours: 3 per week

- MEB500 SPECIAL TOPIC I
  A series of lectures and tutorials in subject areas which are of special professional relevance to the student’s intended career path, or which may be available on occasions from visiting scholars and which may be relevant to the undergraduate program.
  Prerequisite: Students will need to have achieved an appropriate level of preparation in the topic area concerned.
  Co-requisite: Will depend on the syllabus of the particular special topic offered.
  Credit Points: 7  Contact Hours: 3 per week

- MEB510 NOISE & VIBRATIONS
  Introduction to noise and vibration measurements and instrumentation, free and forced vibration, normal mode vibration, Holzer’s method, Mykelstad’s method.
  Noise levels, A-weighting, leq, SEL, noise dose and standards, Sound power, absorption, fields and the behaviour of sound relating to rooms, enclosures and partitions.
  Prerequisites: PHB132, MAB493
  Co-requisite: MAB893
  Credit Points: 7  Contact Hours: 3 per week

- MEB511 STRESS ANALYSIS
  Analysis of strain and stress; including strain-displacement relations and stress and strain transformation; two-dimensional problems including curved bars, thick-walled cylinders and rotating discs; tension of prismatic bars and thin-walled sections; failure criteria and their applications; experimental strain measurement and analysis.
  Credit Points: 7  Contact Hours: 3 per week

- MEB531 ADVANCED MATERIALS
  Properties and applications for modern advanced composites; fibre reinforcements of ceramic, metal and polymer materials; coatings of metals and ceramics by vapour deposition; plasma and advanced techniques; surface treatments for frictional and wear performance; properties of ultra high strength steels.
  Prerequisites: MEB230, MEB231
  Credit Points: 7  Contact Hours: 3 per week

- MEB550 HEAT TRANSFER
  Conduction (steady-state, 1 and 2 dimensions, unsteady-state); convection (boundary layers, forced, natural) and radiation (black and grey bodies, shape factors).
  Credit Points: 6  Contact Hours: 3 per week

- MEB560 INDUSTRIAL EXPERIENCE III
  Students should engage in at least five weeks’ employment, approved by the Head of School. For the employment to be recognised, students must submit an industrial experience record form which has been completed by both student and the employer.
  Contact Hours: 5 weeks

- MEB561 SPECIAL TOPIC II
  A series of lectures and tutorials in subject areas which are of special professional relevance to the student’s intended career path, or which may be available on occasions from visiting scholars.
  Prerequisites: Students will need to have achieved an appropriate level of preparation in the topic area concerned.
  Co-requisites: Will depend on the syllabus of the particular special topic offered.
  Credit Points: 7  Contact Hours: 3 per week

- MEB5610 MECHANICS II
  Introduction to mechanical frames and methods of analysis, with the emphasis placed on investigation of the effects of static and dynamic loading upon frames and frame members.
  Prerequisites: MEB411, MAB493, MEB510
  Co-requisite: MEB511
  Credit Points: 6  Contact Hours: 3 per week

- MEB5640 AUTOMATION I
  Mathematical models of mechanical systems: system response to given inputs; modification of system
parameters to obtain a more desirable response in closed loop.
Prerequisite: MAB493
Credit Points: 7 Contact Hours: 3 per week

**MEB650 THERMODYNAMICS III**
Properties and testing methods of solid, liquid and gaseous fuels; combustion calculations; flue gas analysis; energy tariffs and audits; major applications of energy management, eg, buildings, process plants, compressed air systems, vehicle fleets; economic evaluation of energy projects; introduction and management of energy saving programs; field visit.
Prerequisites: MEB550, MEB251
Credit Points: 6 Contact Hours: 3 per week

**MEB660 FLUID POWER**
Introduction to fluid power; graphical symbols; simple circuits; cascade method; Boolean algebra; fluid logic; Karnaugh-Veitch method; hydraulic components; hydraulic systems design; hydraulic circuits.
Prerequisite: MEB462
Credit Points: 6 Contact Hours: 3 per week

**MEB670 INDUSTRIAL ENGINEERING I**
Project planning and control; plant location and layout; work study; design of experiments; linear programming applications.
Credit Points: 6 Contact Hours: 3 per week

**MEB673 MANUFACTURING ENGINEERING III**
Advanced manufacturing technology; tool chatter and vibration; optical metrology; an introduction to CAM and robotics.
Prerequisite: MEB471
Credit Points: 7 Contact Hours: 3 per week

**MEB680 ADVANCED MECHANICAL DESIGN**
The application of modern materials and analytical techniques to mechanical design; case studies; statistical analysis of failures; application of materials science in design; fracture mechanics; computer-aided optimisation techniques.
Prerequisites: MEB483, MEB210, MEB231, MEB411
Credit Points: 7 Contact Hours: 3 per week

**MEB701 SPECIAL TOPIC III**
A series of lectures and tutorials in subject areas which are of special professional relevance to the student's intended career path, or which may be available on occasions from visiting scholars and which may be relevant and important to the undergraduate program.
Prerequisite: Students will need to have achieved an appropriate level of preparation in the topic area concerned.
Co-requisite: Will depend on the syllabus of the particular special topic offered.
Credit Points: 7 Contact Hours: 3 per week

**MEB710 AUTOMATION II**
Use of computer packages in control system design (eg, Matrix, 'X'); fundamentals of discrete time systems; instrumentation used in the acquisition and analysis of digital data (eg, Labtech); Programmable Logic Controllers.
Prerequisites: MEB460, MEB660
Credit Points: 7 Contact Hours: 3 per week

**MEB711 INDUSTRIAL ENGINEERING II**
Forecasting; manufacturing resources planning; scheduling; capacity planning; total quality control; modelling and simulation.
Prerequisite: MEB670
Credit Points: 6 Contact Hours: 3 per week

**MEB772 ENGINEERING PROJECT APPRAISAL**
Rational economic analysis of engineering projects at product level 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.
Prerequisites: MEB483, MEB339, MEB472
Co-requisites: MEB773, MEB670
Credit Points: 7 Contact Hours: 3 per week

**MEB773 DESIGN FOR MANUFACTURING I**
Value analysis and principles related to product design; tolerance technology; design of jig and fixtures; cutting tools applicable for various machining operations including assembly.
Prerequisite: MEB171
Credit Points: 7 Contact Hours: 3 per week

**MEB800 SPECIAL TOPIC IV**
A series of lectures and tutorials in subject areas which are of special professional relevance to the student's intended career path, or which may be available on occasions from visiting scholars and which may be relevant and important to the undergraduate program.
Prerequisite: Students will need to have achieved an appropriate level of preparation in the topic area concerned.
Co-requisite: Will depend on the syllabus of the particular special topic offered.
Credit Points: 7 Contact Hours: 3 per week

**MEB8310 INDUSTRIAL NOISE & VIBRATION**
Vibration measurements; spectrum analysis; Kur-tosis, Cepstrum and envelope analysis; averaging; gear, bearing and rotor vibration; whole body and arm vibration; noise power; industrial standards; attenuation methods.
Prerequisite: MEB510
Credit Points: 7 Contact Hours: 3 per week

**MEB900 MANUFACTURING PROJECT**
The student is required to investigate in depth and present a formal report on a problem area taken from the full range of manufacturing engineering practice. Project may arise through investigation in applied research programs or specific topic from industry.
Credit Points: 12 per semester
Contact Hours: 3 per week

**MEB911 FINITE ELEMENT ANALYSIS**
General description of the finite element method; static and dynamic analysis of mechanical engineering problems; review of finite element packages.
Prerequisites: MEB462, MEB550, MEB610, MEB511
Credit Points: 7 Contact Hours: 3 per week

**MEB950 PROCESS PLANT DESIGN**
Duct and industrial pipework system design; pressure vessel design methods; field visits.
Prerequisites: MEB251, MEB462
Co-requisite: MEB511
Credit Points: 7 Contact Hours: 3 per week
MEB960 FLUID SYSTEMS DESIGN
Analysis of selected fluid systems; performance characteristics of individual components; performance characteristics of systems.
Co-requisite: MEB464
Credit Points: 7 Contact Hours: 3 per week

MEB974 DESIGN FOR MANUFACTURING II
Design of press tools, dies for forming operations and joining processes; an overview of CAD in tool and die design.
Prerequisite: MEB571
Credit Points: 7 Contact Hours: 3 per week

MEB975 DESIGN OF MANUFACTURING SYSTEMS
Design and integration of flexible fixtures, palletisers and conveyors to FMS; the use of robots and automatic guided vehicles in materials handling; total integrated manufacturing systems; selection of machine tools for CIM implementation.
Prerequisites: MEB976, MEB977
Credit Points: 7 Contact Hours: 3 per week

MEB976 COMPUTER INTEGRATED MANUFACTURING
Requirements for implementing CAD/CAM systems; component design using geometric modelling techniques; classification systems for part family formation and computer-aided process planning; concepts and applications of Flexible Manufacturing Systems (FMS).
Credit Points: 7 Contact Hours: 3 per week

MEB977 COMPUTER CONTROL OF MANUFACTURING SYSTEMS
Use of computers in machine tool control; computer control of production systems; control of robots; interfacing and networking.
Prerequisite: MEB976
Credit Points: 7 Contact Hours: 3 per week

MEB978 MANUFACTURING SYSTEMS ENGINEERING
Concepts and fundamentals of manufacturing system analysis and production management; simulation and modelling of manufacturing systems.
Credit Points: 7 Contact Hours: 3 per week

MEB980 DESIGN OF POWER TRANSMISSION SYSTEMS
Design of systems for the generation and transmission of mechanical power; solid elements (gears, clutches, belts etc); fluid elements (pneumatic and hydraulic).
Prerequisites: EEB209, MEB411, MEB313, MEB483
Co-requisites: MEB510, MEB511
Credit Points: 7 Contact Hours: 3 per week

MEB981 DESIGN OF MATERIALS HANDLING SYSTEMS
Design of bulk material conveying and process plant, storage silos and bins, ground stockpiling systems, and the associated supporting structures.
Prerequisites: MEB483, MEB411, CEB184, CEB185, MEB111, MEB11
Credit Points: 6 Contact Hours: 3 per week

MEP173 QUALITY CONTROL PLANNING
Quality systems, a succinct explanation; case studies; TQC and the Deming Philosophy; getting things into perspective; the business plan; quality management; continuous training and productivity improvement on the path to business success; quality assurance, its organisation and function; TQ principle; procedures and audits; everyone's responsibility; the role of the QA entity; organisation structure; the quality manual; standards and their applications; procedures preparation and format; the quality plan; inspection and test plans; design control; procurement to control; audit and corrective action; the quality manual assignment.
Credit Points: 6 Contact Hours: 1.5 per week

MEP201 SAFETY TECHNOLOGY & PRACTICE I
Overview of models of the accident phenomenon; technological background necessary for the understanding 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 effects on failure modes.
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.
Credit Points: 6 Contact Hours: 1.5 per week

MEP301 SAFETY TECHNOLOGY & PRACTICE II
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.
Prerequisite: MEP201
Credit Points: 12 Contact Hours: 3 per week

MEP371 RELIABILITY & MAINTAINABILITY
Reliability and maintainability; relationship between reliability and maintenance; relationship between 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 for reliability; computerised maintenance systems; economics and systems availability.
Credit Points: 6 Contact Hours: 1.5 per week

MEP473 QUALITY SYSTEMS & ASSESSMENT
Subject and class breakdown on the basis of syndicates for leading topic discussion; lectures on quality system requirements; policy and organisation; planning; purchasing; work instructions; inspection; corrective action; review and reorganisation; application of topics to AS3900 - 1987/ISO9000 - 1987 to AS3904 - 1987/ISO9004 - 1987; application of topics to AS2590 - 1987; syndicate presentation; quality system requirements and assessment; the mechanics of step-by-step auditing.
Credit Points: 8 Contact Hours: 2 per week
MET101 ENGINEERING DRAWING
Engineering graphics for electrical engineering students; orthographic projection; preparation of circuit diagrams; other drawing relevant to electrical engineering associates; computer-aided drafting techniques.
Credit Points: 7 Contact Hours: 3 per week

MET120 ENGINEERING DRAWING I
Lettering and linework; principles of third angle projection; orthographic projection; pictorial drawings; assembly drawings; sectional views; CAD.
Credit Points: 7 Contact Hours: 3 per week

MET121 DRAFTING PRACTICE IA
Complements MET120: drawing mechanical engineering components; detail exercises; CAD.
Co-requisite: MET120
Credit Points: 3 Contact Hours: 3 per week

MET123 ELECTRICAL ENGINEERING DRAWING I
Preparation of block diagrams; logic diagrams; circuit diagrams.
Co-requisite: MET101
Credit Points: 3 Contact Hours: 3 per week

MET140 ENGINEERING MATERIALS I
General properties of materials; materials selection; service requirements and properties of ferrous and nonferrous metals and alloys; corrosion types and prevention; testing procedures; plastics, ceramics and other materials.
Credit Points: 8 Contact Hours: 3 per week

MET141 MATERIALS (CIVIL)
Properties of common ferrous and nonferrous metals and alloys; timber, bricks, bitumen and plastics; corrosion mechanism and protective systems; quality control of engineering materials.
Credit Points: 7 Contact Hours: 3 per week

MET170 MANUFACTURING TECHNOLOGY
Basic methods of converting raw material into manufactured goods; an introduction to metrology; safety in the work place.
Credit Points: 8 Contact Hours: 3 per week

MET171 TRADE TRAINING IA
Skill training in basic fitting and welding; the practical and applied aspects of fitting and welding skills.
Credit Points: 6 Contact Hours: 7 per week

MET175 WORKSHOP TRAINING (MECHANICAL) IA
An introduction to workshops and field training; the use of sketches; working drawings; materials; safety and legal requirements.
Credit Points: 3 Contact Hours: 3 per week

MET201 APPLIED MECHANICS
Statics; friction; velocity and acceleration; inertia and change of motion; dynamics of rotation; periodic motion; balancing; work and energy; impulse and momentum; strain and stress; fluids at rest and in motion.
Credit Points: 7 Contact Hours: 3 per week

MET210 APPLIED MECHANICS I
Force and its effects; equilibrium; moments of forces; displacement; velocity and acceleration; inertia; friction and friction machines.
Credit Points: 8 Contact Hours: 3 per week

MET220 ENGINEERING DRAWING II
Auxiliary views; sectional views; intersections; surface developments; CAD.
Prerequisite: MET120
Credit Points: 8 Contact Hours: 3 per week

MET221 DRAFTING PRACTICE IIA
Camm and gear geometry; spatial geometry; mechanical drive component selection; CAD.
Co-requisite: MET220
Credit Points: 3 Contact Hours: 3 per week

MET223 ELECTRICAL ENGINEERING DRAWING IIA
Printed circuit board layout; plant layout; transformer construction; single line diagrams; CAD.
Prerequisite: MET120
Credit Points: 3 Contact Hours: 3 per week

MET250 THERMODYNAMICS
Basic engineering thermodynamics concepts; systems; reversibility; first and second law; working fluids; IC engine cycles and simple performance evaluations.
Credit Points: 6 Contact Hours: 3 per week

MET271 TRADE TRAINING IIA
Skill training in basic metal machining techniques; practical and applied aspects of turning, milling, shaping, surface and cylindrical grinding.
Credit Points: 6 Contact Hours: 7 per week

MET310 APPLIED MECHANICS II
Work, power and energy; efficiency; introduction to simple machines; mechanical advantage and velocity ratio; hydrostatics and fluid friction; section properties; shearing force and bending moments; torsion.
Credit Points: 8 Contact Hours: 3 per week

MET320 ENGINEERING DRAWING III
Geometric tolerancing; structural drafting; simplified dimensioning techniques; CAD.
Prerequisites: MET120, MET220
Credit Points: 6 Contact Hours: 3 per week

MET350 PROCESS ENGINEERING
Steam plant; positive displacement compressors; refrigeration plant; positive expanders; reciprocating engines; gas turbines.
Prerequisite: MET250
Credit Points: 7 Contact Hours: 3 per week

MET352 REFRIGERATION & AIR CONDITIONING
Ideal and actual refrigeration cycles including variation of operating conditions; performance of refrigeration equipment; psychrometry; cooling load estimation; air supply systems.
Prerequisite: MET250
Credit Points: 7 Contact Hours: 3 per week

MET420 ENGINEERING DRAWING IV
Specialist drafting techniques; electrical/electronic drafting; hydraulic/pneumatic diagrams; CAD.
Prerequisites: MET120, MET220
Credit Points: 7 Contact Hours: 3 per week

MET421 MECHANICAL PROJECT IA
Report and presentation; projects selected from list; each project deals with a specific engineering environment.
Prerequisite: MET320
Credit Points: 3 Contact Hours: 3 per week
MET433 ENGINEERING MATERIALS II
Properties and selection of advanced engineering materials.
Co-requisite: MET140
Credit Points: 8  Contact Hours: 3 per week

MET475 WORKSHOP (MECHANICAL) IIIA
An introduction to workshop machines and practices.
Co-requisite: MET175
Credit Points: 3  Contact Hours: 3 per week

MET511 NOISE, STRESS & VIBRATION PRACTICE
Instrumentation used to measure vibrations, noise and stress; fundamental principles and equations related to such measurement; vibration isolation; noise standards; stress/strain transformations.
Co-requisites: MET210, MET310
Credit Points: 6  Contact Hours: 3 per week

MET560 THERMOFLUIDS
Fluid statics; fluid flow and measurement; dimensionless groups; elementary heat transfer by conduction, convection and radiation.
Credit Points: 8  Contact Hours: 3 per week

MET572 PRODUCTION PLANNING & CONTROL
Overview of production management; introduction to quality control; types of production; plant layout; scheduling and inventory control.
Prerequisite: MET171
Credit Points: 6  Contact Hours: 3 per week

MET573 CAD/CAM TECHNOLOGY
Introduction to the fundamentals of CAD/CAM and geometrical modelling; practical applications in CNC programming and economics of machine tools; the use of robots and principles of integrated manufacturing systems.
Credit Points: 7  Contact Hours: 3 per week

MET580 MACHINE ELEMENTS I
Practical application of shear force and bending moment diagrams; selection of components from BHP manual; use of handbooks; codes and rolled steel section tables; bolted and welded connections; application of standard rolled steel sections; selection of shafts.
Prerequisites: MET210, MET120, MET220
Credit Points: 6  Contact Hours: 3 per week

MET600 MATERIALS FOR ELECTRICAL ENGINEERS
Properties of materials; materials selection; service requirements and properties of ferrous and nonferrous metals and alloys; corrosion types and prevention; testing procedures; plastics, ceramics and other materials.
Credit Points: 4  Contact Hours: 1.5 per week

MET601 MECHANICAL PLANT
Manufacturing processes and workshop practices; power station equipment (turbines and boilers); mining machinery; air-conditioning equipment; fans and pumps; hoists; compressors; cranes; welding; heat transfer principles.
Credit Points: 3  Contact Hours: 1.5 per week

MET650 PLANT ENGINEERING I A
A series of investigatory practical sessions related to design parameters; performance characteristics and plant maintenance practices associated with engineering plant systems; the machinery within the system and maintenance procedures.
Credit Points: 3  Contact Hours: 3 per week

MET680 MACHINE ELEMENTS II
Selection and application of shafts and couplings; selection of spur, helical and worm reduction units; determination of gear forces; selection of springs and brakes; curved beams.
Prerequisite: MET580
Credit Points: 7  Contact Hours: 3 per week

MET733 INDUSTRIAL METALLURGY
Techniques in casting; metallurgical advances in materials and their evaluation.
Prerequisite: MET433
Credit Points: 6  Contact Hours: 3 per week

MET782 JIG & TOOL DESIGN
Design of jigs and fixtures for various machine operations and assembly; principles in design of blanking and forming dies; special forming techniques; dies used in blow and injection moulding; simple press capacity calculation.
Prerequisite: MET171
Credit Points: 6  Contact Hours: 3 per week

MET850 ENERGY MANAGEMENT
Tariff framing and objectives; energy and power losses in electrical and mechanical plant; equipment and buildings; identification of losses; energy audits; load forecasting and control.
Co-requisites: EET500, MET250
Credit Points: 6  Contact Hours: 3 per week

MET901 SUGAR MILL TECHNOLOGY I
This subject provides the basic knowledge and skills in the technology and equipment associated with sugar mill processes and operation.
Credit Points: 6  Contact Hours: 3 per week

MET902 SUGAR MILL TECHNOLOGY II
This subject provides further knowledge and skills in the technology and equipment associated with sugar mill processes and operation.
Prerequisite: MET901
Credit Points: 7  Contact Hours: 3 per week

MET920 COMPUTER AIDED DESIGN & DRAFTING
Computer based drafting: 2-D drafting; design and solid modelling.
Prerequisites: MET120, MET220
Credit Points: 6  Contact Hours: 3 per week

MET933 INDUSTRIAL TRIBOLOGY
Maintenance and maintenance systems; types and mechanisms of wear; bearings and seals; friction, lubricants; oils; greases; solid lubricants; gas as a lubricant; application of lubricants.
Credit Points: 6  Contact Hours: 3 per week

MET940 MECHANICAL MEASUREMENTS
Instruments used to measure mechanical quantities; function and method of application; speed; acceleration; frequency; force; torque; pressure; level; flow and temperature.
Credit Points: 8  Contact Hours: 3 per week

MET960 FLUID POWER
Introduction to fluid power; compressed air systems; graphical symbols; cascade method of pneumatic system design; hydraulic components; hydraulic circuits.
Credit Points: 7  Contact Hours: 3 per week

MET961 FLUID MECHANICS
Characteristics of pumps; turbines; compressors and fans; fluid coupling and torque converters; friction
losses in pipes and fittings. Analysis of complete pumping systems.

Prerequisites: MET560
Credit Points: 7 Contact Hours: 3 per week

- **MNB004 MANAGEMENT**
The subject acts as an introduction to the theory and practice of management and lays a foundation on which to build managerial knowledge and techniques through a lifetime career. Functions of management: planning, organising, leading and controlling are presented in the framework of a systems approach to decision making.
Credit Points: 4 Contact Hours: 2 per week

- **MNB007 BEHAVIOURAL SCIENCE**
An introduction to perception, motivation, individual personality, social attitudes, group interaction and dynamics; social motives and the sources and resolution of conflict. Students will be introduced to the practical application and limitations of behavioural studies through the use of readings and case studies drawn from the building industry. An introduction to the job and responsibilities of management; the functions and role of the manager including planning, organisation, control, budgeting and decision-making; styles of leadership. Students will discuss and assess the various leadership styles and their application in the building industry, together with an assessment of the decision-making roles of the contractor, architect, unions, government and owner on the building site. Students will be introduced to employee selection training, appraising and promotion. Worker efficiency and working conditions.
Credit Points: 6 Contact Hours: 3 per week

- **MNB018 INDUSTRIAL RELATIONS**
Structure and development of the industrial relations system in Australia. Federal and State conciliation and arbitration systems, authority and extent of jurisdiction. Industrial relations issues such as wages, conditions, claims and disputes. Role of the trade unions, the employers' and employees' representatives, the commission, awards and agreements. Acts, regulations and workers' compensation. Law of Master and Servant. Strikes and Lockouts. Public liability insurance. Law of Professional Negligence.
Credit Points: 4 Contact Hours: 2 per week

- **MNB025 ECONOMIC ANALYSIS FOR GEOLOGISTS**
Topics include a general overview of the economic approach and method. Importance of statistics, theory and practice in Economics. Neo-classical economics: Relevance to Australia and other western nations. The macro, macro distinction, comparative systems, and the role of values. Development models; Kaldor, Myint, Robinson, Graffia and mineral economics.
Credit Points: 4 Contact Hours: 2 per week

- **MNB026 ADMINISTRATION FOR GEOLOGISTS**
The subject aims to introduce geology students to management practices and principles. It covers the managerial functions of planning, controlling, organisating, directing, and staffing, as well as the management of change and conflict. Also included are the areas of business planning for new ventures, budgets and financial controls, and time management.
Credit Points: 6 Contact Hours: 3 per week

- **MNB040 MANAGEMENT**
An introductory study of management including the functions of management, leadership, motivation and supervision of staff, and employee relations.
Credit Points: 4 Contact Hours: 2 per week

- **MNB043 INDUSTRIAL MANAGEMENT**
The management process planning, leading, organising, controlling. Human resources management aspects of communication, motivation, leadership and teamwork, with practical applications to planning and control, personnel relations, job design.
Credit Points: 6 Contact Hours: 3 per week

- **MNB067 PSYCHOLOGY**
This subject seeks to educate students to: critically evaluate statements about behaviour; state and give examples of higher order motives, and apply this knowledge to work and interpersonal situations; understand factory 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 behaviour of others; use skills to reduce interpersonal stress.
Credit Points: 6 Contact Hours: 1 per week

- **MNB072 PSYCHOLOGY**
The subject acts as an introduction to the theory and practice of management and lays a foundation on which to build managerial knowledge and techniques through a lifetime career. Functions of management: planning, organising, leading and controlling are presented in the framework of a systems approach to decision making.
Credit Points: 4 Contact Hours: 2 per week

- **MNB091 MARKETING**
The course is designed to concentrate on breadth rather than depth, to provide an overall view of marketing. The areas pursued will be the definition of marketing including its fit into the strategic plans of a firm or institution, either profit or non-profit; full explanation of the components of the Marketing Mix with emphasis on a systems approach. The components of the marketing mix are 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.
Credit Points: 9 Contact Hours: 2 per week

- **MNB111 INTRODUCTORY PSYCHOLOGY FOR HEALTH PROFESSIONALS**
A course of lectures and tutorials on psychology as a science and interpersonal behaviour and skills.
Credit Points: 4 Contact Hours: 2 per week

- **MNB126 ELEMENTARY JAPANESE**
Introduction to a basic knowledge of the spoken Japanese language through models of dialogues based on situational conversation essential to business and
travel. Additionally, it includes special lectures on cultural background studies which are related to business practices in Japan.

Credit Points: 12 Contact Hours: 3 per week

- **MNB121 COLLOQUIAL JAPANESE**
  Emphasises spoken and aural comprehension based on situational conversation related to Australian business-people, including study of hiragana/katakana (Japanese syllables reading and writing) and an introductory lesson of Kanji (Chinese characters).

Credit Points: 12 Contact Hours: 3 per week

- **MNB130 GENERAL PSYCHOLOGY**
  This course is designed to give 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.

Credit Points: 4 Contact Hours: 3 per week

- **MNB151 MICROECONOMIC ANALYSIS**
  This subject will examine how managers make decisions in firms in the Australian economy. The role of consumers and firms in various markets will be studied. Production and market strategies for managers in different types of firms will be examined. Lastly, constraints on managers' decisions and other contemporary issues in Australian microeconomics will be examined.

Credit Points: 12 Contact Hours: 3 per week

- **MNB153 ANALYSIS & METHODOLOGY IN MANAGEMENT**
  The first part of the course is designed to establish a conceptual base suitable for the analysis of both abstract and empirical argument. The second part of the course builds upon the concept of a valid argument by introducing the notion of the empirical research process, both historical and scientific. Specifically, the research cycle of problem definition, research design, data collection, analysis and reporting will be introduced. Normal empirical research will be concentrated upon, though in the context of a discussion of a wide range of research processes. Primary and secondary data sources will be considered, with case studies utilising archival material, market research and questionnaire design to provide practical anchoring. A final project which requires the construction of an argument and integration of data will be introduced to help integrate the analytical and empirical material, and demonstrate the student's ability to communicate meaning in an appropriate fashion. This may draw on introductory statistics and computing subjects.

Credit Points: 12 Contact Hours: 3 per week

- **MNB154 PSYCHOLOGY**
  An introduction to selected areas of psychology to give a behavioural base to subsequent studies in the management and organisational science area and to provide limited skills training in some areas for personal development. A learning unit investigates conditioning, imitation and higher order learning. A second unit on individuals and groups examines the development and assessment of individuals within groups. Other units examine perception human development and survival skills, including assertiveness and stress management.

Credit Points: 12 Contact Hours: 3 per week

- **MNB181 AUSTRALIAN NATIONAL GOVERNMENT**
  This subject provides an introduction to the Australian political system at the national level. It aims to foster an understanding of the major participants in the system and to evaluate their interaction with Australian society. The Australian Constitution, the Commonwealth Parliament, the Cabinet, Ministry and Public Service, the High Court, the electoral system, political parties and interest groups are examined and related to basic political theory and current political issues. The role of the State Governments is also considered.

Credit Points: 12 Contact Hours: 3 per week

- **MNB183 AUSTRALIAN NATIONAL GOVERNMENT A**
  This subject provides an introduction to the Australian political system at the national level. It aims to foster an understanding of the major participants in the system and to evaluate their interaction with Australian society. The Australian Constitution, the Commonwealth Parliament, the Cabinet, Ministry and Public Service, the High Court, the electoral system, political parties, and interest groups are examined and related to basic political theory and current political issues. (For Bachelor of Business - Public Administration only).

Note: One hour per week is set aside for a communication component.

Credit Points: 12 Contact Hours: 4 per week

- **MNB184 INTRODUCTION TO ADMINISTRATIVE & POLITICAL ANALYSIS**
  The aim of the subject is to ensure the student develops a basic understanding of the aims and methods of the social sciences. It is also intended to help the student develop an understanding of what constitutes a valid explanation of social phenomena that can be utilised in other subjects. It will help develop habits of thought that can be applied to a wide variety of problems and decisions.

Credit Points: 12 Contact Hours: 3 per week

- **MNB231 GOVERNMENT ECONOMIC POLICY**
  This subject is designed to examine some of the problems in the economics of government social policy. Social policy will be analysed in terms of its impact on the allocation of resources and the distribution of income and wealth. The theory of public sector economics will not be studied since the subject Microeconomic Policy covers this area. The latter is a recommended but not a necessary prerequisite for MNB231. However, the theory of taxation, fiscal federalism and the significance of the size and growth of the public sector will be studied. The application of economic analysis in a number of areas of social policy including health and medical care, social security, education, environmental protection and housing will be demonstrated.

Prerequisite: MNB151 or MNB471

Credit Points: 12 Contact Hours: 3 per week

- **MNB250 DEVELOPMENTAL PSYCHOLOGY**
  This subject provides students with 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.

Prerequisite: MNB101

Credit Points: 9 Contact Hours: 3 per week
MNB251 MACROECONOMIC ANALYSIS
Macroeconomic Analysis is concerned with the economic problems that occur at the national level. The aim of the subject is to ensure that students understand the economic problems at this level and appreciate the effects on the business community and on individuals of the Federal Government’s attempts to manage these problems in Australia. Specific topics covered in the subject include economic systems, management techniques associated with a capitalist economy, unemployment, inflation – its causes and effects, and international trade.
Credit Points: 12  Contact Hours: 3 per week

MNB252 BUSINESS STATISTICS
Introduction to the field of statistical inference; fields of management and commerce; statistical analysis; use of microcomputer statistical package.
Prerequisite: MNB152 or CSB191
Credit Points: 12  Contact Hours: 3 per week

MNB253 INTRODUCTORY MARKETING
This introductory subject focuses on the role of marketing and its importance in contemporary organisations. The subject material covers the key marketing decision areas including the marketing concept; understanding consumer behaviour and preferences; marketing research and marketing information systems; market segmentation and positioning; and an introduction to marketing planning, strategy, and control. Emphasis is given to understanding the components of the marketing mix, viz. product planning, management and development; pricing methods and strategies; the elements of promotion, including personal selling, advertising, publicity and sales promotion; and distribution.
Credit Points: 12  Contact Hours: 3 per week

MNB254 PERSONNEL MANAGEMENT & INDUSTRIAL RELATIONS
This subject is about the way human resources act and are acted upon. It examines human resources from the points of view of the employer, employees, government and other stakeholders. It utilises the pipeline concept to introduce some of the key processes of personnel management. It examines a variety of theoretical perspectives on industrial relations, introduces industrial relations concepts appropriate to middle managers, supervisors, and employee representatives, to enable students to understand the interpersonal and communication skills appropriate to the area. Current issues are highlighted throughout and students are introduced to the basic framework of Australian industrial law.
Credit Points: 12  Contact Hours: 3 per week

MNB267 PSYCHOLOGY
In studying this subject, students will be 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.
Credit Points: 4  Contact Hours: 3 per week

MNB281 POLITICAL BEHAVIOUR
The aim of this course is to provide students with an understanding of the causes and significance of political behaviour in Australia. The course is structured around two related perspectives, that of political behaviour at the individual level, and political behaviour as a feature of collective political activity. The course examines the major perspectives used to explain political behaviour in Australia, relating these both singly and together to specific examples of political activity. Finally, the implication of these explanations for patterns of political power is examined.
Prerequisite/Co-requisite: MNB183 or MNB181
Credit Points: 12  Contact Hours: 3 per week

MNB282 STATE GOVERNMENT
This subject aims to provide an analytical scrutiny of Australian state government with attention concentrated on Queensland. The interaction of parties, groups and institutions is highlighted. The course attempts to identify the outstanding demographic, economic, social and political features of the states and the dominant themes of political life therein. It looks at the political parties, at elections, electoral and voting systems, at pressure groups and the press. It investigates the workings of state parliaments and cabinets. Finally it has something to say about state government administration, about functions and financing and about intergovernmental relations.
Prerequisite: MNB451 or MNB181/183
Credit Points: 12  Contact Hours: 3 per week

MNB302 PRINCIPLES OF MANAGEMENT
Introduction to the concepts, principles and practical techniques involved in managing organisations. Topics covered include strategic and operational planning; the organising function; staffing of organisations; motivation and effective leadership; the dynamics of groups and the management of organisation culture; the design and operation of effective control systems; the management of quality; managing change and conflict.
Credit Points: 9  Contact Hours: 2 per week

MNB319 HEALTH INFORMATION MANAGEMENT I
An introduction to the principles of health record management and their application in hospitals. The subject will present 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 uses 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.
Credit Points: 12  Contact Hours: 3 per week

MNB320 MEDICAL TERMINOLOGY
This subject is designed to enable the student to understand, define, spell and pronounce terms related to the diseases and systems of the body, the activities of health professionals and medical technology. A thorough knowledge of medical terminology is necessary for health information managers and health administrators to communicate effectively with other health care professionals and contribute to health care planning, evaluation and research studies.
Credit Points: 12  Contact Hours: 3 per week

MNB322 INTRODUCTORY TRAINING AND DEVELOPMENT
Training in Australia. Instructional models and theories of learning. Training needs analysis, task analysis process. Basic training techniques – the information giving model, the skill development model, the discussion model. Training aids/audio-visuals, al-
The focus is upon issues and problems which arise in learning, writing and scoring test items. Follow-up algorithms. Administering a training course. Evaluating services are also studied. Students are introduced to the role of the Health Services Administrator.

This is a practical subject with strong conceptual and practical components. It focuses on two key areas: human resources with the organisation and its requirements. Introduction to human resources information systems. An examination 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. Students are introduced to the role of the Health Services Administrator.

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. Students are introduced to the role of the Health Services Administrator.

This subject aims to provide students with an understanding of the principles and practices of industrial relations in Australia. While considerable help is given by the lecturer in the form of lectures and seminar discussion, this subject should appeal to students who appreciate conducting their own individual research. A comprehensive, annotated bibliography is provided and students must use this as the resource base for their own study of the subject. Particular references to the bibliography are noted under the lecture topics.

This subject applies economic analysis to the health care industry. It includes an examination of the demand for health care, the supply of health care, and the market for health care.

This subject applies economic analysis to the health care industry. It includes an examination of the demand for health care, the supply of health care, and the market for health care.

This subject examines the interface of human resources with the organisation and its requirements. Concepts and processes for analysing jobs will be examined. Human resources planning, job evaluation, job design and performance appraisal concepts and processes will be built on the foundation data. A substantial level of analytical and professional competence is expected in this subject.

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This is a practical subject with strong conceptual and research foundations. It builds on job analysis competencies to deal in depth with recruitment and selection. Major topics include use of advertising, private agencies, the Commonwealth Employment Services and other approaches in recruiting; the use of aptitude and ability tests for selection; screening devices (for example, the weighted application blank); practical selection interviewing; other issues in recruitment and selection. Where appropriate, attention is given to underlying statistical methods (for example, in the estimation of reliability and validity). Legal requirements are emphasised throughout (eg, anti-discrimination, EEO).

This subject applies economic analysis to the health care industry. It includes an examination of the demand for health care, the supply of health care, and the market for health care.

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work on the VAX as well as on certain packages on the PCs.
Credit Points: 12  Contact Hours: 3 per week

- **MNB385 ADMINISTRATIVE THEORY**
  Public administration draws upon a wide range of theory and related concepts. The aim of this subject is to ensure students gain a critical understanding of such theory, utilizing the analytical frameworks developed in Introduction to Administrative & Political Analysis. The understanding developed will be applied in the examination of administrative systems and their problems in a range of subjects, notably Public Policy Process I & II.
  Prerequisites: CMB111, MNB184
  Credit Points: 12  Contact Hours: 4 per week

- **MNB391 MARKETING MANAGEMENT**
  This subject is concerned with the tactical decisions required at the product or middle management level. Particular emphasis will be placed upon new product and services innovations with an introduction to the development of strategy in terms of defining marketing opportunities, developing and implementing marketing plans. There will be a specific focus on market segmentation, positioning, measuring market opportunity, marketing communications, the promotional mix, distribution, price determination together with retail/wholesale, service marketing and not-for-profit marketing as applied in the strategy developing process.
  Prerequisite: MNB253 or MNN204
  Credit Points: 12  Contact Hours: 3 per week

- **MNB392 CONSUMER BEHAVIOUR**
  This course examines the various theories of consumer behaviour and is designed to provide students with an insight into consumer needs, attitudes and behaviour and their impact on all aspects of marketing strategy.
  Prerequisite: MNB253 or MNN204
  Credit Points: 12  Contact Hours: 3 per week

- **MNB405 MANAGEMENT SCIENCE A**
  The major behavioural objectives are to introduce students to important models of operations research; students are made aware of how these models are used in accounting and/or management decision-making situations; students develop familiarity with solving decision problems through their own calculations and the use of a computer; students will have an appreciation of the strengths and weaknesses of the models.
  Credit Points: 9  Contact Hours: 2 per week

- **MNB411 EXPORT MANAGEMENT**
  The role of government, including need to export, and export incentives; methods of exporting, including agents and merchants, consultants and overseas organisations; bases for export sales, including terminology and exporter's responsibilities; export documentation; finance of export trade, including methods of payment, finance for export transactions and foreign exchange transactions; export finance insurance corporation; modes of international transport, marine insurance; quoting for export, including pricing policies, export costs, marketing and packaging and quotations. A major case study is included as part of the study program.
  Prerequisite: MNB253
  Credit Points: 12  Contact Hours: 3 per week

- **MNB412 MANAGEMENT & ORGANISATIONS**
  Introduction to the concepts, principles and practical techniques involved in managing organisations.
  Topics covered include strategic and operational planning; the operating function; staffing of organisations; motivation and effective leadership; the dynamics of groups and the management of organisational culture; the design and operation of effective control systems; the management of quality; managing change and conflict.
  Credit Points: 12  Contact Hours: 3 per week

- **MNB413 APPLIED COGNITIVE PSYCHOLOGY**
  Introduction to cognitive psychology; perception processes in cognition; memory processes in cognition; thinking processes in cognition; includes problem solving and decision making; application of cognitive psychology. Artificial intelligence, ergonomics and job design also included.
  Prerequisite: MNB154 or completion of 96 credit points of degree study
  Credit Points: 9  Contact Hours: 2 per week

- **MNB419 HEALTH INFORMATION MANAGEMENT II**
  This subject is designed to provide the student with an understanding of specialised medical and health record systems and techniques, particularly data capture techniques and models. The students will study clinical classification principles and systems used in the retrieval of health information for research, evaluation, planning and statistical collection in the health services.
  Prerequisites: MNB319 and MNB320
  Credit Points: 12  Contact Hours: 3 per week

- **MNB420 ADVANCED TRAINING TECHNIQUES**
  Planning and programming management and supervisory development. Career planning. Developing a complete training program. Advanced training techniques — case study, role play, laboratory training, simulations, games, programmed instruction, computer assisted instruction, individualised learning, video and learning. Managing the training and development function — planning, organising staffing, directing, controlling. The competencies of a trainer. Experiential and project activities.
  Prerequisite: MNB322
  Credit Points: 12  Contact Hours: 3 per week

- **MNB426 SALES MANAGEMENT**
  This subject introduces the student to the range of analytical activities performed in the design and management of the selling function of the organisation. These activities include sales forecasting, sales force size, territory management and selling logistics, sales force motivation, sales negotiation and so on. The subject combines theory and practice and uses a case study approach to consolidate the learning process.
  Prerequisite: MNB253 or MNN204
  Credit Points: 12  Contact Hours: 3 per week

- **MNB430 APPLIED HEALTH CARE ANALYSIS**
  This subject is an introduction to epidemiology and biostatistics. Descriptive and analytical epidemiological methods used in the study of acute and chronic disease and in health services planning are studied. The statistical techniques appropriate to public health problems are included at an introductory level.
  Prerequisite: MNB382
  Credit Points: 12  Contact Hours: 3 per week
MNB431 HEALTH CARE ECONOMICS II
The objective of this course is to follow up and continue the study of economics as applied to health care. Advanced level studies in health economics are critically examined.
Prerequisite: MNB331
Credit Points: 12  Contact Hours: 3 per week

MNB450 PHYSIOLOGICAL & HEALTH PSYCHOLOGY
This subject examines the physiological and cognitive bases to human behaviour. In particular, it gives attention to such areas as 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.
Prerequisite: MNB154 or first year of course
Credit Points: 12  Contact Hours: 3 per week

MNB451 GOVERNMENT, BUSINESS & LAW
The purpose of this subject is to provide a basic understanding of government, business and the law. It will stress that politics is an all-pervasive aspect of human societies, though its semantic definition varies from culture to culture. This will be illustrated by demonstrating the important senses in which management is a political activity. It will then examine the specialised governmental and legal institutions and processes, the extent to which they structure the frameworks within which business and government operates and feedback from business into the political system. The subject will then use a series of case studies to illustrate and analyse selected business-government relationships.
Credit Points: 12  Contact Hours: 4 per week
Note: This subject is not available to students who have taken MNB181 or MNB183, Australian National Government A or B, or MNN203 Government Business Relations.

MNB461 FOUNDATION HR COMPETENCIES
This subject analyses and develops the personal and interpersonal competencies (in both cognitive and affective domains) which form the foundations from which a HR practitioner must operate. It aims to develop knowledge of and skills in self-awareness, personal and interpersonal development and interpersonal processes. It emphasises the design of process to achieve outcomes.
Prerequisite: MNB154, MNN100 or MNB516
Credit Points: 12  Contact Hours: 3 per week

MNB462 ADVANCED ORGANISATION BEHAVIOUR
An in-depth study of organisational behaviour. Major organisational aspects (the individual, group, technology, formal organisation structure) are considered and integrated into a comprehensive analysis of the factors affecting behaviour in the organisation, with the emphasis on practical application. Particular attention is given to methods of research into motivation, leadership and structure in the organisational context. The emphasis throughout is on rigorous analysis and evaluation.
Prerequisite: MNB154
Credit Points: 12  Contact Hours: 3 per week

MNB463 ORGANISATION DEVELOPMENT
The subject has two major objectives. The first is to develop conceptual and theoretical models and skills in relation to the general process of introducing change into organisations, and the specific techniques/interventions which are most often used in organisation development. The second is to develop practical skills wherever possible in relation to the introduction of change; in particular, skills related to the specific interventions/techniques used in organisational development, and diagnostic and analytical skills used for organisation development. Special attention is focused on the work group and its processes as a key structural unit in organisational change.
Prerequisite: MNB461 or MNN100
Credit Points: 12  Contact Hours: 3 per week

MNB471 MICROECONOMIC POLICY
Prerequisite: MNB371 or MNB372, MNN106
Credit Points: 12  Contact Hours: 3 per week

MNB472 MACROECONOMIC POLICY
Monetary and fiscal policies based on various theoretical underpinnings will be discussed. In particular, the role of discretionary-monetary policy will be addressed; as will government expenditure and taxation, the size of the budget deficit/surplus, and the management of an open economy (eg, Australia).
Prerequisite: MNB372
Credit Points: 12  Contact Hours: 3 per week

MNB482 LOCAL GOVERNMENT
This subject examines the vital role of local government as the third sphere of government in Australia. Its nature and constitution, functions, finance and the role of professional employees are some of the topics examined in the context of questioning local governments' capacity to effectively and efficiently provide services, and to develop as a participative grass root democratic system. The emphasis is on local government in Queensland, but interstate and overseas examples are included.
NB: For students enrolled in the Public Administration degree only. This subject includes a one hour per week communication component (4 hour subject).
Prerequisite: MNB181/183
Credit Points: 12  Contact Hours: 4 per week

MNB483 ADMINISTRATION ANALYSIS
This subject introduces students in public sector administration to the interpretation and use of statistical information. The subject covers the most commonly used techniques of handling data, with an emphasis on the purpose of each technique rather than on its mechanics. As well as being proficient for general administration, students who pass this subject will be trained for junior and middle-level research positions. An important part of this subject is the research project each student will do in a field he/she is interested in (for example, economics, local government) using the techniques taught. Among the topics covered are: hypothesis testing, regression and correlation, multiple regression, forecasting, time series, index numbers, and an application of statistical tech-
MNB484 PUBLIC PERSONNEL MANAGEMENT
To provide the student with an understanding of the principles and practices which surround personnel management in the public sector. The focus on public sector personnel management is important since there exists a body of law, regulations and procedures at each level of government which affects the performance of its personnel. The human resource planning, personnel recruitment, selection, performance evaluation, training, and compensation are discussed.
Prerequisite: MNB382
Credit Points: 12
Contact Hours: 3 per week

MNB485 PUBLIC ENTERPRISE
Public enterprises occupy a central economic role in the Australian economy, at both federal and state levels. They also occupy a unique position astride the public and private sectors, and are subject to both the forces of the market and of the political system. This subject will examine the origins and development of this role, the unique position of public enterprises in the Australian economy. The subject will also introduce the public sector, its origins, growth and significance, with a focus on public enterprises and their role in the Australian economy.
Prerequisite/Co-requisite: MNB385
Credit Points: 12
Contact Hours: 4 per week

MNB489 RETAILING MANAGEMENT I
This subject provides a comprehensive introduction to the techniques, concepts and analytical issues that are involved in retailing management. The dynamics of the retail system are examined from a strategic marketing viewpoint and include a basic appreciation of retail customer behaviour and retail information needs. The analysis of store layout and the evaluation of retail trade areas and store siting determinants are given detailed attention along with store layout and design. Elements of merchandising, franchising and promotion are also examined. The learning process is further extended by visits to local retail stores and shopping centres and by project work covering the investigation of new retail business opportunities.
Prerequisite: MNB451 or MNB181 and 8 subjects in either BBus – Public Administration, or 8 subjects in BBus – Management.
Credit Points: 12
Contact Hours: 3 per week

MNB492 SERVICES MARKETING
This subject is concerned with the special characteristics of services and possible strategies to deal with those characteristics. The topics covered include the natural and classification of services: the differences between services and products and their implications for the marketing/customer mix and for marketing strategy; and the management of product support services. The following will also be introduced: the concept of productivity for services; including the management of demand and supply; and the search for service quality and consistency, including the issue of standardisation vs. customisation.
Prerequisite: MNB253 or MNN204
Credit Points: 12
Contact Hours: 3 per week

MNB503 THE TOURISM INDUSTRY IN AUSTRALIA
In recent years the tourism and hospitality sector has been the major growth sector in the Australian economy. The purpose of this subject is to undertake an economic, political and managerial analysis of the industry, its origins, growth and significance, with a particular focus on management needs relevant to the industry. The subject will examine the analytical methods and techniques developed in the degree to enable a multidisciplinary analysis of an applied nature.
Prerequisite: 12 subjects in BBus – Management
Credit Points: 12
Contact Hours: 3 per week

MNB504 INTERNATIONAL POLITICS & BUSINESS
This subject will provide a basic outline of the contemporary, international political system, with a focus on Australia’s major trading partners. It will examine the major actors in the system, and regional systems, with an emphasis on states, international organisations and multinational corporations. The subject also examines the role of domestic and foreign policies relevant to business will be examined, both in terms of processes and policy content.
Prerequisite: MNB451 or MNB181 or MNB183 or MNN203 or MNN811
Credit Points: 12
Contact Hours: 3 per week

MNB505 HEALTH MANAGEMENT I
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.
Prerequisite: 16 subjects in BBus – Health Administration Degree
Credit Points: 12
Contact Hours: 3 per week

MNB509 PUBLIC POLICY & BUSINESS
The policy process in government is generally more complex and encompasses a wider range of variables than is the case in the private business sector. Private enterprises are not exempt from these processes, which can and do have a crucial impact upon the enterprise’s policies and operations. This subject is designed to provide an understanding of public policy processes relevant to private enterprise managers, and to help develop a capacity for the analysis of policy content.
Prerequisite: MNB451, MNB686 or MNB208
Credit Points: 12
Contact Hours: 3 per week

Note: This subject is not available to postgraduate students who have taken the subjects MNP508 Australian Policy Studies or MNN811 Policy Analysis, or to BBus - Public Administration students.

MNB515 INDEPENDENT STUDY UNIT INDUSTRIAL RELATIONS
This subject allows students to undertake a supervised research project in the industrial relations area. The topic must be chosen by the student with the approval of his or her supervisor. The project should entail the study of a significant topic in industrial relations and result in the production of a 7000 word assignment. Assessment will judge the student’s ability to research and understand the literature surrounding the chosen field. In normal circumstances the student will also be
expected to demonstrate an ability to collect some primary data, ie, not rely totally on library research in the construction of the project.
Prerequisites: MNB363 or MNB630
Credit Points: 12  Contact Hours: 3 per week

**MNB516 ORGANISATIONAL SOCIOLOGY**
The aim of the subject is to ensure that the student gains an understanding of organisations in the public sector. It builds upon the Introduction to Sociology and Theory and Administration subjects to provide a detailed understanding of organisation theory.
Prerequisites/Co-requisites: Eight subjects in the Bachelor of Business Degree including either MNB385 or MNB154
Credit Points: 12  Contact Hours: 3 per week

**MNB517 SPECIAL TOPIC IN INDUSTRIAL RELATIONS**
According to student demand, a Special Topic in Industrial Relations will be offered. Enterprise level HRM/IR, and Comparative Industrial Relations are subjects that are likely to be offered as special topics at an early stage.
Prerequisite: Determined by arrangement with Coordinator
Credit Points: 12  Contact Hours: 3 per week

**MNB518 HEALTH ADMINISTRATION PROJECT**
This subject enables students to do follow-up work of a practical nature in an area of interest to them. Before being admitted to this subject, students will have completed all the required coursework in the discipline area of the proposed project. Projects may be undertaken in any of the discipline areas covered by the degree eg, health economics, law, medical sociology, health finance, health information management, health management, statistics, epidemiology, either individually or in small groups. Projects must have prior approval and will be closely supervised. Being of a practical nature, projects will be undertaken in a health or medical care delivery setting eg, hospital medical record department, group practice, local authority health department, State health department.
Credit Points: 12  Contact Hours: 3 per week

**MNB519 HEALTH INFORMATION MANAGEMENT III**
This subject is designed to enable the students to recognise and use effectively all types of classification systems utilised for the retrieval of health information. It builds on to student's experience from MNB419 by refining and enhancing practical coding skills. It explores the use of coded data in case mix, particularly diagnosis related groups. The examination of specialised types of health records within hospitals, special purpose health record systems outside hospitals and systems for the registration and notification of disease is linked with the specialised classification systems developed to aid the retrieval of information from these various health information systems.
Prerequisite: MNB419
Credit Points: 12  Contact Hours: 3 per week

**MNB523 INDEPENDENT STUDY HRD**
This subject will enable students to demonstrate a competence in directing their own learning. This is essential for professionals who must subsequently keep themselves up-to-date in their area of expertise. To this end, students (either individually or in small groups) will, within an approved content area, undertake one or several learning activities with the approval of a supervisor. Appropriate activities could include literature review, research (mini-thesis), project, practicum (work placement) or anything else deemed acceptable by the supervisor.
Prerequisites: MNB361, MNB461, 2 HRD electives or MNN100
Credit Points: 12  Contact Hours: 3 per week

**MNB524 RETAILING MANAGEMENT II**
The basic objective of this subject is to provide students with both a strong conceptual and practical grounding in those retailing activities that comprise the merchandising function of the different types of retail stores including the distributors of durable consumer goods. This area of management attention and control is a basic and vital one for every retail institution from the large supermarket or department store to the smallest corner store. The course covers those topics associated with the merchandising of retail products: forecasting customer demand, planning, what, how and when to buy, pricing, store display and promotions, as well as the managerial control of buying and stockkeeping merchandising.
Prerequisites: MNB491
Credit Points: 12  Contact Hours: 3 per week

**MNB525 MARKETING DECISION MAKING**
This subject is an advanced treatment of the theory and application of quantitative models in marketing. The various analytical models cover the evaluation of marketing policy and strategy, consumer and organisational buying behaviour, market segmentation and demand assessment, product, price, promotion, distribution and selling decisions. These models lead to the study of an integrated decision support system for marketing management. Application to real-life examples is stressed throughout with case studies and experiential exercises providing the learning framework.
Prerequisites: MNB391 or MNN204 and MNN202
Credit Points: 12  Contact Hours: 3 per week

**MNB526 INTERNATIONAL MARKETING**
This course endeavours to introduce the student to the nature and practice of international marketing. It assumes a familiarity with general marketing management and builds on this knowledge to develop insight into and understanding of the peculiar nature of international marketing management and the problems of marketing within a number of different national markets. The course is managerial in the sense that it focuses on the problems and decisions facing managers of international marketing in business enterprises.
Prerequisites: MNB253 or MNN204
Credit Points: 12  Contact Hours: 3 per week

**MNB527 TRANSPORT ECONOMICS**
A study of the economics of the management of private and public transport operations. These operations will relate to passenger movement and general freight movement. Each operation will be examined in terms of consumer demands, cost, market structure, pricing and non-pricing strategy, regulation, handling and storage techniques.
Prerequisites: MNB371, MNN106
Credit Points: 12  Contact Hours: 3 per week

**MNB528 PACIFIC RIM ECONOMIC RELATIONS**
This subject defines Pacific Rim nations as including Australia, South-East Asia, China, Japan, Canada, the United States of America, Central and South America.
and New Zealand. It examines the evolution of economic relations between Australia and the other nations in the Pacific Rim category. Matters of trade, investment and migration are emphasized. An analysis of the impact of political, social and cultural variables on these relations is given a high priority. The subject also charts future changes in these relationships. In this way it seeks to contribute to the development of a strategic management perspective.

Prerequisite: MNB5372
Credit Points: 12 Contact Hours: 3 per week

MNB533 INTERNATIONAL HEALTH CARE SYSTEMS

The objective of this course is to make students aware of how different countries have organised their health delivery systems. The comparisons will be historical and economic. An analysis will be made of the growth of "the welfare state" in a number of countries eg, United Kingdom, USA, Sweden, Canada, with particular reference to the organisation and delivery of health services. International organisations working in health will be studied. Students will be 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 models; functions, effectiveness and coordination problems.

Credit Points: 12 Contact Hours: 3 per week

MNB534 HEALTH SERVICES EVALUATION

This subject is a study of process evaluation, program evaluation and evaluation research with applications to the health fields. It is designed for health professionals in both the administration and practice areas. Theory, practice, the utilisation of evaluation results and the administration of evaluation studies are emphasised in this course. Specific topics such as quality assurance, utilisation, review and accreditation are addressed.

Prerequisite: MNB543
Credit Points: 12 Contact Hours: 3 per week

MNB543 HEALTH SERVICES PLANNING

This subject deals with the administrator's role in the planning and development of health care facilities and health services. It includes an examination of the reasons for planning, the concepts and principles of planning and the types and categories of planning applied to the health industry.

Prerequisites: MNB430, MNB330 or MNB533
Credit Points: 12 Contact Hours: 3 per week

MNB551 OPERATIONS MANAGEMENT

Operations Management is an advanced treatment of the management and control of organisational systems. The subject involves the functional analysis of short and medium-term operations using management science techniques. The medium-term analysis provides an operational link with strategic management decision making required in the following core subject Managerial Strategy. The subject provides a logical flow of learning from understanding and analysing an operation, work task or organisational activity; to managing raw materials, work-in-process and finished goods; through to layout analysis, job scheduling and operational planning.

Prerequisite: MNB351 and MNB252 or MNN202
Credit Points: 12 Contact Hours: 3 per week

MNB561 INDEPENDENT STUDY HRM

This subject enables students to demonstrate an ability to direct their own learning, a key competence for professionals who must subsequently keep themselves up-to-date in their area of expertise. To this end, students (either individually or in small groups) undertake one or several learning activities with the approval of a supervisor. Appropriate activities could include literature review, research (mini-thesis), project, practicum (work placement), or anything else deemed acceptable by the supervisor.

Prerequisite: MNB361, MNB461, 2 HRM electives or MNN100
Credit Points: 12 Contact Hours: 3 per week

MNB571 ADVANCED ECONOMIC THEORY & POLICY

Considers the foundations of economic thought and recent contributions to the literature of micro and macro theory and policy and their relevance for public and private decision making in the Australian context.

Prerequisite: MNB372, MNB371 or one of these plus the other as a co-requisite.
Credit Points: 12 Contact Hours: 3 per week

MNB572 APPLIED ECONOMETRICS

Application of econometric techniques to economic models in micro and macroeconomics. The models will be used to explain or predict the behaviour of such economic variables as demand, production cost, interest rates, investment activity, and government activity.

Prerequisites: MNB252, MNB371, MNB372 or one of these plus the other as a co-requisite.
Credit Points: 12 Contact Hours: 3 per week

MNB581 LOCAL GOVERNMENT ADMINISTRATIVE PRACTICE I

The powers of central government; the constitution of the Local Authority; its committees and its officials; by-laws; the conduct of elections; budgetary administration; the administration of Land Subdivision; Environmental Legislation and Health Acts; the provision of water and sewerage and building controls.

Credit Points: 12 Contact Hours: 3 per week

NB: Offered in Semester 1 in even-numbered years only.

MNB586 COMPARATIVE POLITICS

To widen student's knowledge and perspectives of political systems. A variety of liberal democratic, socialist and other types of states will be examined. The emphasis is upon comparative study, rather than country by country examination of separate political systems.

NB: For students enrolled in the Public Administration degree only. This subject includes a one hour per week communication component (4 hour subject).
Prerequisites: MNB183 or MNB181
Credit Points: 12 Contact Hours: 3 per week

MNB588 PUBLIC POLICY PROCESS I

Public enterprises at both State and federal levels pursue business functions as part of the institutions of government. They are subject to the public policy
especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimation. The aim of this subject is to provide such an understanding, especially in relation to formulation and legitimisation.

The subject has two main purposes, to look at the theoretical foundations behind both qualitative and quantitative marketing research, and to undertake a "hands on" marketing research project whereby small groups of students will be asked to liaise with the client; determine the most suitable way of gathering information; undertake the research; and finally, present the results. Topics to be covered in both the theoretical and practical areas of the subject include problem formulation; research design and sources of information; design and forms of data collection; sample design; analysis and interpretation of data, and the marketing research report and presentation.

This subject continues the case study approach of Health Management I. It departs from the management of hospitals to include considerations of community health, mental health, and group practice management.

The aim of this subject is to permit an in-depth examination of an issue of importance to the industry. Hence, the actual content will vary, depending upon the issue under examination. Issues currently under consideration are the impact of special, or hallmark events upon the industry, drawing upon School of Management expertise in this area; the gaming industry, its value and impact; and government policy toward the industry, with a special focus upon State-owned, tourist corporations. Each issue will be examined from a multidisciplinary perspective, focused upon managerial considerations.

As a small, relatively open economy, heavily dependent upon commodity exports, and with national policies firmly oriented toward an increase of exports, the need for an understanding of the complexities of transnational management have become greater. This subject is intended to provide a basic outline of management in the transnational context. It will draw upon earlier core subjects and their explanation of management roles to illustrate the manner in which those roles are influenced by the transnational context. The range of problems faced in such situations will be examined, as well as the institutional and procedural solutions adopted, their advantages and disadvantages. The focus will be upon the transnational environments faced in major and developing markets of concern for Australian businesses.

The aim of this subject is to provide a detailed examination of government policy as it influences the tourism industry. It will include the examination of the policies of all levels of government and those international agreements of most significance to the industry, for example, those regarding air traffic rights. The specific governmental institutions and policy processes relevant to the industry will be examined, with a focus on the need to make effective use of the channels provided for access. The policies will be examined in their historical and contemporary context, concluding with an examination of current developments and their likely impact.

Principles and applications of electronic data processing in health care settings. Computerised health information systems are analysed from a variety of viewpoints including the objectives of the system, specific methods employed to meet user needs, structure in an overall information system, the technology which makes it operative, the data base, and the various ways information is transferred and used in health facilities.

This subject explores the role and functions of the medical record administrator in the management of health care services. Topics include the legal and ethical implications of health information management; extended care facilities and their special needs; occupational health and health records for industry; health records for community/primary care units; the potential of modern technology in the effective running of health information services. The clinical classification system will concentrate on nontologic problem solving, collection strategies for disease and operation indexes and the practical application of classifications in health care settings.
MNB624 PROMOTIONAL STRATEGY

This course introduces the student to concepts of promotional strategy. An overall appreciation will be discussed together with a detailed coverage of the management of the advertising functions including objectives of the promotional program, organising and managing the human resources, characteristics of advertising media (TV, radio, magazine etc.), strategy for selection of media vehicle, investigating advertising effectiveness and formulation of a promotional strategy for a local firm or institution. A proportion of the semester will be taken with a coverage of direct marketing and direct response advertising.

Prerequisite: MNB253 or MNN204
Credit Points: 12 Contact Hours: 3 per week

MNB625 PROFESSIONAL MARKETING PRACTICE

With the approval of the lecturer involved the students will undertake a preferred study program within the marketing framework, eg, some particular area of the marketing mix. This study program will require students to undertake a project or internship with a suitable company, where they will actively work on a part-time basis. The program will be aligned as closely as possible to the preferred area of study. Students will be required to submit a number of reports reflecting the theoretical concepts learned and the application to their job experience.

Prerequisite: MNB391 and MNB491 or MNN204 and MNB391
Credit Points: 12 Contact Hours: 3 per week

MNB626 INTERNATIONAL ECONOMICS

The subject will concentrate on Australia’s experience in international economics. Australia’s reason for trade and direction of trade will be considered. Restriction on trade will be examined and debate will cover the Industries Assistance Commission and protection of Australian domestic producers. Appreciation, depreciation and external and internal balance in Australia will be discussed. Special attention will be paid to floating exchange rates and foreign exchange risk management under floating exchange rates; monetary policy and financial deregulation; Keynesian and monetarist theories of the balance of payments; the national debt; ASEAN; international monetary reform; the monetary unification of Germany.

Prerequisite: MNB372 or MNN106
Credit Points: 12 Contact Hours: 3 per week

MNB627 PROGRAM EVALUATION

The objective of the subject is to provide decision makers with a methodology for efficient project selection based on economic criteria. The use of cost benefit analysis, cost effectiveness analysis and program budgeting studies will be investigated. The development of such techniques will involve consideration of objectives, benefits, costs, prices, discount rates and investment rules. The application and limitations of such principles will be demonstrated by the use of case studies.

Prerequisite: MNB371 or MNB471 or MNN106
Credit Points: 12 Contact Hours: 3 per week

MNB630 INDUSTRIAL RELATIONS II

The aim of this subject is to equip students with a detailed knowledge of changes in the Australian community which will have an impact on industrial relations in the next ten years. The subject aims to develop this understanding largely by means of individual student research into relevant topics. While considerable assistance is given by the lecturer in the way of seminars, advice on research methods, and printed material, this subject should appeal particularly to students who appreciate conducting their own individual research.

Prerequisite: 96 credit points subjects successfully completed from Faculty of Business degree program including MNB254
Credit Points: 12 Contact Hours: 3 per week

MNB633 DISTRIBUTION MANAGEMENT

Deals with the application of the basic principles underlying the distribution of an organisation’s products from their production or receipt to final delivery to a customer. Using a systems approach, the subject deals with such practice topics as warehouse location and management and choice of transportation modes. The subject is intended for students working in the marketing and transport/distribution fields but will also be valuable for those in other areas, eg, business research, retailing, accounting.

Prerequisite: MNB391 or MNB371 or MNN204 or MNN106
Credit Points: 12 Contact Hours: 3 per week

MNB639 ECONOMICS OF STRATEGIC MANAGEMENT

This subject examines the internal structure, operation and growth of organisations with special reference to commercial institutions. A wide range of analytical tools is used to address major issues which include the determinants of the internal structure of organisations; the relative effectiveness of the institutions of market and hierarchy in reaching decisions; the determinants of vertical integration; the determinants of the growth and functioning of internal labour markets; the reasons for the development of firms as economic institutions; and the role of the entrepreneur in decision making.

Prerequisite: MNB371 or MNN106
Credit Points: 12 Contact Hours: 3 per week
Note: This subject is not available to students who have taken and passed MNN814.

MNB651 MANAGERIAL STRATEGY

The basic objective of the semester’s work is to help the student to develop a personally useful and explicit way of thinking about the business enterprise as a total system in a total environment; to help to identify the crucial elements and relationships in a situation; analyse systematically and rigorously the basic opportunities, constraints and issues and trace out the impact of an action in any one part upon the other parts and upon the totality. It is the capstone subject in the BBus – Management degree, and aims to integrate student’s previous studies.

Prerequisites: MNB551 or MEB670
Credit Points: 12 Contact Hours: 3 per week

MNB661 INTERVIEWING & COUNSELLING

The unit aims to develop practical skills in aspects of employment interviewing through an introduction to the theory and principles of interviewing and through supervised experience. Attention will be given to the characteristics of the interview situation; the interviewer, the interviewee and their interrelationships. Interview areas covered will include the personal interview (information seeking) and the employee-personnel interview (recruitment, appraisal, disciplinary and exit). Personality theory, guidance and counselling theory and techniques will be introduced. An emphasis will be placed on understanding
and practising the human skills required to facilitate the development of others either in individual interaction or group interaction. Role plays, modelling, case studies, peer and lecturer assessment and guidance may be used towards developing practical skills.

**Prerequisites:** MNN100 or MNB451 or completion of first year of course and either MNB514 or MNB516
Credit Points: 12  Contact Hours: 3 per week

**MNB666 COUNSELLING FOR HEALTH PROFESSIONALS**
A study of the psychology of illness and the counselling process.
Credit Points: 4  Contact Hours: 2 per week

**MNB683 COMPARATIVE ADMINISTRATION**
This subject widens the student's perspectives by examining administrative structures and their functioning in a variety of systems. Students should realise that we in Australia do not have a monopoly on administrative wisdom, and that other systems may be just as effective in their particular environments. Liberal-democratic and totalitarian regimes will be examined with countries chosen to represent unitary systems, federal systems and developing and third world systems. For each country included in the final selection, bureaucratic structure and functions will be examined together with personnel practices, major reforms and committees of inquiry.

**Prerequisites/Co-requisites:** MNB484, MNB586
Credit Points: 12  Contact Hours: 3 per week

**NB:** Offered in Semester 2 in even-numbered years only.

**MNB684 LOCAL GOVERNMENT ADMINISTRATIVE PRACTICE II**
The constitution and administrative arrangements of the Brisbane City Council; the miscellaneous powers and duties of the Local Authority; natural justice in Local Government; land acquisition; flood mitigation; Local Government Court decisions; sources of funds and the Grants Commission; relationships among Local Authorities and with other levels of Government; and the Local Government Association.

**Prerequisite:** MNB584
Credit Points: 12  Contact Hours: 3 per week

**NB:** Offered in Semester 2 in even-numbered years only.

**MNB686 GOVERNMENT & BUSINESS**
To develop an understanding of the relationships between business and government in Australia in historical and contemporary perspective. The subject will build upon the base provided in MNB451, providing a detailed examination of the historical and contemporary context of government-business relationships in Australia at federal and State levels. It will provide the detailed understanding for the subject MNB509.

**Prerequisites:** MNB451 or MNB181
Credit Points: 12  Contact Hours: 3 per week

**MNB687 PUBLIC POLICY PROCESS II**
Continuation of MNB388. A focus upon the implementation to evaluation phases. It also aims at developing the student's capacity to analyse policy content, drawing upon approaches and methods developed in other subjects, and within the subject itself.

**Prerequisite:** MNB588, MNB482
Credit Points: 12  Contact Hours: 4 per week

**MNB691 STRATEGIC MARKETING**
This course is designed to develop a specific understanding of marketing strategies with an in-depth consideration of selected areas of decision making. The course will also cover current and future dimensions of marketing. Students will be exposed to a variety of advanced marketing techniques and issues through lectures, seminars and case analyses.

**Prerequisite:** MNB391, MNB491 or MNB492 (MNN246 - MNB209 and MNB391)
Credit Points: 12  Contact Hours: 3 per week

**MNB998 SPECIAL TOPIC IN PUBLIC ADMINISTRATION**
The aim of this subject is to help the student apply in detail the modes of analysis developed in the core subjects to specific policy areas. In this way their immediate relevance can be demonstrated and a thorough understanding of a policy area gained.

**Prerequisites/Co-requisites:** MNB588, MNB251
Credit Points: 12  Contact Hours: 3 per week

**MND011 PSYCHOLOGY I**
The main objectives of this subject are: Students can explain concepts in the areas of social perception, transactional analysis and motivation, and give examples of these in their own and client behaviour; students can facilitate an interpersonal interaction using skills of transactional analysis and helping; students recognise difficulties in interaction and choose appropriate skills to overcome some difficulties.

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

**MND033 PSYCHOLOGY II**
This subject seeks to enable students to outline assumptions of stage and learning theory approaches to understanding development; outline the following theories of development - Piaget, Erikson, social learning theory; state main research findings for each of the following stages of the life cycle (childhood, adolescence, young adulthood, middle age, ageing); distinguish between normal and abnormal adjustment, and explain issues regarding the definition of 'normal' behaviour; recognise when referral for specialised help is required; state types of programs available and basic assumptions of different treatment strategies.

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

**MND055 PSYCHOLOGY III**
The main objective of this subject will be to educate students to identify problem behaviours in clients and indicate, select and use appropriate intervention and interpersonal skills to assist adjustments of people with psychological problems. The topics covered in the subject include neurosis; psychosis; child psychology; mental retardation and other psychological approaches.

**Prerequisite:** MND033
Credit Points: 6  **Contact Hours:** 3 per week

**MND066 PSYCHOLOGY IV**
The purpose of the subject is to teach students to explain major theories of counselling; initiate the counselling process; identify appropriate goals and strategies; use appropriate skills and techniques to facilitate client change; evaluate the outcome of counselling.

**Prerequisite:** MND055
Credit Points: 6  **Contact Hours:** 3 per week
MND129 PSYCHOLOGY FOR HEALTH PROFESSIONALS A
The purpose of this subject is to teach students to be able to demonstrate effective interpersonal skills in relation to patients and other health professionals; 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 and behaviour; demonstrate appropriate problem-solving skills in their work situation.
Credit Points: 12 Contact Hours: 3 per week

MND501 PSYCHOLOGY
In this subject, the students shall be able to demonstrate effective interpersonal skills in relation to patient and other health professionals; 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 and behaviour and demonstrate appropriate problem-solving skills in their work situation.
Credit Points: 6 Contact Hours: 3 per week

MNN100 INTRODUCTION TO MANAGEMENT
This subject explores the process of management, both analytically and experientially. Using a series of case studies and other learning activities a series of issues typical of those faced by managers are addressed. The tools of various disciplines are used to examine the definition and solution to these problems. Upon completion of the subject, students will be aware of the various means of management, variations in time in what is managed and in the techniques of management. They will be aware of international differences in the management process. Students will confront the gaps between how they think they ought to act, and how they do act in interpersonal managerial contexts. They will also be competent in understanding issues such as pricing, market research, promotional expenditure, staffing levels, wage negotiations and capital expenditure decisions.
Credit Points: 12 Contact Hours: 3 per week

MNN106 MANAGERIAL ECONOMICS
This subject examines principles of economics pertinent to managerial decision making in an economic environment. Topic areas include an introduction to economics, the macroeconomic environment, demand analysis and forecasting, cost analysis, market strategy, and investment analysis. At the completion of the subject students will be capable of applying economic principles to problems of resource allocation at the firm, in industry and the economy. A principal means of achieving this end will be completion of an industry study by each student, and an analysis of the Commonwealth budget strategy.
Credit Points: 12 Contact Hours: 3 per week

MNN201 LABOUR-MANAGEMENT RELATIONS
This subject focuses on the development of managerial policy towards employee relations in the industrial and human resource management sphere. It looks at employee and union action and the role of governments and industrial tribunals. It assesses alternative methods and pressures to change traditional Australian systems. As a result of studying this subject a student will understand the Australian system of labour/management relations, be able to evaluate different systems of regulation in the employment area, understand negotiating processes and develop negotiating skills, and both appreciate and be able to utilise the resources required for mobilising change in this area.
Credit Points: 12 Contact Hours: 3 per week

MNN202 DECISION SUPPORT SYSTEMS
Timely and accurate information is a management resource, and computers can process much of this information to augment and extend a manager's capacity. This subject provides an understanding of the importance, variety and value of both quantitative and qualitative decision support systems, including a significant emphasis on computer-based information systems (such as data bases and expert systems) from the point of view of systems users rather than of specialist system analysis. With personal computers, managers can themselves build logical decision models, and so the subject also develops skills of building models, applying personal computer software (e.g., IFPS/Personal, spreadsheets) to analyse those models, and incorporating the analyses in complex managerial decision-making processes. The subject will also address issues that relate to the human and organisational elements that support managerial decision making.
Credit Points: 12 Contact Hours: 3 per week

MNN203 GOVERNMENT-BUSINESS RELATIONS
This subject examines the nature of the relationship between government and business, especially in the Australian context. It focuses both upon the historical development of the relationships that exist between the private and public sectors and of the impact that the policy decisions of each has on the operations of the other.
Credit Points: 12 Contact Hours: 3 per week

MNN204 MARKETING METHODS & PRACTICES
This introductory subject focuses on the role of marketing, and how marketing fits into the strategic processes of firms and institutions. The subject material covers the key marketing decision areas marketing concept, marketing research, consumer behaviour, marketing segmentation and positioning, product policy, pricing, promotion and distribution.
Credit Points: 12 Contact Hours: 3 per week

MNN302 PEOPLE IN ORGANISATIONS
The subject examines the internal operation of organisations and the behaviour of those in them. The subject explores a range of theories and models of individual and group behaviour including the structural and action perspectives, role theory, conflict and change. This exposure will encourage students to critically evaluate such theories and models, and their implications for management behaviour. Students will also be encouraged to develop the analytical, attitudinal, behavioural and emotional resources necessary to enable them to cope effectively with the complexities and demands of the human resource system in organisations.
Prerequisite: MNN100
Credit Points: 12 Contact Hours: 3 per week

MNN307 STATISTICAL METHODS
Statistics is the study of the procedures for collecting, analysing and interpreting the quantitative data required for effective decision making. The aim of this subject is to develop an understanding of the basic concepts and techniques of statistical analysis, with


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<tr>
<th>Course Code</th>
<th>Course Name</th>
<th>Description</th>
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<tr>
<td>MNN403</td>
<td>BUSINESS POLICY</td>
<td>Integrates and focuses students' earlier studies by developing a general manager's knowledge, analytical understanding and action-taking competencies. A general manager is involved in the decision processes of matching and evaluating an organisation's capabilities to its environment, which includes responsibilities to many stakeholders. Thus tasks of general managers are more complex and interdependent than those of specialist or functional managers. The paradigm adopted in this subject is that of strategic management — analyses of stakeholders, environments and capabilities, strategy formulation, and strategy implementation. Teaching methodologies (such as case studies and real-world projects) used during the semester will emphasise the process of management as well as analysis, and will emphasise contexts as well as concepts. At the conclusion of this subject, students should understand how and why strategic decisions are made, and be prepared to make them. Prerequisite: MNN202. Credit Points: 12 Contact Hours: 3 per week</td>
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<tr>
<td>MNN404</td>
<td>APPLIED RESEARCH PROJECT</td>
<td>This subject allows the student to demonstrate an ability to plan and execute a significant piece of applied research, or to conduct an independent study of an applied area, with a minimum of supervision. Students will be individually assigned to a project supervisor and should consult with them on the nature of the project to be undertaken and the methodology to be used. The final project report, of a maximum of 15,000 words, must demonstrate an ability to identify and research a significant managerial problem area. A comprehensive literature review of the area, and an appreciation of other relevant studies in the area must be included. Prerequisite: 10 subjects in the MBA. Credit Points: 12 Contact Hours: 3 per week</td>
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<tr>
<td>MNN601</td>
<td>CONTEMPORARY HEALTH CARE ISSUES</td>
<td>A comparison of the Australian system of health care with another health care system; 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. Credit Points: 12 Contact Hours: 3 per week</td>
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<tr>
<td>MNN602</td>
<td>HEALTH PLANNING, MANAGEMENT &amp; EVALUATION</td>
<td>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. Credit Points: 12 Contact Hours: 3 per week</td>
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<tr>
<td>MNN603</td>
<td>ENVIRONMENTAL &amp; OCCUPATIONAL HEALTH</td>
<td>Principle of environmental and occupational health; pollution control and worker protection. Credit Points: 12 Contact Hours: 3 per week</td>
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<tr>
<td>MNN604</td>
<td>PRINCIPLES OF EPIDEMIOLOGY</td>
<td>Basic epidemiologic concepts; understanding and control of chronic diseases; unique aspects of infectious diseases. Credit Points: 12 Contact Hours: 3 per week</td>
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<tr>
<td>MNN605</td>
<td>STATISTICAL METHODS &amp; COMPUTING</td>
<td>Basic concepts of biostatistics; application and interpretation; practical introduction to statistical computing. Credit Points: 12 Contact Hours: 3 per week</td>
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<tr>
<td>MNN606</td>
<td>SOCIAL &amp; BEHAVIOURAL SCIENCES IN PUBLIC HEALTH</td>
<td>Social and behavioural influences on health and how they may be utilised to improve health of populations. Credit Points: 12 Contact Hours: 3 per week</td>
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<tr>
<td>MNN607</td>
<td>DISSERTATION</td>
<td>Credit Points: 48</td>
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<tr>
<td>MNN608</td>
<td>ECONOMICS &amp; HEALTH</td>
<td>The role of economics in planning and decision making in health care; application of economic analysis to the health care industry; issues related to the demand for health care; the supply of health care and the market for health care. Credit Points: 12 Contact Hours: 3 per week</td>
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<tr>
<td>MNN609</td>
<td>HEALTH CARE FINANCE</td>
<td>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. Credit Points: 12 Contact Hours: 3 per week</td>
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<tr>
<td>MNN610</td>
<td>HEALTH SERVICES MANAGEMENT</td>
<td>Evolution and changing status of management in health services; interactions between general managers, doctors and others; power/authority concepts; leadership and leadership styles; principles of motivating people and managing conflict; effective decision making by individuals and groups; theories and methods of effective communication, both verbal and written; performance assessment and outcome measures in health management. Credit Points: 12 Contact Hours: 3</td>
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<tr>
<td>MNN611</td>
<td>ADVANCED HEALTH PLANNING</td>
<td>The planning of action programs of prevention, care and cure; students taking this subject will previously have studied the determination of health needs using epidemiological methods. This subject has a bias towards ensuring participation in the planning process by all interests affected by the program. Prerequisites: MNN604, MNN605. Credit Points: 12 Contact Hours: 3 per week</td>
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<tr>
<td>MNN612</td>
<td>ADVANCED HEALTH EVALUATION</td>
<td>A study of evaluation research with applications to the health fields; the theory, practice; the utilisation of evaluation results and the administration of evaluation studies. Prerequisite: MNN602. Credit Points: 12 Contact Hours: 3 per week</td>
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This subject runs concurrently with MNN806 to provide a review of the substantive disciplines within management and to highlight key issues in the current theory and practice of management. MNN805 covers an analysis of critical environmental changes. It focuses on changes in the economy and in the social and political environment including industrial relations and technological change outlining the key issues that are current in these areas.
Credit Points: 12  Contact Hours: 3 per week

This subject runs concurrently with MNN805 to provide a review of the substantive disciplines within management and to highlight key issues in the current theory and practice of management. MNN806 will focus on current issues within strategic management, with particular emphasis on financial management, strategy and planning and the management of human resources.
Credit Points: 12  Contact Hours: 3 per week

This subject aims to update and develop student's knowledge of research theory and research procedures in the social sciences with special reference to practical applications in management areas such as economics, marketing and human resource management. This subject also introduces students to problems of logical inference, observation techniques and to advanced data analysis techniques and the advantages and disadvantages of their use in different contexts.
Prerequisites: MNN805, MNN806  Credit Points: 12  Contact Hours: 3 per week

This subject provides a critical and cross-cultural review of the development of management theory and an analysis of management within complex organisations. The course focuses on managers as participants in an organisational dynamic that is both influenced by and influences such factors as the current state of technology, labour markets, world markets and government and community pressures.
Prerequisites: MNN805, MNN806  Credit Points: 12  Contact Hours: 3 per week

Government-business relationships are complex and dynamic. The formulation and implementation of policy in both government and business organisations is particularly sensitive to these relationships. This subject focuses upon the policy process in both public and private sector organisations with an emphasis on the relationship between these sectors as an important determining variable. Models of the policy process will be used as the major explanatory device, and government policies towards business as the context within which their relationships are examined.
Prerequisites: MNN805, MNN806  Credit Points: 12  Contact Hours: 3 per week

The course looks at the nature of organisations and the way in which individuals groups and leaders function within organisations. Theories of organisational structures, and the determinants of organisational structure are explored, leading to an examination of climate and culture within organisations. The place of the individual within the organisations and the assumptions underlying the psychological theories which guide our treatment of employees are investigated. The traditional and recent developments in leadership theory are examined. The course ends with a consideration of the future of organisations and changes which will occur.
Prerequisites: MNN805, MNN806  Credit Points: 12  Contact Hours: 3 per week

An advanced study of marketing, marketing systems and market management decision processes within the contemporary structure of social cultural, political, economic, business and organisational environments. The subject will cover advanced marketing theory from both strategic and tactical perspectives with emphasis on the relationship between marketing and corporate policy as well as both the internal and external social and behavioural and motivational factors that facilitate marketing exchange opportunities. The subject will address those marketing issues associated with both profit and non-profit organisations and the relevance of marketing theory to these institutions, and will include the developing area of international marketing.
Prerequisites: MNN805, MNN806  Credit Points: 12  Contact Hours: 3 per week

This subject examines the internal structure operation and growth of organisations with special reference to commercial institutions. A wide range of analytical tools is used to address major issues which include the determinants of the internal structure of organisations. The relative effectiveness of the institutions of market and hierarchy in reaching decisions; the determinants of vertical integration; the determinants of the growth and functioning of internal labour markets, and the reasons for the development of firms as economic institutions.
Prerequisite: MNN806  Credit Points: 12  Contact Hours: 3 per week

The purpose of this subject is to both study and develop case studies in management. Australian Case Studies (for example from the Melbourne University Data Base) will be included in the program, which is intended to develop the student's ability to analyse interdisciplinary problems, explore research problems and learn techniques of team-management and problem solving.
Prerequisites: MNN807, MNN806, MNN808  Credit Points: 12  Contact Hours: 4 per week

An investigation by individuals or small groups of students into a managerially significant issue or problem. Students will be expected to choose an area of investigation that will be connected with their final project (MNN830 and MNN831). For example, this may take the form of a review of a section of their proposed area of project work or be part of an initial or pilot study.
Prerequisite: MNN815  Credit Points: 12  Contact Hours: 3 per week
This subject aims to give the student an opportunity to test out some practical applications of research theory and analysis. Students will be required to develop a research proposal of interest to them and related to each student's proposed research project (MNN830). The student will be required to conduct a preliminary or pilot study on a limited number of cases areas of interest in his/her proposed research field and to complete a research report justifying and assessing the chosen research methodology and demonstrating the research techniques that will be used in the full study. Annotated comments on the report must also show awareness of different designs and statistical techniques etc. that might have been used demonstrating a good grasp of elements covered in MNN810 and the earlier analyses of case study material in this course.

Prerequisites: MNN807
Credit Points: 12 Contact Hours: 3 per week

This subject has two central themes. One, the critical analysis of public policy content, using a series of case studies. Two, the development and analysis of explanatory models of the Australian policy process. The role of key institutions and groups in the policy process will be examined in relation to the case studies selected and the explanatory models.

Prerequisites: 96 credit points in the MBA program
Credit Points: 12 Contact Hours: 3 per week

MNP218 ECONOMIC ANALYSIS
Australia's international trading performance relative to other industrialised nations. The potential economic impact on quality control systems on primary, secondary and tertiary sectors of Australian industry. Economics of the firm and the quality factor, quality as a determinant of demand, demand elasticity, goods attribute theory. Tools for incorporating quality into investment decision: opportunity and marginal costs; obsolescence and economic life; repair and major overhaul; criteria for comparing economic alternatives.

Credit Points: 6 Contact Hours: 3 per week

MNP210 VENTURE MANAGEMENT & DEVELOPMENT
The creation and development of new business ventures; the evaluation of the entrepreneurial founder, analysis of the business opportunity itself, and assessment of the resources required for the venture. Students, in teams, will work closely with inventors/entrepreneurs to assess the feasibility of actual new ventures, and to develop comprehensive, professional standard business plans for those ventures.

Credit Points: 12 Contact Hours: 3 per week

MNP508 AUSTRALIAN POLICY STUDIES
This subject has two central themes. One, the critical analysis of public policy content, using a series of case studies. Two, the development and analysis of explanatory models of the Australian policy process. The role of key institutions and groups in the policy process will be examined in relation to the case studies selected and the explanatory models.

Credit Points: 12 Contact Hours: 3 per week

MSA111 BIOLOGICAL CHEMISTRY I
A course introducing the basic biochemistry of major groups of biologically important compounds, includ-
ing carbohydrates, lipids, nucleic acids and protein synthesis and proteins. Biochemical homeostasis in biological systems is considered.

Credit Points: 8  Contact Hours: 4 per week

MA112 BIOLOGICAL CHEMISTRY II
A course which deals with basic metabolism. Topics include: biological catalysis; energetics of biological systems; catabolic and anabolic pathways for the metabolism of carbohydrates, lipids, amino acids and nucleic acids; metabolic control and integration.

Prerequisites: MA111, MA123
Credit Points: 8  Contact Hours: 4 per week

MA113 INTRODUCTORY BIOCHEMISTRY

Credit Points: 8  Contact Hours: 3 per week

MA120 PERSPECTIVES IN MEDICINE
An introduction to the health care area. The course includes presentations by specialists in areas of health care and delivery. Topics addressed include safety, functioning of laboratories in hospitals, country pathology services, clinical measurement and research laboratories as well as related topics such as stress management and the roles of various laboratory personnel.

Credit Points: 4  Contact Hours: 1 per week

MA121 PATHOLOGY
Application of scientific methods to the study of the general principles of disease processes and the major diseases of the organ systems. Correct understanding and use of pathological terms and concepts are emphasised.

Prerequisites: PNA170, PNA171
Co-requisite: PNA171
Credit Points: 8  Contact Hours: 2 per week

MA123 LABORATORY INSTRUMENTATION I
A course of lectures and practical work on the principles, care and effective usage of basic laboratory equipment including glassware, plastics, balances, spectrophotometers, flamephotometers, autotitrometers, pH meters and specific ion meters. Programmable calculators and computers are used during the practical course to illustrate modern methods of data manipulation. In addition the practical course aims to provide experience in the handling of chemicals, and in the preparation of reagents and standards. In this work emphasis is placed on aspects of laboratory safety.

Co-requisite: MA111
Credit Points: 8  Contact Hours: 4 per week

MA124 LABORATORY INSTRUMENTATION II
A course of lectures and practical work designed to integrate the principles and techniques of macromolecule separation by a variety of chromatographic procedures and various methods of electrophoresis, dialysis, filtration and centrifugation.

Prerequisite: MA123
Credit Points: 8  Contact Hours: 4 per week

MA161 MICROBIOLOGY I
An introduction to the biology of bacteria, fungi, algae, protozoa and viruses, with consideration of structure, nutrition, reproduction, genetics, and classification systems. The practical course is aimed at developing the manipulative skills necessary for laboratory identification of microbial forms.

Credit Points: 8  Contact Hours: 5 per week

MA162 MICROBIOLOGY II
The growth of microbial populations and methods of controlling growth; sterilisation and disinfection methods; enzymic activity of microorganisms; the identification of the microorganisms more important in public health; host-parasite relationships and an introduction to immunity.

Prerequisite: MA161
Credit Points: 8  Contact Hours: 5 per week

MA335 IMMUNOLOGICAL TECHNIQUES III
The subject aims to provide an introduction to immunology with particular emphasis on the principle and performance of basic immunological techniques including blood grouping. Topics include antigens, antibodies and the immune system.

Prerequisites: PNA170, PNA171
Credit Points: 8  Contact Hours: 4 per week

MA346 TRANSFUSION TECHNIQUES IV
A course applying the basic knowledge of immunology gained in MA335 to the study of human blood group systems. Topics include principles of immunohaematology, ABO blood group, Rh blood group system, compatibility testing, antibody identification, investigation of transfusion reactions, antenatal testing, quality control and intravenous fluids and blood products.

Prerequisite: MA335
Credit Points: 8  Contact Hours: 4 per week

MA441 CLINICAL MICROBIOLOGICAL TECHNIQUES III
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.

Prerequisite: MA462
Credit Points: 8  Contact Hours: 4 per week

MA442 CLINICAL MICROBIOLOGICAL TECHNIQUES IV
The course aims to teach basic microbiological techniques in the following disciplines: virology, mycology and parasitology (enteric parasites). The practical periods are used to reinforce the theoretical aspects of the subject.

Prerequisite: MA462
Credit Points: 8  Contact Hours: 4 per week

MA443 HISTOLOGICAL TECHNIQUES III
A basic course presenting methods of 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.

Prerequisites: PNA170, PNA171, MA123
Credit Points: 8  Contact Hours: 4 per week

MA444 HISTOLOGICAL TECHNIQUES IV
An advanced course dealing with specialised methods for identifying tissue components. Topics include
electron microscopy, histochemistry, immunohistochemistry. Emphasis is placed on the practical application of these methods in histopathology.

**Prerequisites: MSA412, MSA463**
Credit Points: 8  Contact Hours: 4 per week

**MSA465 CYTOLUMINAL TECHNIQUES III**
A course of lectures and associated practical sessions in cytolomological methods and normal gynaecological cytology. The course provides a basis for the study of clinical cytology offered in MSA466.

**Prerequisites: MSA412, PNA170, PNA171**
Credit Points: 8  Contact Hours: 4 per week

**MSA466 CYTOLUMINAL TECHNIQUES IV**
A course of lectures and associated practical work presenting specialised preparative methods for nongynaecological cytology and demonstrating the evaluation of specimens commonly encountered in routine diagnostic cytology.

**Prerequisites: MSA465**
Credit Points: 8  Contact Hours: 4 per week

**MSA471 CLINICAL BIOCHEMICAL TECHNIQUES III**
A study of the basic chemical procedures used in biochemical laboratories with emphasis on technique and accuracy. Topics include tests of renal, pancreatic, hepatic and gastric functions, and the estimation of serum proteins and lipids.

**Prerequisites: MSA412, PNA171**
Credit Points: 8  Contact Hours: 4 per week

**MSA472 CLINICAL BIOCHEMICAL TECHNIQUES IV**
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.

**Prerequisites: MSA471**
Credit Points: 8  Contact Hours: 4 per week

**MSA481 HAEMATOLOGICAL TECHNIQUES III**
A course of lectures and associated practical work in basic haematological techniques. Topics include the counting of blood cells, the preparation, staining and examination of blood films, the determination of the red cell indices, supravital staining techniques erythrocyte sedimentation rate and origin and maturation of blood cells.

**Prerequisites: PNA170, PNA171**
Credit Points: 8  Contact Hours: 4 per week

**MSA482 HAEMATOLOGICAL TECHNIQUES IV**
This subject is an extension of MSA481 Haematological Techniques III. The student is introduced to the common blood disorders. A brief outline of their courses and laboratory investigation is given. However the main emphasis is the use of the basic haematological techniques and some specialised laboratory procedures used in the investigation of commonly encountered blood disease. The basic theory of haemostasis and the screening tests used in the investigation of the bleeding disorders are discussed.

**Prerequisites: MSA481**
Credit Points: 8  Contact Hours: 4 per week

**MSB101 MICROBIOLOGY I**
The subject acts as an introduction to the study of microbiology, biochemistry & biotechnology. The diversity of microbes is presented together with the various forms of microscopy used to study them. Important biological molecules, both inorganic and organic, are discussed with emphasis on the mode of action of enzymes and their role in energy production. A detailed study is made of the morphology of eukaryotic cells, prokaryotic cells and viruses.

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

**MSB120 INTRODUCTION TO PATHOLOGY**
Application of scientific methods to the study of the general principles of disease processes and the major diseases of the organ systems. Correct understanding and use of pathological terms and concepts are emphasised.

**Prerequisites: PNB175**
Credit Points: 6  Contact Hours: 3 per week

**MSB145 LABORATORY TECHNOLOGY II**
A course dealing with the theoretical and practical aspects of instrumental analysis in the clinical laboratory. Topics covered include glassware, plastics, spectrophotometers, flamephotometers, autoanalyzers, pH meters and specific ion meters. Programmable calculators and computers are used during the practical course to illustrate modern methods of data manipulation. Emphasis is placed throughout on the effective use of the instruments.

**Prerequisites: PHB150**
Credit Points: 6  Contact Hours: 2 per week

**MSB201 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.

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

**MSB301 MICROBIOLOGY I**
This subject considers the classification and identification of microorganisms. Emphasis is on their microbiology and reproduction. Organisms dealt with are the protozoa, helminths, fungi and bacteria and algae.

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

**MSB310 BIOCHEMICAL METHODOLOGY III**
A companion to MSB415 emphasising biochemical laboratory methods and practice and dealing with pH measurement and buffers, UV and visible spectrophotometry, chromatography, electrophoresis and isotope techniques.

**Prerequisites: MSB101, MAB227**
Co-requisites: MSB415
Credit Points: 8  Contact Hours: 4 per week

**MSB320 SYSTEMATIC PATHOLOGY**
Detailed study of the diseases of the organ systems: cardiovascular, respiratory, alimentary, urogenital, nervous musculoskeletal, endocrine, haematologic and skin.

**Prerequisite: MSB120**
Credit Points: 8  Contact Hours: 3 per week
MSB402 MICROBIOLOGY II
This subject extends the principles covered in MSB301 and considers the classification and identification of microorganisms, their infectious capability, host responses and the role of microorganisms in nature and in industrial processes, the enumeration of microorganisms, the control of microbial populations. The classification of viruses and their reproductive cycle is briefly considered.
Prerequisite: MSB301
Credit Points: 6 Contact Hours: 3 per week

MSB405 LABORATORY COMPUTING III
The first section of this subject extends the knowledge of computing gained in Laboratory Computing I by examining the programming process in more detail. This leads on to the second section which concentrates on the practical application and operation of computers in a laboratory. The use of software packages forms an important part of this course.
Prerequisite: CSB259
Credit Points: 8 Contact Hours: 3 per week

MSB408 VIROLOGY IV
This subject is an introductory course in virology and will include the range of viruses and virus diseases, their morphology and composition; virus replication, taxonomy and classification and the major virus groups; purification of viruses; diagnosis and virus assay; transmission and 'life' cycles; control and eradication of viruses.
Prerequisite: MSB415 or MSB473 and MSB450
Credit Points: 8 Contact Hours: 4 per week

MSB410 BIOCHEMICAL METHODOLOGY IV
A companion subject to MSB416 which continues the studies of MSB310. This unit extends studies of chromatographic and electrophoretic methods, protein binding techniques and the methodology of protein and nucleic acid analysis.
Prerequisite: MSB310 Co-requisite: MSB416
Credit Points: 8 Contact Hours: 4 per week

MSB412 IMMUNOLOGY IV
A study of 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 and immunisation of man against infections.
Prerequisite: PNB465, PNB231, MSB450
Credit Points: 8 Contact Hours: 4 per week

MSB415 BIOCHEMISTRY III
A course of 28 lectures and 42 hours laboratory work introducing properties, biological molecules and at the molecular level with particular emphasis on cell structure and function, the chemistry of proteins, enzymology, energy production and utilisation, the chemistry and functions of carbohydrates.
Prerequisite: CHB242, MSB101
Credit Points: 10 Contact Hours: 5 per week

MSB416 BIOCHEMISTRY IV
A course of 28 lectures and 42 hours laboratory work considering aspects of carbohydrate metabolism in mammals, the chemistry and metabolism of lipids, the basic catabolism of amino acids, the chemistry and function of the nucleic acids, protein biosynthesis and the molecular bases of genetic mutation.
Prerequisite: MSB415
Credit Points: 10 Contact Hours: 5 per week

MSB420 IMAGING PATHOLOGY
A study of the appearances of pathology on medical images with particular emphasis on the radiographic image.
Prerequisite: MSB320
Credit Points: 4 Contact Hours: 2 per week

MSB421 ELECTRON MICROSCOPY
A course providing a theoretical background to the operation, scanning and transmission electron microscopes and applications in biological, materials and forensic science. Basic principles of specimen preparation will be covered, with materials and biological samples and the analytical capabilities of electron beam instruments will be introduced.
Credit Points: 6 Contact Hours: 2 per week

MSB426 HAEMATOLOGY IV
In the first of the three haematology subjects the student is introduced to the theory of the origin, development and composition of normal blood. Laboratory tests (principles, outline of the techniques and interpretation) used in the screening of blood samples are discussed in detail. Basic haematologic tests included in this unit include: preparation, staining and examination of blood films, determination of the red cell indices, supravital staining, erythrocyte sedimentation rate, screening tests used in the investigation of a bleeding disorder.
Prerequisite: MSB445, PNB132, PNB465
Co-requisite: MSB416
Credit Points: 8 Contact Hours: 4 per week

MSB430 DISEASE PROCESSES IV
A course introducing the 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. The course 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.
Prerequisite: PNB163 or PNB131
Co-requisite: PNB462 or PNB435
Credit Points: 4 Contact Hours: 2 per week

MSB445 LABORATORY TECHNOLOGY III
The course deals with techniques encountered in the clinical laboratory. Topics include immunohematology, enzymic analysis, electrophoresis, isoelectric focusing, and chromatography (gel filtration, ion exchange, affinity, and high performance liquid chromatography). Emphasis is placed on the maintenance of accuracy, precision and quality control in the clinical laboratory.
Prerequisite: MSB145
Credit Points: 8 Contact Hours: 3 per week

MSB450 MICROBIOLOGY III
An introductory core unit of lectures and practical exercises in microbiology dealing with cytology, nutrition, genetics, control of microbial populations, and principles of taxonomy.
Prerequisite: MSB101 (except optometry students)
Co-requisite: MSB415 or MSB473 (except optometry students)
Credit Points: 6 Contact Hours: 3 per week

MSB454 MICROBIOLOGY IV
An extension of the core course in Microbiology (MSB450), includes aspects of microbial taxonomy,
food and water microbiology, microbial ecology, industrial and agricultural microbiology and the role of microorganisms as infectious agents.

Prerequisite: MSB450 Co-requisite: MSB416 or MSB474
Credit Points: 8  Contact Hours: 4 per week

MSB471 BIOCHEMISTRY IV
A course of 28 lectures and 28 hours of laboratory work introducing the structures and functions of proteins, carbohydrates, lipids and nucleic acids, basic enzymology, mechanisms of cellular energy production and the role of ATP, an outline of the metabolism of carbohydrates, lipids and amino acids and the fundamentals of protein biosynthesis and molecular biology.
Prerequisite: CHB242
Credit Points: 8  Contact Hours: 4 per week

MSB473 BIOCHEMISTRY III
This subject will cover the biochemistry of proteins including structure-function relationships, enzymeology including basic kinetics and control mechanisms relevant to metabolism, the mechanism and role of the Krebs (Citric Acid) Cycle including stoichiometry and energetics and bioenergetics including the mechanisms of electron transport and synthesis at ATP.
Prerequisite: MSB101, CHB150, CHB250
Credit Points: 6  Contact Hours: 3 per week

MSB474 BIOCHEMISTRY IV
The biochemistry of polysaccharides; carbohydrate metabolism; lipid biochemistry including structure-function relationships; lipid metabolism; amino acid catabolism and nitrogen excretion; the structural biochemistry of the nucleic acids; basic mechanisms in protein biosynthesis including an introduction to molecular genetics.
Prerequisite: MSB473
Credit Points: 6  Contact Hours: 3 per week

MSB492 HISTOPATHOLOGY IV
An introductory course presenting methods of preparing tissue samples for examination by the various methods of light and electron microscopy. Topics include fixation, embedding, microscopy and an introduction to staining and microscopy techniques.
Co-requisites: PNB132, CHB242
Credit Points: 8  Contact Hours: 4 per week

MSB510 FOOD MICROBIOLOGY
A course of lectures and associated practical work dealing with aspects of the microbiology of foods and water. Topics include foodborne infections and intoxications; food hygiene; food ecology and its relationship to spoilage and preservation; fermentations; methods of microbiological examination of foods.
Prerequisite: MSB454
Credit Points: 8  Contact Hours: 3 per week

MSB511 MICROBIAL PHYSIOLOGY & METABOLISM V
An advanced course of lectures and practical sessions relating to the composition, organisation, structure and activity of the microbial cell (bacteria, yeasts and fungi). Topics include light microscopy and staining methods; cell structure; enrichment, isolation and growth of cultures; cells, populations and the kinetics of growth; biosynthesis of cellular materials; regulation of metabolism; microbial genetics; sporogenesis and germination.
Prerequisite: MSB454
Credit Points: 10  Contact Hours: 4 per week

MSB512 VIROLOGY V
A course of lectures and laboratory exercises dealing with the nature of viruses; viral replication; viral transmission; viral diseases of humans, animals and plants and their diagnosis; virus purification and assay.
Prerequisite: MSB408
Credit Points: 8  Contact Hours: 3 per week

MSB520 BIOCHEMISTRY V
An extension of studies begun in MSB415 and MSB416 considering further aspects of carbohydrate metabolism emphasising non-mammalian systems, lipid metabolism including steroid biosynthesis, amino acid metabolism in mammalian and non-mammalian systems and regulation and integration of metabolism and bioenergetics.
Prerequisite: MSB416
Credit Points: 12  Contact Hours: 5 per week

MSB521 BIOCHEMICAL SEPARATIONS
An advanced course of lectures and a comprehensive project designed to integrate a number of specialist biochemical procedures including centrifugation, chromatography, electrophoresis and spectrophotometry. Students will be required to design and execute an experimental protocol for the separation of selected macromolecules.
Prerequisite: MSB310 Co-requisite: MSB520
Credit Points: 10  Contact Hours: 4 per week

MSB530 MOLECULAR BIOLOGY
An introductory subject of lectures and practical exercises in molecular biology including types and structures of DNA and RNA, the genetic code and protein synthesis; DNA replication, repair and mutability; transcription and translation; gene structure, function and expression in prokaryotes and eukaryotes; transferable DNA including plasmids, bacteriophage and transposable elements.
Prerequisites: MSB416, MSB454
Credit Points: 10  Contact Hours: 5 per week

MSB610 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; membrane filtration; product recovery; biochemical engineering; production of immunising agents and diagnostic reagents; primary and secondary metabolites of industrial importance; single cell protein; microbial transformations; biodeterioration and bioleaching.
Prerequisite: MSB511
Credit Points: 10  Contact Hours: 5 per week

MSB611 APPLIED MICROBIOLOGY
An advanced course of lectures and practical sessions with emphasis upon the applied aspects of microbiology. Topics include electron microscopy; systematics and nomenclature; plant and soil microbiology; preservation of cultures and cell lines.
Prerequisite: MSB511
Credit Points: 10  Contact Hours: 4 per week

MSB620 BIOCHEMISTRY VI
Advanced studies in protein biochemistry, including structure, analysis and evolution of proteins, and their special properties; applications in the area of enzymology and membrane biochemistry.
Prerequisite: MSB410, MSB416
Credit Points: 12  Contact Hours: 5 per week
MSB621 ANALYTICAL BIOCHEMISTRY VI
A companion unit to MSB620 which extends the subject matter of MSB410 into biochemical analysis. This subject treats enzyme-based analyses, advanced analytical techniques, immunology, and specific methods for the major biomolecules.
Prerequisite: MSB410 Co-requisite: MSB620
Credit Points: 10 Contact Hours: 4 per week

MSB630 GENETIC ENGINEERING
This subject introduces the techniques in genetic engineering including the enzymes, vectors and hosts, gene isolation and detection of recombinant genes; strategies of gene cloning, genomic and cDNA libraries and gene identification; and applications of genetic engineering.
Prerequisite: MSB530
Credit Points: 10 Contact Hours: 5 per week

MSB631 NUTRITIONAL BIOCHEMISTRY
This subject builds on a student's background of basic biochemistry. The effect of nutrient intake on metabolic balance and the use of laboratory data for monitoring metabolic balance are highlighted. Specific topics include: the digestion, absorption and assimilation of the macronutrients; the metabolic basis of primary nutritional diseases; biochemical assessment of nutritional status; the clinical significance of pathology laboratory data; integration of metabolism in a variety of pharmacological and pathological conditions which require dietary intervention; and nutrient interactions.
Prerequisites: MSB620
Credit Points: 8 Contact Hours: 4 per week

MSB712 IMMUNOLOGY V
This unit builds on the basic understanding provided in MSB412 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.
Prerequisites: MSB412, MSB416, MSB454
Credit Points: 8 Contact Hours: 4 per week

MSB713 IMMUNOHAEMATOLOGY VI
This course is designed to supply the competence in theoretical and practical blood transfusion which would be required of a scientist working in a hospital blood bank. The understanding of immunology gained in MSB412 and MSB712 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.
Prerequisites: MSB712
Credit Points: 8 Contact Hours: 4 per week

MSB718 CLINICAL BIOCHEMISTRY V
This course 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, and the metabolism of lipids, carbohydrates and proteins.
Prerequisites: MSB416, MSB445, PNB465
Co-requisite: MAB252
Credit Points: 8 Contact Hours: 4 per week

MSB719 CLINICAL BIOCHEMISTRY VI
This course further develops 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.
Prerequisite: MSB718
Credit Points: 8 Contact Hours: 4 per week

MSB726 HAEMATOLOGY V
This unit continues the study of blood diseases. The format follows the one outlined for MSB726. Topics in this unit include: haemolytic anaemia, leukaemia and related diseases, paediatric haematology, blood disorders in the elderly and veterinary haematology.
Prerequisite: MSB726
Credit Points: 8 Contact Hours: 4 per week

MSB755 MICROBIOLOGY V
A study of parasitology (85 semester hours) directed towards the laboratory diagnosis of parasitic disease in man. It consists of a systematic study of identification, life history, incidence, modes of infection, epidemiology and control of the parasites of man. Emphasis is placed on parasites evident in Australia and Australia's most likely to penetrate the quarantine barrier. A study of clinical mycology (20 semester hours) including characterisation of fungi responsible for systemic and superficial infections in man.
Prerequisite: MSB454
Credit Points: 16 Contact Hours: 7 per week

MSB756 CLINICAL BACTERIOLOGY VI
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.
Prerequisite: MSB454
Credit Points: 16 Contact Hours: 7 per week

MSB761 FUNDAMENTALS OF MEDICINE I
This subject provides students with the theoretical basis for an understanding of the process of medical care. These 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; and assist in research and quality assurance programs in the health services. A review of the important and frequently encountered diseases and includes disorders of the major body systems.
Prerequisite: PNB262
Credit Points: 12 Contact Hours: 3 per week

MSB762 FUNDAMENTALS OF MEDICINE II
This subject continues the study of the process of medical care begun in Fundamentals of Medicine I.
In addition it includes the study of the roles and functions of allied health professions, and of technological services in the diagnosis and treatment of disease.

**Prerequisite:** MSB761  
Credit Points: 12  
Contact Hours: 3 per week  

**MSN792 HISTOPATHOLOGY V**  
A detailed study of techniques used in routine histopathology and introduces advanced and specialised methods including scanning electron microscopy and X-ray microanalysis. Major components include the overview of techniques for diagnostic cytology concentrating on specimen preparation and the microscopic detection of cancerous and other abnormal cells in human tissues and body fluids.

**Prerequisite:** MSB492, MSB416, PN465, MSB445, PN132  
Credit Points: 8  
Contact Hours: 4 per week  

**MSN793 HISTOPATHOLOGY VI**  
The course reviews recent advances in diagnostic histopathology and introduces advanced and specialised methods including scanning electron microscopy and X-ray microanalysis. A major component is an overview of techniques for diagnostic cytology concentrating on specimen preparation and the microscopic detection of cancerous and other abnormal cells in human tissues and body fluids.

**Prerequisite:** MSN792  
Credit Points: 8  
Contact Hours: 4 per week  

**MSN360 MICROBIOLOGY I**  
An introduction to the microbial world with emphasis on organisms causing disease in humans and on host-parasite relationships. The nature of bacteria, viruses, fungi and protozoa, their appearance and means of replication. Sterilisation and disinfection, antibiotics and chemotherapeutic agents. An introduction to bacterial genetics.

**Credit Points:** 3  
**Contact Hours:** 2 per week  

**MSN410 PATHOLOGY**  
An introduction to the processes of disease and to the processes taking place in the production of conditions requiring clinical treatment.

**Prerequisite:** PND132 Co-requisite: PND430  
Credit Points: 2  
Contact Hours: 1 per week  

**MSN460 MICROBIOLOGY II**  
Sources of human infection and modes of transmission in bacterial, viral and fungal infections. Concepts of host resistance. Immunity to infectious disease and the broader concepts of immunology. Consideration of the more important microorganisms responsible for human disease with emphasis on the causative agents, diagnostic measures, prophylaxis and therapy.

**Prerequisite:** MSN360  
Credit Points: 6  
Contact Hours: 3 per week  

**MSN680 EPIDEMIOLOGY**  
An introduction into principles and application of epidemiology. The definition and application of terms and parameters. Agents of disease: physical, chemical, biological, social, and their interactions. Data used in epidemiology studies and their sources and accuracy. Methods and approaches. Examples will be freely chosen from communicable and non-communicable diseases and student will gain practice in model studies.

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

**MSN751 INTRODUCTORY EPIDEMIOLOGY**  
History and purposes of epidemiology, definitions and application of terms used in epidemiology, etiological agents of disease, measurement, methods and approaches.

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

**MSN102 CELLULAR BASIS OF DISEASE**  
The following material will be presented in either lectures or tutorials. Cell injury and stress mechanisms. Cellular communication. The responses of organelles, cells and tissues to injury and stress including the following: immune, inflammation, thrombosis, ageing and neoplastic responses. Transplantation and regeneration.

**Prerequisite:** 24 credit points in Master of Health Science  
Credit Points: 12  
Contact Hours: 3 per week  

**MSN110 MOLECULAR BASIS OF DISEASE**  
This course of study aims to provide an understanding of the molecular level, of the aetiology, diagnosis and treatment of various diseases, by a study of molecular structures, biochemical reactions, and the integration and control of metabolism. Topics for study will include: gene structure and function, proteins - structure and molecular function, and enzymes - properties and alterations in diseases; metabolic integration and hormone action, hormones and organ disease, disorders of carbohydrate and lipid metabolism and chemotherapy.

**Prerequisite:** 24 credit points in Master of Health Science  
Credit Points: 12  
Contact Hours: 3 per week  

**MSN150 EPIDEMIOLOGY & RESEARCH STRATEGIES**  
An introduction to the principles and applications of epidemiology with emphasis given to its scope and value in establishing disease aetiology. Course topics will include epidemiological methods (descriptive, analytical and experimental), epidemiological concepts, causal relationships, measurement of morbidity and mortality statistical overview of the health of the Australian population, and the investigation of an epidemic.

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

**MSN158 ULTRASONIC PATHOLOGY**  
Pathology as applicable to diagnostic ultrasound; basic embryology and genetics.

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

**MSN306 PATHOPHYSIOLOGY**  
A study of selected pathophysiological states which represent major alteration in physiological functioning, occurring in each developmental phase.

**Prerequisite:** 72 credit points in Master of Health Science  
Credit Points: 12  
**Contact Hours:** 3 per week  

**MSN401 ADVANCES IN MEDICAL LABORATORY SCIENCE**  
A series of lectures to provide current and topical information across the general field of medical laboratory science. In addition, topics which have significant implications on the advancement of the profession will be presented, e.g., computers, laboratory automation, biotechnology, self-diagnosis. The lecture program will be flexible to allow for the incorporation of visiting speakers or for the introduction of a current interest topic. In addition to formal lectures the unit will offer tutorial and student seminar sessions.

**Prerequisite:** 72 credit points in Master of Health Science  
Credit Points: 12  
**Contact Hours:** 3 per week
[MSN510] CLINICAL BIOCHEMISTRY I
This subject is designed to emphasise the use of clinical biochemistry in the diagnosis of diseases. Disorders of fluid and electrolyte balance systems, disorders of the gastrointestinal, pancreatic and hepato-biliary systems, and disorders of the cardiovascular system and hypertension will be studied, concentrating on diagnosis and the interpretation of biochemical results. In addition, aspects of instrumentation and laboratory methods will be reviewed.
Prerequisite: MSN510
Credit Points: 12 Contact Hours: 3 per week

[MSN511] HAEMATOLOGY I
This subject studies in depth a number of haematologic diseases; their aetiology, laboratory investigation, their diagnosis and the interpretation of biochemical results. In addition, aspects of instrumentation and laboratory methods will be reviewed.
Prerequisite: MSN510
Credit Points: 12 Contact Hours: 3 per week

[MSN912] HISTOPATHOLOGY I
An in-depth review of recent advances and modern methods in diagnostic histopathology. Major topics will include immunohistochemistry, enzyme histochemistry and transmission electron microscopy.
Prerequisite: MSN511
Credit Points: 12 Contact Hours: 3 per week

[MSN515] MICROBIOLOGY I
These courses will explore, in-depth, areas of bacteriology, virology, mycology and parasitology. Topics will be chosen to increase the knowledge and understanding of microorganisms associated with human infection. Recent trends and developments in diagnostic microbiology will be studied. A critical approach to the assessment of laboratory practices and interpretation of data will be developed.
Prerequisite: MSN515
Credit Points: 12 Contact Hours: 3 per week

[MSN530] DISSERTATION
The dissertation includes a supervised project in an approved topic area selected by the student. The project area may be novel, developmental or directed at an investigation of the introduction of a new system into the laboratory. Other areas which are considered appropriate include epidemiological analyses, laboratory safety, laboratory design or the efficacy of laboratory service. Each student will submit a written project report in a style to present the data.
Prerequisite: 96 credit points in Master of Health Science
Credit Points: 12 per semester
Contact Hours: 3 per week

[MSN610] CLINICAL BIOCHEMISTRY II
This subject is designed to emphasise the use of clinical biochemistry in the diagnosis of diseases. Endocrinology, disorders of the muscular and skeletal systems, disorders of special groups, nutrition and drugs, neurochemistry and neural disorders, cancer-associated biochemical abnormalities, and the seriously ill patients will be studied, concentrating on diagnosis and the interpretation of biochemical results.
Prerequisite: MSN510
Credit Points: 12 Contact Hours: 3 per week

[MSN611] HAEMATOLOGY II
This unit has the same aims and objectives as for MSN511. Topics considered in this unit include: age-related changes to the haemopoietic system, (perinatal haematology, paediatric haematology and haematology in the elderly), nutrition anaemias, the role of the forensic laboratory, transplantation, automation and quality control. Since outside lecturers participate in these specialist electives some interchange of topics between the two units may be necessary.
Prerequisite: MSN511
Credit Points: 12 Contact Hours: 3 per week

[MSN612] HISTOPATHOLOGY II
Investigation of methods in diagnostic histopathology. The design and assessment of diagnostic programs to aid the identification of tumours and diseases of selected organ systems. A study of specialised techniques including aspiration cytology, scanning electron microscopy and analytical electron microscope methods.
Prerequisite: MSN512
Credit Points: 12 Contact Hours: 3 per week

[MSN615] MICROBIOLOGY II
These courses will explore, in-depth, areas of bacteriology, virology, mycology and parasitology. Topics will be chosen to increase the knowledge and understanding of microorganisms associated with human infection. Recent trends and developments in diagnostic microbiology will be studied. A critical approach to the assessment of laboratory practices and interpretation of data will be developed.
Prerequisite: MSN515
Credit Points: 12 Contact Hours: 3 per week

[MSP104] ANALYTICAL ELECTRON MICROSCOPY
An advanced course in electron microscopy with emphasis on the applications of labelling and analytical techniques. Methods covered in lectures and practical sessions 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.
Credit Points: 10 Contact Hours: 5 per week

[MSP105] MOLECULAR DIAGNOSIS OF DISEASE
This subject consists of a series of lectures and laboratory exercises in advanced molecular techniques of disease diagnosis. Included will be collection and preparation of samples; the use of DNA probes in dot blots, Southern blots and Northern blots, RFLP analysis and DNA fingerprinting; advanced immunological techniques such as Elisa and Western blotting.
Credit Points: 10 Contact Hours: 4 per week

[MSP120] ADVANCED GENETIC ENGINEERING
The isolation of mRNA and DS viral RNA; DNA analysis using Restriction Fragment Length Polymor-
MSPI24 RESEARCH STRATEGIES II
This subject consists of a series of seminars presented by staff of the Faculties of Health and Science and other research scientists on research strategies and directions in their area of expertise. A series of tutorials and lectures on such topics as library searches, oral communications, written communications and ethics. Several written assignments 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.
Credit Points: 8  Contact Hours: 3 per week

MSPI25 READING IN BIOMEDICAL SCIENCE I
This subject consists of the preparation of a literature review of direct and associated relevance to the Honours Project (MSPI25). The literature review, under the guidance of the supervisor(s), will include 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.
Credit Points: 25  Contact Hours: 1 per week

MSPI26 READING IN BIOMEDICAL SCIENCE II
This subject consists of the preparation of a paper reporting the methods and results of investigations in the Honours Project (MSPI25). The paper will also include an introduction, analysis and discussion of the project in a style and length deemed to be appropriate by the Head of Department. In the course of this subject students should relate their project work to published work already undertaken in the relevant field.
Credit Points: 25  Contact Hours: 1 per week

MSPI27 TOPICS IN BIOTECHNOLOGY I
A series of special tutorials, lectures or seminars on biotechnology oriented topics such as: commercial perspectives of a biotechnology company; funding for commercial research; research strategies in biotechnology; methods of reviewing the biotechnology literature; DNA and protein sequence data banks. Students will also be required to present a seminar on some aspect of biotechnology research.
Credit Points: 12  Contact Hours: 4 per week

MSPI28 TOPICS IN BIOTECHNOLOGY II
A series of special tutorials, lectures or seminars on biotechnology oriented subjects such as: guidelines for the use of genetically modified organisms; funding for biotechnology projects; patent protection for ideas and products; intellectual property agreements; commercial perspectives of a biotechnology company. Students will also be required to present a seminar on some aspect of biotechnology research.
Credit Points: 4  Contact Hours: 1 per week

MSPI46 PROJECT
All students undertaking the Graduate Diploma in Biotechnology will be required to select, in consultation with their employer and an academic supervisor, a suitable research project. The aims of the project are that students, under supervision, should: participate in the selection of a suitable topic for investigation; conduct a literature search in the subject area; plan an experimental program which includes scheduling laboratory space, equipment and consumables; undertake work at the bench; record, assess and interpret the results; write a concise thesis in a standard form of presentation.
Credit Points: 16 per semester  Contact Hours: 3 per week

MSPI52 FOOD MICROBIOLOGY
An introduction to food borne pathogens, microbial spoilage of foods; preservation; fermentation; hygiene; microbiological standards.
Credit Points: 6  Contact Hours: 3 per week

NSB110 FOUNDATIONS OF NURSING PRACTICE I
The processes underlying nursing practice; use of nursing framework to examine relationships amongst health, environment, individual and nurse; therapeutic nurse-client relationship.
Credit Points: 12  Contact Hours: 4 per week

NSB111 FOUNDATIONS OF NURSING PRACTICE II
Components of nursing role and associated functions; theoretical approaches to counselling, learning and teaching, management, research and change.
Prerequisite: NSB110 Co-requisite: NSB112
Credit Points: 18  Contact Hours: 7 per week

NSB112 CLINICAL PRACTICE I
Application of theoretical concepts to the provision of nursing care in a clinical setting, based on content in year one of the course.
Co-requisite: NSB111 Credit Points: 6  Contact Hours: 40/1 week block

NSB120 NURSING IN SOCIAL SYSTEMS I
Concepts of environment and health, and their impact on health care; nursing as part of the health care system; development of nursing theory.
Credit Points: 9  Contact Hours: 3 per week

NSB130 PROFESSIONAL ASPECTS OF NURSING I
Use of a professional framework to analyse nursing practice; international, national and State nursing organisations and authorities; legal and ethical aspects of practice.
Credit Points: 12  Contact Hours: 4 per week
† NSB201 PRINCIPLES OF PATIENT CARE
This introductory unit emphasises the ethical, legal and clinical accountability of the radiographer for safe patient care. The subject aims to develop in radiography students an awareness of their responsibilities in protecting patients and promoting their well-being. Credit Points: 4  Contact Hours: 2 per week

† NSB210 THEORIES OF NURSING I
Analysis of selected models of nursing; interrelationship between research and theory development; application of models/theories to healthcare settings. Co-requisites: NSB212, NSB240 Credit Points: 9  Contact Hours: 3 per week

† NSB211 THEORIES OF NURSING II
Relationship of research and development of nursing theory; use of a nursing model for generating research problems; application of statistical principles to data analysis; preparation of research reports. Prerequisites: NSB210, NSB111 Co-requisite: MAB156 Credit Points: 9  Contact Hours: 3 per week

† NSB212 CLINICAL PRACTICE II
Use of a nursing model as a basis for giving nursing care; selection of setting (hospital or community) and clients according to developmental stage; emphasis on clinical, teaching and counselling components of nursing role. Prerequisite: NSB112 Co-requisites: NSB210, NSB240 Credit Points: 6  Contact Hours: 40 hrs/1 wk block

† NSB220 NURSING IN SOCIAL SYSTEMS II
Characteristics of Australian society—family, education systems, religion, economic and political order, race and ethnicity; implications for nursing practice. Prerequisite: NSB210 Credit Points: 9  Contact Hours: 3 per week

† NSB230 PROFESSIONAL ASPECTS OF NURSING II
Factors promoting professional leadership in nursing—leadership theory, evaluation of practice; societal issues affecting practice; legislation related to health care delivery. Prerequisite: NSB130 Credit Points: 12  Contact Hours: 4 per week

† NSB240 NURSING PRACTICE I
Extension of knowledge of theory and skills related to the clinical, teaching and counselling components of the nursing role; use of case studies for the assessment of individual needs according to stage of development. Prerequisites: PNB115, PNB116 Co-requisites: NSB212, NSB210 Credit Points: 18  Contact Hours: 8 per week

† NSB241 NURSING PRACTICE II
Care coordinator, charge agent and client advocate components of the nursing role—application of management principles to job assignment; documentation; cooperative interaction with other health professionals; application of principles of change; process of client advocacy. Prerequisite: NSB240 Credit Points: 15  Contact Hours: 6 per week

† NSB250 PSYCHOSOCIAL ADAPTATION
Axiological factors related to adaptive and maladaptive behaviour; assessment techniques to identify maladaptation in health-related situations; nursing participation in therapeutic intervention. Credit Points: 6  Contact Hours: 2 per week

† NSB252 PATHOPHYSIOLOGY
A study of selected pathophysiological states which represent major alteration in physiological functioning, occurring in each developmental phase. Credit Points: 6  Contact Hours: 2 per week

† NSD120 PERSPECTIVES FOR NURSING PRACTICE I
Views nursing from a conceptual viewpoint, examines the roles of the nurse in the provision of health care. Distinguishes between the independent and interdependent functions of the nurse. Credit Points: 3  Contact Hours: 2 per week

† NSD121 CONCEPTS FOR NURSING PRACTICE I
Addresses the relationship between the individual and health. Examines human needs/adaptation theory and related concepts. Introduces the concept of health promotion—maintenance. Co-requisite: NSD122 Credit Points: 6  Contact Hours: 3 per week

† NSD122 CLINICAL PRACTICE I
Focuses on the acquisition of knowledge and experience in interpersonal, problem-solving and psychomotor skills. Experience takes place in the college laboratory and community placements. Credit Points: 9  Contact Hours: 8 per week

† NSD123 CLINICAL PRACTICE II
Provides experience in the application of concepts and principles addressed during semester. Focuses on the acquisition of a specific level of competence. Settings may include: kindergartens, schools, senior citizens centres and maternity units. Co-requisite: NSD122 Credit Points: 9  Contact Hours: 120 hrs/3 week block following semester

† NSD220 PERSPECTIVES FOR NURSING PRACTICE II
Critiques health care in Australia. Analyses nursing in hospitals. Determines specific attributes of the nursing roles of clinicians and teacher. Prerequisites: NSD120 Credit Points: 6  Contact Hours: 2 per week

† NSD221 CONCEPTS FOR NURSING PRACTICE II
Addresses the concept of illness and the effect on individuals. Examines strategies to promote adaptation to illness/hospitalisation of individuals from each developmental stage. Focuses on health promotion—maintenance, restoration, reorganisation. Prerequisite: NSD211 Co-requisite: NSD122 Credit Points: 6  Contact Hours: 3 per week

† NSD222 CLINICAL PRACTICE IIA
Focuses on the acquisition of knowledge and experience in interpersonal, problem-solving and psychomotor skills. Experience takes place in the college laboratory and hospitals. Credit Points: 9  Contact Hours: 8 per week

† NSD223 CLINICAL PRACTICE IIB
Provides experience in the application of concepts and principles addressed during semester. Focuses on the
acquisition of a specific level of competence. The setting will be hospitals.
Co-requisite: NSD222
Credit Points: 9
Contact Hours: 120 hrs/3 wk block following semester

NSD320 PERSPECTIVES FOR NURSING PRACTICE III
Reviews the concept of the health care team. Addresses the roles of care coordinator and researcher.
Prerequisite: NSD220
Credit Points: 6
Contact Hours: 2 per week

NSD321 CONCEPTS FOR NURSING PRACTICE III
Addresses the effects of pathophysiology or psychopathology on human needs (196 respiratory, cardiovascular, fluid/electrolyte imbalance, surgical intervention). Examines independent and interdependent strategies to promote health - maintenance, restoration, reorganisation.
Prerequisite: NSD221
Co-requisite: NSD322
Credit Points: 6
Contact Hours: 3 per week

NSD322 CLINICAL PRACTICE III A
Focuses on the acquisition of knowledge and experience in interpersonal, problem-solving and psychomotor skills. Experience takes place in the college laboratory and hospitals.
Credit Points: 9
Contact Hours: 10 per week

NSD323 CLINICAL PRACTICE III B
Provides experience in the application of concepts and principles addressed during semester. Focuses on the acquisition of a specific level of competence. The setting will be hospitals.
Co-requisite: NSD322
Credit Points: 9
Contact Hours: 120 hrs/3 week block following semester

NSD420 PERSPECTIVES FOR NURSING PRACTICE IV
Concentrates on ethical aspects of nursing - theory and practice. Addresses the role of the nurse as client advocate.
Prerequisite: NSD220
Credit Points: 6
Contact Hours: 2 per week

NSD421 CONCEPTS FOR NURSING PRACTICE IV
Addresses the effects of pathophysiology or psychopathology on human needs - urinary, gastrointestinal, musculo-skeletal. Examines emergency/critical aspects of care. Examines independent and interdependent strategies to promote health - maintenance, restoration, reorganisation.
Prerequisite: NSD221
Co-requisite: NSD422
Credit Points: 6
Contact Hours: 3 per week

NSD422 CLINICAL PRACTICE IV A
Focuses on the acquisition of knowledge and experience in interpersonal, problem-solving and psychomotor skills. Experience takes place in the college laboratory and hospitals.
Credit Points: 9
Contact Hours: 10 per week

NSD423 CLINICAL PRACTICE IV B
Provides experience in the application of concepts and principles addressed during semester. Focuses on the acquisition of a specific level of competence. The setting will be hospitals.
Co-requisite: NSD422
Credit Points: 9
Contact Hours: 120 hrs/3 week block following semester

NSD520 PERSPECTIVES FOR NURSING PRACTICE V
Addresses the concepts of the community and family as systems. Focuses on crises intervention as a therapeutic process. Examines the role of the nurse as counsellor.
Prerequisite: NSD220
Credit Points: 6
Contact Hours: 4 per week

NSD521 CONCEPTS FOR NURSING PRACTICE V
Addresses the effects of pathophysiology or psychopathology on human needs - reproductive, neurological, psychiatric. Examines the childbearing experience. Examines independent and interdependent strategies to promote health - maintenance, restoration, reorganisation.
Prerequisite: NSD221
Co-requisite: NSD522
Credit Points: 6
Contact Hours: 4 per week

NSD522 CLINICAL PRACTICE V A
Focuses on the acquisition of knowledge and experience in interpersonal, problem-solving and psychomotor skills. Experience takes place in the college laboratory, community and hospital.
Credit Points: 9
Contact Hours: 15 per week

NSD523 CLINICAL PRACTICE V B
Provides experience in the application of concepts and principles addressed during semester. Focuses on the acquisition of a specific level of competence. The setting will be the community, community agencies and hospitals.
Co-requisite: NSD522
Credit Points: 9
Contact Hours: 120 hrs/3 wk block following semester

NSD620 PERSPECTIVES FOR NURSING PRACTICE VI
Addresses nursing from a historical and contemporary perspective. Looks at such issues as the nurse as a professional, leadership and the expanding role of the professional nurse.
Prerequisite: NSD220
Credit Points: 6
Contact Hours: 3 per week

NSD621 CONCEPTS FOR NURSING PRACTICE VI
Addresses the effects of pathophysiology and psychopathology on human needs - integumentary, endocrine, oncologic, immunologic problems. Examines independent and interdependent strategies to promote health - maintenance, restoration, reorganisation.
Prerequisite: NSD221
Co-requisite: NSD622
Credit Points: 6
Contact Hours: 4 per week

NSD622 CLINICAL PRACTICE VI A
Focuses on the acquisition of knowledge and experience in interpersonal, problem-solving and psychomotor skills. Experience takes place in the college laboratory, community and hospitals.
Credit Points: 9
Contact Hours: 15 per week

NSD623 CLINICAL PRACTICE VI B
Provides experience in the application of concepts and principles addressed during semester. Focuses on the
acquisition of a specific level of competence. The setting will be the community, community agencies and hospitals.

Co-requisite: NSD622
Credit Points: 9  Contact Hours: 120 per week

NSN102 CONCEPTS FOR ADVANCED CLINICAL NURSING
In recent years there has been significant development in the role of the professional nurse as an advanced-level planner and provider of care. At this level, it is expected that nurses show a high degree of competence with an independent problem-solving approach to client care and are able to interact widely on intra-, inter- and extra-professional levels. Therefore, this subject is designed to enhance knowledge and skills involved in the selection, provision and communication of contemporary nursing care.
Credit Points: 12  Contact Hours: 3 per week

NSN103 RESEARCH METHODS IN NURSING
This subject will provide opportunities for students to develop skills in research design and data collection processes related to clinical phenomena. The data analysis component will emphasise statistical techniques applicable to nursing research design.
Credit Points: 12  Contact Hours: 3 per week

NSN104 PROFESSIONAL ISSUES IN NURSING
This subject is designed to enable students to expand the concept of the social significance of nursing as well as analyse the profession's accountability and responsibility to health care at local, national and international levels. Major topics of study will include theoretical and ideological perspectives of professional regulation, nursing's approach to professionalisation and the involvement of national and international nursing organisations in health policy formulation. Students will be given the opportunity to consider the influence of other disciplines and the historical environment on the development of ideas in nursing theory.
Credit Points: 12  Contact Hours: 3 per week

NSN105 MEDICAL/SURGICAL NURSING I
Advanced specialization in medical-surgical nursing requires the ability to deal critically and effectively with particular clinical phenomena so that the health of the individual, family or community is promoted. This subject, which focuses on the individual as client, will provide opportunities for students to enhance previous clinical knowledge and skills so that excellence in nursing care may be realised.
Prerequisites: NSN101, NSN102
Credit Points: 12  Contact Hours: 3 per week

NSN106 MEDICAL/SURGICAL NURSING II
Advanced specialization in medical-surgical nursing requires the ability to deal critically and effectively with particular clinical phenomena so that the health of the individual, family or community is promoted. This subject adds a community focus to that of the individual and family. It will provide opportunities for students to enhance previous clinical knowledge and skills so that excellence in nursing care may be realised.
Credit Points: 12  Contact Hours: 3 per week

This subject adds a community focus to that of the individual and family. It will provide opportunities for students to enhance previous clinical knowledge and skills so that excellence in nursing care may be realised.
Credit Points: 12  Contact Hours: 3 per week

NSN107 MEDICAL/SURGICAL NURSING III
Advanced specialization in medical-surgical nursing requires the ability to deal critically and effectively with particular clinical phenomena so that the health of the individual, family or community is promoted.
Credit Points: 12  Contact Hours: 3 per week

NSN108 PRIMARY HEALTH CARE NURSING I
Advanced specialization in primary health care nursing requires the ability to critically analyse issues and trends affecting the health and lifestyle of individuals, families and communities. This subject focuses on the individual as client and provides the foundation for the primary health care nursing stream by exploring a broad range of factors which together define the parameters of primary health care practice.
Credit Points: 12  Contact Hours: 3 per week

NSN109 PRIMARY HEALTH CARE NURSING II
Advanced specialization in primary health care nursing requires the ability to critically analyse issues and trends affecting the health and lifestyle of individuals, families and communities. This subject focuses on the family as client and will provide opportunities to enhance previous clinical knowledge and skills through the application and evaluation of appropriate health education strategies.
Credit Points: 12  Contact Hours: 3 per week

NSN110 PRIMARY HEALTH CARE NURSING III
Advanced specialization in primary health care nursing requires the ability to critically analyse issues and trends affecting the health and lifestyle of individuals, families and communities. This subject focuses on the community as client and will provide opportunities to enhance previous clinical knowledge and skills through the application and evaluation of appropriate health education strategies.
Credit Points: 12  Contact Hours: 3 per week

NSN111 PSYCHIATRIC/MENTAL HEALTH NURSING I
Advanced clinical practice in psychiatric-mental health nursing requires the ability to deal critically and effectively with interpersonal processes and strategic therapeutic use of self to restore, maintain, promote and prevent mental and psychiatric disability. Particular attention is given to interpersonal dynamics and behaviour as basic processes by which nursing assessment and intervention occur. This subject, which focuses on the individual as client, will provide opportunities to enhance previous clinical knowledge and skills through the application and testing of interpersonal theory and therapeutics.
Credit Points: 12  Contact Hours: 3 per week

NSN112 PSYCHIATRIC/MENTAL HEALTH NURSING II
In this subject, particular attention is given to family dynamics and behaviour as basic processes by which nursing assessment and intervention occur. By focusing on the family as client, it will provide opportunities to enhance previous clinical knowledge and skills through the application and testing of family theory and therapeutics.
Credit Points: 12  Contact Hours: 3 per week

NSN113 PSYCHIATRIC/MENTAL HEALTH NURSING III
Particular attention is given to current trends and approaches to the organisation and delivery of mental
health services within Australia with selected international comparisons.
Credit Points: 12      Contact Hours: 3 per week

■ NSN201 GRIEF & BEREAVEMENT
Advanced level clinical practice in any field of nursing requires the ability to deal effectively and sensitively with grieving and bereaved individuals and families. The purpose of such practice is to enable the dying to experience a dignified and peaceful death; and to assist with the grieving/bereaved individual's adaptation to the loss. This subject will provide opportunities for student to enhance previous clinical knowledge and skills so that excellence in nursing care may be realised when caring for grieving and bereaved individuals and families in hospital and community settings.
Credit Points: 6      Contact Hours: 1.5 per week

■ NSN202 NURSING & HEALTH EDUCATION PRACTICE
This elective unit of study introduces practising nurses to the theoretical perspectives of health education. Particular attention is given to the development, implementation and evaluation of health education programs which focus on specific needs of groups and/or communities.
Credit Points: 6      Contact Hours: 1.5 per week

■ NSN203 HUMAN SEXUALITY & HEALTH
Human sexuality remains a controversial and highly debated topic in Australian society. Although there is a growing awareness amongst nurses of the significance of human sexuality to patient care, many nurses suffer from the same paucity of information, myths and misconceptions about sexuality that afflict the broader community. Students undertaking this elective will have the opportunity to explore a subject of considerable complexity within a nursing context.
Credit Points: 6      Contact Hours: 1.5 per week

■ NSN204 PAIN: A NURSING FOCUS
Pain is a universal experience which may cause individuals, together with their families, great distress. It is also a subjective, personal experience about which much is still being learnt and understood. This subject will provide opportunities for students to extend previous clinical knowledge and skills so that a contemporary and comprehensive approach to pain assessment and management may be initiated by the nurse.
Credit Points: 6      Contact Hours: 1.5 per week

■ NSN205 INDEPENDENT STUDY
The intention of this unit of study is to increase flexibility and provide the opportunity for in-depth study in an approved area of study interest to meet the diverse needs and interest of practising Registered Nurses.
Credit Points: 6      Contact Hours: 1.5 per week

■ NSN301 ADVANCED NURSING EDUCATION I
This subject is designed to increase students' knowledge of the theoretical bases of teaching and learning in order to promote and facilitate learning. Students from various disciplines on campus can be accommodated within this subject. Students will focus on the professional practice of that discipline.
Credit Points: 12      Contact Hours: 3 per week
skills from leadership, innovation, and change theory. This subject examines consultation theory and practice in detail. The areas of study include a focus on relationship between the nurse consultant and the client, problems that can arise, planning intervention and evaluation of the consultative process.

**Prerequisite:** NSN301  
**Credit Points:** 12  
**Contact Hours:** 3 per week

[**NSN401 STRATEGIES FOR NURSING RESEARCH**](#)

This subject introduces postgraduate students to the use and application of qualitative research techniques in nursing practice. The content will be selected from techniques such as participant observation and unstructured interviewing as well as qualitative approaches in nursing research such as phenomenology, grounded theory, ethnography and historical research.

**Credit Points:** 6 per semester  
**Contact Hours:** 1.5 per week

[**NSN403 DISSERTATION**](#)

The dissertation should be a substantive and original research study. It should provide evidence that the student has identified a significant problem, reviewed the relevant literature, developed appropriate methodology to collect and analyse data, implemented the study and presented the findings in a form consistent with school requirements.

**Prerequisites:** NSN401, MSN150  
**Credit Points:** 24  
**Contact Hours:** 6 per week

[**NSP171 PRINCIPLES OF EDUCATION**](#)

Learning theories; the teaching process; readiness for learning; organisation of instruction – group and individual methods; teaching techniques; audio and visual aids; and place of evaluation in educational process. Practice of principles of education will be incorporated in the practice of diet therapy as students practise instructing patients on therapeutic diets.

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

[**OPB132 OPHTHALMIC OPTICS II**](#)

An introduction to ophthalmic optics; optical properties of spherical and astigmatic lenses and of ophthalmic prisms; bifocals, multifocals and special lens types; ophthalmic lens materials and lens quality; the ophthalmic prescription, its interpretation and verification.

**Prerequisite:** PHB150  
**Co-requisite:** PHB240  
**Credit Points:** 12  
**Contact Hours:** 4 per week

[**OPB312 VISUAL SCIENCE III**](#)

The performance of the eye as an optical system is considered in the context of ocular aberrations, refractive errors and image formation and quality. An introduction to visual performance characteristics includes absolute and relative thresholds, dark and light adaptation and relative luminous efficiency curves.

**Prerequisite:** PHB240  
**Co-requisite:** PHB340  
**Credit Points:** 14  
**Contact Hours:** 5 per week

[**OPB401 OCULAR & REGIONAL ANATOMY**](#)

The gross anatomy of the head and neck region with particular reference to the central nervous system. The macroscopic and microscopic anatomy of the orbit, extraocular muscles, eyelids, lacrimal apparatus, cornea, conjunctiva, sclera, uveal tract, lens, retina, optic nerve, aqueous, vitreous and the neural pathways and vascular circulation subserving vision. Ocular embryology.

**Prerequisite:** PNB363  
**Co-requisites:** PNB435; OPB412  
**Credit Points:** 8  
**Contact Hours:** 3 per week

[**OPB412 VISUAL SCIENCE IV**](#)

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 are also included.

**Prerequisites:** OPB312, PHB340  
**Co-requisite:** OPB401  
**Credit Points:** 14  
**Contact Hours:** 5 per week

[**OPB504 OPHTHALMIC OPTICS V**](#)

A continuation of OPB132. Ophthalmic Optics II, with emphasis on problems with spectacle lenses. The practical application of theory to ophthalmic dispensing in the laboratory.

**Prerequisites:** OPB132, PHB340  
**Credit Points:** 6  
**Contact Hours:** 4 per week

[**OPB505 CLINICAL OPTOMETRY V**](#)

The clinical application of techniques learnt in OPB109 Optometry V (studied concurrently) in the management of patients presenting for eye examinations.

**Prerequisite:** OPB412  
**Co-requisites:** OPB509, OPB508, OPB527  
**Credit Points:** 8  
**Contact Hours:** 4 per week

[**OPB508 OCULAR PHYSIOLOGY**](#)

This course covers all aspects of ocular physiology including the vegetative physiology of various ocular structures, visual neurophysiology and an introduction to electrophysiological techniques.

**Prerequisites:** OPB412, OPB401  
**Co-requisites:** OPB509, OPB505, OPB527  
**Credit Points:** 8  
**Contact Hours:** 4 per week

[**OPB509 OPTOMETRY V**](#)

The aim of this subject is to teach the theory and practice of clinical procedures which are used in routine eye examinations.

**Prerequisite:** OPB412  
**Co-requisite:** OPB508, OPB505  
**Credit Points:** 18  
**Contact Hours:** 9 per week

[**OPB527 DISEASES OF THE EYE V**](#)

The detection, diagnosis, referral and management of ocular disease. General pathological considerations. The writing of reports, referral letters and referral procedures. The nature, aetiology and management of congenital, developmental, dystrophic and degenerative anomalies of the external and internal ocular structures and ocular adnexae. The ocular manifestation of systemic disease including cardiovascular, metabolic, endocrine, central nervous system and malnourishment disorders.

**Prerequisites:** PNB435, OPB401, MSB430  
**Co-requisites:** OPB505, OPB508, OPB509  
**Credit Points:** 8  
**Contact Hours:** 3 per week

[**OPB605 CLINICAL OPTOMETRY VI**](#)

The continuation of OPB505 Clinical Optometry V. The clinical application of techniques learnt in OPB509 Optometry V and OPB609 Optometry VI (studied concurrently) in the management of patients presenting for eye examinations.

**Prerequisite:** OPB505  
**Co-requisites:** OPB608, OPB609, OPB627  
**Credit Points:** 8  
**Contact Hours:** 4 per week
**OPB608 OCULAR PHARMACOLOGY**
General pharmacological principles are presented as background to a study of pharmaceutical profiles of ophthalmic preparations; both diagnostic and topical therapeutic agents are considered. Particular emphasis is placed on those ophthalmic drugs used to facilitate an eye examination.

**Prerequisites:** OPB508, OPB509

**Co-requisites:** OPB603, OPB609, OPB627

**Credit Points:** 6  **Contact Hours:** 4 per week

**OPB609 OPTOMETRY VI**
This subject is a continuation of the theory and practice of routine and advanced clinical procedures which are used when conducting a complete eye examination. The areas covered include ocular photography, the management of binocular vision anomalies, methods of examining the visual fields and the measurement of intra-ocular pressure.

**Prerequisites:** OPB508, OPB509

**Co-requisites:** OPB608, OPB609

**Credit Points:** 16  **Contact Hours:** 8 per week

**OPB617 CONTACT LENS STUDIES VI**
This subject provides an introduction to the basic concepts of contact lens fitting. Areas covered include contact lens instrumentation, contact lens materials and designs, fitting and consultation techniques. The practical component of the subject focuses upon the fitting of contact lenses.

**Prerequisites:** OPB509, OPB505, OPB527

**Co-requisites:** OPB609, OPB605, OPB627

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

**OPB627 DISEASES OF THE EYE VI**
A continuation of OPB527 Diseases of the Eye V. 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 adnexa.

**Prerequisite:** OPB527

**Co-requisites:** OPB605, OPB608, OPB609

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

**OPB705 CLINICAL OPTOMETRY VII**
This is the clinical application of the procedures studied in OPB609 Optometry VI and OPB709 Optometry VII, and includes the management of patients in the clinical situation.

**Prerequisite:** OPB605

**Co-requisites:** OPB709, OPB717

**Credit Points:** 24  **Contact Hours:** 13

**OPB707 OPTOMETRY VII**
This subject is a continuation of OPB609 Optometry VI and provides knowledge and understanding of the theory and clinical procedures involved in paediatric optometry, low vision, colour vision and aniseikonia.

**Prerequisite:** OPB609  **Co-requisite:** OPB705

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

**OPB717 CONTACT LENS STUDIES VII**
A series of lectures and practical sessions: "advanced aspects of contact lens practice. The subject includes topics such as the physiological consequences of contact lens wear, management of contact lens patients, and fitting of lenses for keratoconus, extended wear and presbyopia. Practical sessions provide training in advanced diagnostic and fitting techniques.

**Prerequisite:** OPB617

**Co-requisite:** OPB705, OPB709

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

**OPB750 PROJECT**
Students are required to undertake project work in Year 4, Semesters 1 and 2. Students work in groups of up to three on projects of their own choosing or on a topic chosen from a suggested list. Project topics must be original. Students conduct a literature search (including a computer-based search in conjunction with a reference librarian). They decide on the experimental hypotheses, plan and execute the experiment, analyse the results and write a report in manuscript form which is hoped will be suitable for publication in the open literature. Students are encouraged to seek assistance from staff members of the Department of Optometry and other Departments within the University. 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.

**Co-requisites:** OPB709, MAB238

**Credit Points:** 5 per semester  **Contact Hours:** 3 per week

**OPB803 OCCUPATIONAL/PUBLIC HEALTH OPTOMETRY**
A course of study to introduce the basic concepts of eye safety and visual ergonomics. Content will include eye safety programs, occupational vision screening, legal aspects of eye safety, eye hazards - traumatic, radiation and chemical, eye protection, visual ergonomics and illumination engineering.

**Prerequisite:** OPB709  **Co-requisite:** OPB805

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

**OPB805 CLINICAL OPTOMETRY VIII**
A continuation of OPB705 Clinical Optometry VII. This subject places emphasis on the students' decision-making skills in the evaluation, care and treatment of patients who may have a wide range of visual disorders.

**Prerequisites:** OPB705, OPB717

**Co-requisite:** OPB803

**Credit Points:** 32  **Contact Hours:** 17 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 measurements, heat content, heat transfer, reflection and refraction of light at plane surfaces, use of lenses in simple optical instruments, current electricity, e.m.f. resistance, circuit analysis, heating effect, electrical measurements using moving coil galvanometers, potentiometers and Wheatstone bridge, magnetic field with simple applications. A series of laboratory experiments emphasises the above concepts.

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

**PHA213 MEDICAL INSTRUMENTATION II**
Basic concepts and procedures in diagnostic instrumentation; transducer principles; characteristics of physiological signals; methods of measurement and instrumentation principles. Hospital visits may be included.

**Prerequisite:** PHA154

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

**PHA561 CARDIAC INSTRUMENTATION**
Knowledge and understanding of cardiac instrumentation; the application of this knowledge to situations in hospital clinics.

**Prerequisite:** PHA213

**Credit Points:** 6  **Contact Hours:** 3 per week
IIA PHA562 CARDIAC MEASUREMENT TECHNIQUES
Knowledge of the chosen clinical measurement environment within a hospital by controlled clinical measurement experiences in approved clinical measurement departments. Hospital visits may be included.
Prerequisite: PHA213
Credit Points: 9  Contact Hours: 3 per week

IIA PHA661 RESPIRATORY INSTRUMENTATION
Knowledge and understanding of respiratory instrumentation; the application of this knowledge to situations in hospital clinics.
Prerequisite: PHA213
Credit Points: 6  Contact Hours: 3 per week

IIA PHA662 RESPIRATORY MEASUREMENT TECHNIQUES
Knowledge of the chosen clinical measurement environment within a hospital by controlled clinical measurement experiences in approved clinical measurement departments. Hospital visits may be included.
Prerequisite: PHA213
Credit Points: 9  Contact Hours: 3 per week

IIA PHA761 NEUROLOGICAL INSTRUMENTATION
Knowledge and understanding of instrumentation used in electroencephalography (EEG); electromyography (EMG); neurosensory measurement environments; the application of this knowledge in situations in hospital clinics.
Prerequisite: PHA213
Credit Points: 6  Contact Hours: 3 per week

IIA PHA762 NEUROLOGICAL MEASUREMENT TECHNIQUES
Knowledge of the chosen clinical measurement environment within a hospital by controlled clinical measurement experiences in approved clinical measurement departments. Hospital visits may be included.
Prerequisite: PHA213
Credit Points: 9  Contact Hours: 3 per week

IIA PHA861 UROLOGICAL INSTRUMENTATION
Knowledge and understanding of instrumentation used in urological, renal and ultrasonic imaging measurement environments; the application of this knowledge in situations in hospital clinics.
Prerequisite: PHA213
Credit Points: 6  Contact Hours: 3 per week

IIA PHA862 UROLOGICAL MEASUREMENT TECHNIQUES
Knowledge of the chosen clinical measurement environment within a hospital by controlled clinical measurement experiences in approved clinical measurement departments. Hospital visits may be included.
Prerequisite: PHA213
Credit Points: 9  Contact Hours: 3 per week

IIA PHB104 INTRODUCTORY PHYSICS
This subject is intended to give the student a grounding in basic physics topics selected from the following areas: mechanics, heat, electricity, and magnetism and light.
Credit Points: 6  Contact Hours: 3 per week
Note: This subject is not compatible with Senior Physics.

IIA PHB110 PHYSICS IA
A course of lectures, tutorials and laboratory work covering dynamics, fluid mechanics, mechanical properties of matter, gravitation and geometrical optics.
Co-requisite: PHB104 unless Senior Physics has been undertaken.
Credit Points: 8  Contact Hours: 3 per week

IIA PHB111 PHYSICS IB
A course of lectures and laboratory work on a.c. and d.c. circuit theory, electronics, vibrations and waves, sound.
Co-requisite: PHB104 unless Senior Physics has been undertaken.
Credit Points: 8  Contact Hours: 3 per week

IIA PHB132 ENGINEERING PHYSICS IA
A basic subject in the physics of waves and optics; including moving and stationary waves in various media, interference of waves, beats acoustics and shock waves and measurement of sound; geometrical and physical optics including reflection, refraction, dispersion, interference and diffraction, polarisation, optical instruments, design and resolution, and photometry.
Credit Points: 6  Contact Hours: 3 per week

IIA PHB144 APPLIED SCIENCE FOR DESIGNERS I
Physics for environmental design: energy and energy transfer, heat, light and sound; introduction to mechanics; principles of hydraulics and fluid flow; electricity, magnetism and basic electronics. Chemistry for environmental design: basic chemical properties of commonly occurring materials, natural and artificial; common chemical processes in buildings and artefacts. Earth science and climatology for environmental design: landforms and their origins; introduction to the physical and horticultural properties and behaviour of soils and rocks.
Credit Points: 6  Contact Hours: 3 per week

IIA PHB150 PHYSICS 1H
Basic physical measurements; mechanics; fluids; heat; vacuum physics; waves, acoustics, ultrasonics and optics, and the instrumentation used to measure biological parameters.
Credit Points: 12  Contact Hours: 6 per week

IIA PHB170 PHYSICS FOR SURVEYORS
Mechanics; geometrical optics; physical optics; quantum optics; physics of materials; physics of the lower atmosphere; sound; electromagnetic fields; electronics.
Credit Points: 12  Contact Hours: 6 per week

IIA PHB178 PRINCIPLES OF MEDICAL RADIATIONS
An introduction to the principles of medical imaging and to the methods of detection, diagnosis and treatment of cancer.
Credit Points: 10  Contact Hours: 5 per week

IIA PHB210 PHYSICS IIA
A course of tutorials, lectures and laboratory work on thermal physics and electromagnetic fields.
Prerequisite: PHB104 or Senior Physics
Credit Points: 8  Contact Hours: 3 per week

IIA PHB211 PHYSICS IIB
A course of lectures and laboratory work on physical optics, and modern and radiation physics.
Prerequisite: PHB104 or Senior Physics
Credit Points: 8  Contact Hours: 3 per week
PHB232 ENGINEERING PHYSICS II
A basic subject in the physics of heat and properties of matter; including the kinetic theory of gases, temperature scales and thermometers, heat and heat measurement, thermodynamics and the molecular properties of matter; gravitational fields; basic radiation physics.
Prerequisite: PHB150
Credit Points: 14
Contact Hours: 2 per week

PHB240 OPTICS II
The principles of geometrical optics as they apply to rectilinear propagation, reflection and refraction for paraxial rays for monochromatic light for single surfaces, thin lenses, cylindrical, spherocylindrical and toric lenses, lens systems in air, the eye and a selection of optical instruments; study of the optics of monochromatic and chromatic aberrations and of photometry and colour.
Prerequisite: PHB150 Co-requisite: OPB132
Credit Points: 14
Contact Hours: 7 per week

PHB250 PHYSICS III
An extension of PHB150 including a.c., d.c. circuit theory, with emphasis on electronics and instrumentation fields, modern and nuclear physics.
Credit Points: 10
Contact Hours: 4 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).
Credit Points: 6
Contact Hours: 2 per week

PHB260 PHYSICS IIG
A course of lectures and tutorials in thermal physics, electrostatics, magnetostatics, electromagnetic fields and waves, quantum physics, nuclear and radiation physics.
Credit Points: 8
Contact Hours: 4 per week

PHB272 RADIATION PHYSICS I
A course of lectures and practical sessions on electrostatics, electromagnetism, the production of X-rays and their interaction with matter.
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.
Credit Points: 4
Contact Hours: 2 per week

PHB276 GENERAL RADIOGRAPHY I
A program of lectures and practical sessions relating to radiography of the skeletal system.
Prerequisite: PNB125, PHB178
Co-requisite: PNB225
Credit Points: 14
Contact Hours: 7 per week

PHB279 CLINICAL RADIOGRAPHY I
Practical programs carried out in approved clinical departments. Specific experiences relate to topics introduced in PHB276.
Prerequisite: as for PHB310
Credit Points: 4
Contact Hours: 2 per week

PHB286 TREATMENT PLANNING I
An introduction to the techniques of radiotherapy treatment planning.
Credit Points: 12
Contact Hours: 6 per week

PHB287 MEGAVOLTAGE THERAPY I
An introduction to the basic techniques of radiotherapy including beam direction and defining devices, modification of beam and dosimetry.
Prerequisite: PHB178, PHB125
Credit Points: 6
Contact Hours: 3 per week

PHB289 CLINICAL RADIOThERAPY I
Practical programs carried out in approved clinical departments. Specific experiences relate to topics introduced in PHB287.
Credit Points: 4
Contact Hours: 2 per week

PHB308 ELECTRONICS I
A course of lectures and laboratory work covering basic measurement techniques and instrumentation, solid state components such as diodes, transistors, FETs and optoelectronics, feedback theory and applications.
Prerequisite: 2 semesters tertiary study (PHB111 preferred)
Credit Points: 8
Contact Hours: 3 per week

PHB310 WAVE THEORY & A.C. CIRCUITS
A course of lectures and tutorials on undamped and damped oscillations, forced oscillations, coupled oscillations, wave transmission and reflection, examples of wave systems, a.c. network analysis, resonance, transformers, bridges.
Prerequisite: At least three of PHB110, PHB111, PHB210, PHB211 and at least two of MAB211, MAB224, MAB225
Co-requisite: MAB411 is recommended
Credit Points: 8
Contact Hours: 3 per week

PHB311 OPTICS & ACOUSTICS
A course of lectures and tutorials on interference and diffraction, Fourier methods, coherence and correlation, lasers and holography, sound waves, loudspeakers and microphones, acoustic properties of materials, architectural acoustics and measurement of noise.
Prerequisite: As for PHB310
Credit Points: 8
Contact Hours: 3 per week

PHB312 PHYSICAL PROPERTIES OF MATERIALS
Prerequisite: PHB110, PHB210
Credit Points: 9
Contact Hours: 3 per week

PHB316 EXPERIMENTAL PHYSICS III
This course is designed to further the education of students in the field of experimental physics. They are exposed to activities including laboratory experiments in electricity and magnetism, acoustics, optics and materials physics.
Prerequisite: At least three of PHB110, PHB111, PHB210, PHB211
Co-requisite: At least one of PHB310, PHB311
Credit Points: 8
Contact Hours: 3 per week

PHB340 OPTICS III
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 em-
PHB374 RADIOGRAPHIC EQUIPMENT I
A course of lectures on the principles, equipment, and applications of radiography, ward and operating theatre radiography, including techniques for specific sites.
Credit Points: 4  Contact Hours: 2 per week

PHB376 GENERAL RADIOGRAPHY II
An extension of topics introduced in PHB276 to include more advanced techniques of skeletal radiography, and examinations utilising contrast media.
Prerequisite: PHB276, PHB279, PNB225
Credit Points: 12  Contact Hours: 5 per week

PHB379 CLINICAL RADIOGRAPHY II
Clinical experiences in radiographic examinations introduced in PHB276 and PHB376. Experience is obtained in approved clinical departments.
Prerequisite: PHB276, PHB279, PNB225
Credit Points: 10  Contact Hours: 5 per week

PHB382 RADIOTHERAPY PHYSICS I
A study of the design, physical aspects and operating characteristics of megavoltage and telecurie units.
Prerequisite: PHB272
Credit Points: 4  Contact Hours: 2 per week

PHB386 TREATMENT PLANNING II
An extension of the study of treatment planning introduced in PHB286 to the planning of complex techniques of photon therapy. The planning of electron therapy.
Credit Points: 4  Contact Hours: 2 per week

PHB387 MEGAVOLTAGE THERAPY II
A series of lectures and practical exercises on the principles and applications of megavoltage therapy including techniques for specific sites.
Prerequisite: PHB287, PNB225
Credit Points: 14  Contact Hours: 6 per week

PHB389 CLINICAL RADIOTHERAPY II
Practical exercises in megavoltage therapy related to topics introduced in PHB287 and PHB387. The programs are carried out in approved clinical departments.
Prerequisites: PHB289, PNB225
Co-requisite: PHB387
Credit Points: 10  Contact Hours: 5 per week

PHB401 THERMAL & VACUUM PHYSICS
A study of statistical mechanics, thermodynamics and vacuum physics.
Prerequisite: As for PHB310
Credit Points: 8  Contact Hours: 3 per week

PHB402 RELATIVITY & RADIATION PHYSICS
A study of relativity and particle physics.
Prerequisite: As for PHB310
Credit Points: 8  Contact Hours: 3 per week

PHB404 SAFETY TECHNOLOGY II
Examines the physical hazards present in the workplace and equips students with the skills to assess these hazards and recommend suitable control measures. The subject includes an examination of such factors as noise, vibration, fire and explosion, and ionising and non-ionising radiation.
Prerequisites: PHB250, PHB300, MEB035
Credit Points: 8  Contact Hours: 4 per week

PHB405 INSTRUMENTATION
A course of lectures, laboratory work and field trips on instrumentation systems, transducers, signal processing, telemetry, control systems, display and recording systems.
Prerequisite: PHB308
Credit Points: 8  Contact Hours: 3 per week

PHB408 ELECTRONICS II
A program of lectures and laboratory work covering radio-frequency circuits, noise, analogue integrated circuits and applications, digital circuitry, counters, shift registers, A-D and D-A conversion.
Prerequisite: PHB308
Credit Points: 8  Contact Hours: 3 per week

PHB411 ASTRONOMY
An introduction to the theory and practice of observational astronomy: astronomical coordinate systems, time systems, celestial mechanics and gravitation, stellar measurements. Other topics may include the planets and the solar system in general, stellar spectra, formation and evolution, the structure of the universe, and cosmology. The subject will include practical exercises, and observing sessions as weather permits.
Prerequisite: Any three of PHB110, PHB111, PHB210, PHB211
Credit Points: 8  Contact Hours: 3 per week

PHB416 EXPERIMENTAL PHYSICS IV
This subject consists of an extension of the laboratory program of PHB316 together with experimental radiation physics and a project performed either individually or in a small group. The project occupies approximately six weeks.
Prerequisite: PHB316
Co-requisite: At least one of PHB401, PHB402
Credit Points: 12  Contact Hours: 6 per week

PHB471 RADIATION PHYSICS II
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.
Credit Points: 4  Contact Hours: 2 per week

PHB473 MEDICAL ULTRASOUND
A course of lectures and practical exercises on the physical principles and application of ultrasound.
Credit Points: 4  Contact Hours: 2 per week

PHB474 RADIOGRAPHIC EQUIPMENT II
A study of the equipment used in specialised radiography; including mobiles, tomographic units, skull tables and mammography units.
Credit Points: 4  Contact Hours: 2 per week

PHB475 MEDICAL RADIATION COMPUTING I
An introduction to the capabilities of computer hardware and software, and image processing.
Credit Points: 8  Contact Hours: 3 per week
PHB476 SPECIAL PROCEDURES
A course of lectures and practical exercises on specialised techniques of radiography, including the skull, obstetrics, gynaecology, CNS and paediatric radiography.
Prerequisites: PHB376, PHB379
Credit Points: 8  Contact Hours: 3 per week

PHB479 CLINICAL RADIOGRAPHY III
Clinical experience in approved departments in radiographic examinations discussed in PHB376.
Prerequisites: PHB376, PHB379
Credit Points: 8  Contact Hours: 4 per week

PHB481 DOSIMETRY
A study of the measurement and dosimetry of external beam X-ray and gamma ray radiotherapy.
Credit Points: 6  Contact Hours: 3 per week

PHB482 RADIOTHERAPY PHYSICS II
A study of radioactivity including methods of radiation detection, radioactive equilibrium and production of radioisotopes, the principles of brachytherapy.
Prerequisite: PHB382
Credit Points: 6  Contact Hours: 3 per week

PHB484 PRINCIPLES OF TREATMENT I
A course of lectures on the principles underlying the choice of treatment of cancer in specific sites including consideration of associated treatment.
Credit Points: 6  Contact Hours: 3 per week

PHB487 MEGAVOLTAGE THERAPY III
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.
Prerequisites: PHB387, PHB389
Credit Points: 10  Contact Hours: 4 per week

PHB489 CLINICAL RADIOTHERAPY III
Clinical experiences in approved departments in techniques of megavoltage therapy.
Prerequisites: PHB389, PHB387
Co-requisite: PHB487
Credit Points: 8  Contact Hours: 4 per week

PHB501 APPLIED QUANTUM MECHANICS
A course of lectures on quantum mechanics and theory of spectra.
Prerequisites: PHB310[R], MAB411 and MAB412
Credit Points: 8  Contact Hours: 3 per week

PHB502 ELECTROMAGNETIC FIELD THEORY
A course of lectures on electromagnetic field theory. Includes static field theory, wave equation, plane and spherical wave solutions, properties of plane waves, reflection, refraction, wave guides, cavity resonators and radiation theory.
Prerequisites: PHB310[R], MAB411 and MAB412
Credit Points: 8  Contact Hours: 3 per week

PHB508 ELECTRONICS III
A program of lectures and laboratory work covering microprocessor fundamentals and interfacing to computers, displays and instrumentation. Design of microprocessor controlled data collection and analysis systems.
Prerequisite: PHB408
Credit Points: 8  Contact Hours: 3 per week

PHB510 PHYSICAL METHODS OF ANALYSIS I
A course of lectures and associated practical work on a range of physical techniques of analysis, including for example X-ray diffraction and fluorescence, electron microscopy, neutron activation analysis, electron microprobe analysis. Emphasis is on the physical principle, instrumentation and nature of information available from each technique. Industrial visits may be included.
Prerequisite: PHB312
Credit Points: 8  Contact Hours: 3 per week

PHB516 EXPERIMENTAL PHYSICS V
Laboratory and field work in applied physics with emphasis on open ended experiments with modern equipment. Field trips may be necessary.
Prerequisite: PHB416
Co-requisite: At least one of PHB501, PHB502
Credit Points: 12  Contact Hours: 6 per week

PHB572 IMAGE RECORDING & EVALUATION
A course of lectures and practical exercises on non-film image formation evaluation. Information theory.
Credit Points: 8  Contact Hours: 3 per week

PHB573 DIGITAL IMAGING MODALITIES
A study of the principles, methods and applications of CT, digital radiography and MRI in medical imaging.
Credit Points: 6  Contact Hours: 2 per week

PHB574 QUALITY ASSURANCE IN MEDICAL IMAGING
A study of the principles and techniques used in the quality assurance of medical imaging apparatus and ancillary equipment.
Credit Points: 6  Contact Hours: 3 per week

PHB575 MEDICAL RADIATIONS COMPUTING II
A course of lectures and practical exercises related to the applications of computers in image processing and radiotherapy.
Credit Points: 8  Contact Hours: 3 per week

PHB576 ADVANCED RADIOPHIC TECHNIQUE I
A study of the principles and techniques used in advanced radiographic techniques including angiography, the salivary glands, arthrography, sinography, the lacrimal system, arteriography and venography.
Prerequisites: PHB476, PHB479
Co-requisite: PHB578
Credit Points: 12  Contact Hours: 6 per week

PHB578 IMAGE INTERPRETATION I
A course of lectures and practical exercises on image interpretation including technical and diagnostic quality.
Credit Points: 4  Contact Hours: 2 per week

PHB579 CLINICAL RADIOGRAPHY IV
Clinical experience in special radiographic procedures as introduced in PHB476.
Prerequisites: PHB476, PHB479
Credit Points: 8  Contact Hours: 4 per week

PHB583 COMPLEMENTARY & EVOLVING TECHNIQUES
A course of lectures on the principles, strengths and stage of development of techniques which are complementary to radiotherapy treatment of cancer. Including: hyperbaric 02 therapy, neutron therapy,
pi-meson therapy, chemotherapy, cryotherapy and hyperthermia.
Credit Points: 6  Contact Hours: 3 per week

PHB584 PRINCIPLES OF TREATMENT II
A continuation of the detailed discussion started in PHB484 to include the principles of treatment of cancer in all sites, and benign diseases.
Credit Points: 4  Contact Hours: 2 per week

PHB585 COMPUTER ASSISTED TREATMENT PLANNING I
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.
Credit Points: 8  Contact Hours: 3 per week

PHB587 ORTHOVOLTAGE & SUPERFICIAL THERAPY
A course of lectures and practical exercises on the specialised techniques of orthovoltage and superficial radiotherapy.
Prerequisites: PHB489, PHB487
Credit Points: 10  Contact Hours: 4 per week

PHB589 CLINICAL RADIOThERAPY IV
Clinical experience in the techniques of radiotherapy employing orthovoltage and superficial therapy.
Prerequisites: PHB489, PHB487
Co-requisite: PHB587
Credit Points: 12  Contact Hours: 6 per week

PHB601 SOLID STATE PHYSICS
A course of lectures on the physics of materials, including mechanical, thermal and electrical properties.
Prerequisites: PHB401, PHB501, PHB312
Credit Points: 8  Contact Hours: 3 per week

PHB602 NUCLEAR PHYSICS & ENERGY
A course of lectures on applied nuclear physics, neutron physics, reactor technology and energy.
Prerequisites: PHB402
Credit Points: 8  Contact Hours: 3 per week

PHB608 APPLIED ACOUSTICS
A course of lectures and associated practical work. Standards, principles of methods and instrumentation used in vibration, noise and sound measurements with emphasis on architectural acoustics and traffic, industrial and community noise. Study of ultrasonic and non-destructive acoustics and recording and reproduction of sound. Legal and technical aspects of professional practice. Field trips.
Prerequisites: PHB311
Credit Points: 8  Contact Hours: 3 per week

PHB609 APPLIED RADIATION PHYSICS
A course of lectures and associated laboratory work covering special techniques of radiation counting and applications, health physics, radiation protection, and radiobiological effects.
Prerequisites: PHB402
Credit Points: 8  Contact Hours: 3 per week

PHB613 BIOPHYSICS
A course dealing with the biophysics of selected biological systems (e.g., electrical transmission systems, amplifiers, mechanical systems, molecular behaviours in fields) and instrumentation for inter-cellular and inter-organ measurements (microelectronics, transducers, etc.).
Prerequisites: At least 24 credit points in first level physics subjects and successful completion of at least 80 credit points of second level subjects.
Credit Points: 8  Contact Hours: 3 per week

PHB616 PROJECT
A supervised project on some aspect of applied physics which could involve the extension and application of existing techniques or the development of new techniques.
Prerequisite: PHB516
Co-requisite: At least one third level physics unit
Credit Points: 16  Contact Hours: 6 per week

PHB620 TOPICS IN PHYSICS
Lectures, laboratory work and industrial visits in several topics relating to current advances in physics. The nature of the subject is dependent on departmental and staff activities at the time.
Prerequisite: At least 32 credit points in second level physics subjects.
Credit Points: 8  Contact Hours: 3 per week

PHB671 RADIATION BIOLOGY
A study of the biological effects on ionising and non-ionising radiation.
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.
Credit Points: 8  Contact Hours: 3 per week

PHB676 ADVANCED RADIOGRAPHIC TECHNIQUE II
An extension of topics in advanced radiographic technique as introduced in PHB576 to include mammography, digital imaging techniques, technique for examination of the lymphatic system, and emerging techniques.
Prerequisites: PHB576, PHB579
Co-requisite: PHB678
Credit Points: 8  Contact Hours: 3 per week

PHB679 CLINICAL RADIOGRAPHY V
Clinical experience in advanced radiographic techniques introduced in PHB576.
Prerequisites: PHB576, PHB579
Credit Points: 14  Contact Hours: 6 per week

PHB680 NUCLEAR MEDICINE IMAGING II
A course of lectures, practical exercises and clinical experiences in nuclear medicine imaging. This subject expands on topics introduced in PHB573 and provides an in-depth study of nuclear medicine imaging techniques.
Prerequisite: PHB373
Credit Points: 10  Contact Hours: 5 per week

PHB681 COMPUTED TOMOGRAPHY IMAGING
A course of lectures, practical exercises and clinical experiences in CT imaging. This subject expands on topics introduced in PHB573 and provides an in-depth study of CT imaging techniques.
Prerequisite: PHB573
Credit Points: 10  Contact Hours: 5 per week

PHB683 ONCOLOGICAL IMAGING
A study of the principles and techniques of medical imaging used in the detection of cancer including CT, MRI, US and NM.
Credit Points: 6  Contact Hours: 3 per week

PHB685 COMPUTER ASSISTED TREATMENT PLANNING II
A course of lectures and practical exercises in the use of computers in the planning of non-standard and complex radiotherapy treatment. Including arc and rotation techniques, irregular field techniques, 3-D plans.
Credit Points: 8  Contact Hours: 4 per week
PHB687 SPECIALISED RADIOTHERAPY
TECHNIQUE
A study of specialised radiotherapy techniques including techniques applicable to the child patient, and patients with communicable disease, theatre procedures, total body photon and electron therapy.
Credit Points: 10 Contact Hours: 4 per week

PHB689 CLINICAL RADIOTHERAPY V
Clinical experience in specialised radiotherapy treatment techniques.
Prerequisite: PHB589 Co-requisite: PHB687
Credit Points: 8 Contact Hours: 4 per week

PHD351 PHYSICS FOR NURSES
The physical processes associated with normal and abnormal physiological functions, diagnostic and therapeutic procedures and practices; including: measurement as a science; forces and motion; energy production and transfer; thermal, mechanical and electrical behaviour of matter; introductory atomic and nuclear physics.
Credit Points: 3 Contact Hours: 2

PHN101 ANALOGUE ELECTRONICS
Principles of electronics applicable in the medical field; discrete circuits and integrated circuits in common use – design and limitations.
Credit Points: 6 Contact Hours: 2 per week

PHN102 INTRODUCTION TO MEDICAL
STATISTICS COMPUTING
Basic concepts of computing systems, programming, software engineering, introduction to medical applications. Medical applications of numerical methods and medical statistics.
Credit Points: 6 Contact Hours: 2 per week

PHN103 RADIATION PHYSICS I
Study of the basic principles of radioactivity and radioactive decay and the interactions of ionising radiation with matter.
Credit Points: 6 Contact Hours: 2 per week

PHN104 RADIATION PHYSICS II
Deals with phenomena related to interaction of ionising radiation with biological tissue. Emphasis on aspects of actual or potential importance in a clinical environment. Isotope production, nuclear radiation detectors.
Credit Points: 8 Contact Hours: 3 per week

PHN152 CROSS-SECTIONAL ANATOMY
A study of the cross-sectional anatomy of the head, neck, thorax and abdomen (including the pregnant uterus) with an emphasis on an appreciation of the structures demonstrated on ultrasound images.
Prerequisite: PHN161 (or equivalent)
Co-requisite: PHN165 (or equivalent)
Credit Points: 6 Contact Hours: 2 per week

PHN153 ULTRASOUND EQUIPMENT I
The physical principles of diagnostic ultrasound including: wave physics; propagation; the Doppler effect; the biological effects of ultrasound; medical ultrasound equipment, including aspects related to transducers control; display; image performance and artifacts.
Credit Points: 6 Contact Hours: 2 per week

PHN154 PRINCIPLES OF ULTRASOUND
IMAGING
A course of lectures and practical exercises on the general principles of ultrasound imaging techniques including scanning motions, coupling agents, transducer selection and the problems associated with respiration.
Co-requisite: PHN153
Credit Points: 6 Contact Hours: 2 per week

PHN155 ULTRASONIC EXAMINATION IN
OBSTETRICS & GYNAECOLOGY
A study of the normal and abnormal anatomy and function related to gynaecology and obstetrics, the ultrasonic techniques used and the appearance of related images.
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.
Co-requisite: PHN154
Credit Points: 6 Contact Hours: 2 per week

PHN157 CLINICAL ULTRASOUND I
A supervised practical program carried out in an approved clinical ultrasound department. Students must obtain hands-on experience in specified ultrasound procedures used in examination of the abdomen, pelvis and in obstetrics and gynaecology.
Co-requisite: PHN154, PHN153
Credit Points: 12

PHN202 BIOMECHANICS
Study of mechanical principles and properties related to human tissues and physiological functions with emphasis on work ergonomics and occupational health measurement problems.
Credit Points: 8 Contact Hours: 3 per week

PHN204 HEALTH & OCCUPATIONAL
PHYSICS
Deals with philosophy, protocol and practices necessary to minimise hazards associated with electrical, mechanical and biological techniques used in hospitals. Study of principles and techniques of dosimetry of ionising radiation with emphasis on aspects pertinent to actual or potential use in medicine.
Credit Points: 8 Contact Hours: 3 per week

PHN206 MEDICAL IMAGING
Study of the principles involved in the production of the radiographic and nuclear medicine image and the appropriate quality control protocols.
Credit Points: 8 Contact Hours: 3 per week

PHN257 CLINICAL ULTRASOUND II
A period of additional clinical experience designed to refine basic skills acquired in PHN157.
Prerequisite: PHN157
Credit Points: 12

PHN301 MICROPROCESSORS
Basic digital integrated circuits and their applications in logic design and microprocessor interfacing. Microprocessor programming and applications. Integrated with Instrumentation and Medical Imaging Science to develop an understanding of microcomputer function and applications.
Credit Points: 8 Contact Hours: 3 per week

PHN302 INSTRUMENTATION
This subject concentrates on gaining experience in the use of a wide range of instrumentation. Topics included are generalised instrument, data transfer, data interpretation, servomechanisms, data recorders, systems, practical aspects of instrument use. Laboratory
learning experience in the gathering, conditioning, storage and analysis of data, using skills learned in digital electronics, computing and instrumentation. Digital signal processing of physiological signals, digital image processing, medical applications of numerical methods and medical statistics.

Credit Points: 8 Contact Hours: 3 per week

- PHN304 MEDICAL IMAGING SCIENCE
  Visual science, analogue and digital images, image enhancement, restoration and analysis, computed tomography, computer architectures, display instrumentation, recording and storage.

Credit Points: 6 Contact Hours: 2 per week

- PHN351 ULTRASOUND EQUIPMENT II
  A course of lectures and practical exercises on the principles and techniques of quality assurance protocols used in ultrasonic imaging.
  Prerequisite: PHN153

Credit Points: 6 Contact Hours: 2 per week

- PHN352 ULTRASONIC EXAMINATION IN CARDIOLOGY
  The techniques of ultrasound imaging used in investigating the cardiovascular system; including techniques for demonstration of cardiac structures, cerebrovascular and peripheral vascular systems and peripheral venous systems.

Credit Points: 6 Contact Hours: 2 per week

- PHN353 ULTRASOUND IN MEDICAL DIAGNOSIS
  A study of the role of ultrasound in medical imaging diagnosis.

Credit Points: 6 Contact Hours: 2 per week

- PHN354 ULTRASONIC EXAMINATIONS OF THE HEAD, NECK & PERIPHERAL ORGANS
  A course of lectures and practical work on the techniques ultrasound uses to examine the head, neck and peripheral organs and the ultrasonic appearance of normal and abnormal anatomy and pathology.

Prerequisite: PHN257

Credit Points: 6 Contact Hours: 2 per week

- PHN357 CLINICAL ULTRASOUND III
  A supervised practical program carried out in an approved clinical ultrasound department. Students must obtain experience of specified ultrasound examinations used in cardiology and in the examination of the head, neck and peripheral organs.

Prerequisite: PHN257

Credit Points: 12 Contact Hours: 2 per week

- PHN402 RADIOThERAPY
  Considers the principles and techniques of clinical application of ionising radiation for diagnostic and therapeutic purposes. Emphasis is on radiotherapy physics and diathermy therapy.

Credit Points: 6 Contact Hours: 2 per week

- PHN405 PHYSIOLOGICAL MEASUREMENT
  Introduction to the principles and techniques of the direct and indirect measurement of physiological variables.

Credit Points: 6 Contact Hours: 2 per week

- PHN407 CASE STUDIES
  Completion of assignments in applied practical procedures including reports written to journal publication standards.

Credit Points: 6

- PHN520 PROJECT

- PHN540 PROJECT

The project may take the form of research development, a design, a feasibility study, or the collation of scattered information on a given topic. The project can be undertaken externally under Queensland University of Technology supervision. Time spent on projects will be one year for full-time and two years for part-time students.

Credit Points: 48 and 24 per semester respectively

Contact Hours: 18 and 9 per week respectively

- PHP250 OCCUPATIONAL HYGIENE

A course of lectures, practical work and industrial visits to instruct students so that they will be able to recognise, evaluate and control the physical, biological and chemical environmental factors which may adversely affect the health, safety, comfort and efficiency of workers.

Credit Points: 12 Contact Hours: 3 per week

- PNA170 ANATOMY & PHYSIOLOGY I

This subject introduces students to an integrated study of anatomy and physiology. Emphasis will be placed on gaining an appreciation of the relationship between structure and function in cells and tissues, organ and organ systems. Initially the morphology and physiology of cells and tissues will be examined and then the structure and function of the skeletal, muscular, nervous and integumentary systems will be studied.

Credit Points: 8 Contact Hours: 3 per week

- PNA171 ANATOMY & PHYSIOLOGY II

The broad objectives outlined PNA170 will be continued. Emphasis in this subject will be upon the relationships between structure and function at the level of organs and systems. The cardiovascular, lymphatic, respiratory, digestive, urinary, genital, and endocrine systems will be studied.

Prerequisites: PNA170 Co-requisite: MSA124

Credit Points: 8 Contact Hours: 3 per week

- PNA550 CARDIAC PHYSIOLOGY & ANATOMY

A subject designed to develop a sound biological basis for application in the subjects Cardiac Instrumentation and Cardiac Measurement Techniques. It includes study of both normal and disordered structure and/or function of the cardiovascular system, as well as the significance of physiological and/or anatomical parameters commonly measured by instrumentation.

Prerequisites: PNA170, PNA171, MSA121

Co-requisite: PHA561, PHA562

Credit Points: 5 Contact Hours: 2 per week

- PNA650 RESPIRATORY PHYSIOLOGY & ANATOMY

A subject designed to develop a sound biological basis for application in the subjects Respiratory Instrumentation and Respiratory Measurement Techniques. It includes study of both normal and disordered structure and/or function of the respiratory system, as well as the significance of physiological and/or anatomical parameters commonly measured by instrumentation.

Prerequisites: PNA170, PNA171, PNA121

Co-requisite: PHA661, PHA662

Credit Points: 5 Contact Hours: 2 per week

- PNA750 NEUROLOGICAL PHYSIOLOGY & ANATOMY

A subject designed to develop a sound biological basis for application in the subjects Neurological In-
instrumentation and Neurological Measurement Techniques. It includes study of both normal and disordered structure and/or function of the nervous system as well as the significance of physiological and/or anatomical parameters commonly measured by instrumentation.

Prerequisites: MSA121, PNA170, PNA171
Co-requisite: PHA761, PHA762
Credit Points: 5  Contact Hours: 2 per week

■ PNB115 HUMAN PHYSIOLOGY I
The aim of this subject is to enable students to understand their knowledge of concepts related to a physiological basis for nursing practice. It is designed to enable students to effectively apply problem-solving principles to health care delivery to clients in any age group. This subject will introduce students to the functions of major systems under normal conditions to healthy humans and form a firm basis for an understanding of abnormal function to be presented in PNB116.
Credit Points: 12  Contact Hours: 3 per week

■ PNB116 HUMAN PHYSIOLOGY II
This subject considers the physiological basis of the clinical manifestation, pathogenesis and treatment of selected disorders of the cardiovascular, respiratory, haematological, renal, gastrointestinal, nervous and endocrine systems.
Prerequisites: PNB115
Credit Points: 6  Contact Hours: 2 per week

■ PNB204 ENVIRONMENTAL HEALTH III
In this subject students will 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. They will also study introductory food science and current food standards prescribed by legislation.
Prerequisites: CHB242, BEB103, BEB104
Credit Points: 14  Contact Hours: 7 per week

■ PNB205 ENVIRONMENTAL HEALTH IV
There are three major strands in this subject, covering the construction and design of food premises and their hygiene operation; the potential risks to water resources and design and operation of processes to treat drinking and recreational waters; and the management of community wastes, focusing on the origins, transport and disposal of liquid, solid and hazardous wastes.
Prerequisites: PNB203
Credit Points: 18  Contact Hours: 9 per week

■ PNB206 ENVIRONMENTAL HEALTH V
This subject will address the causative agents of communicable and noncommunicable diseases and conditions and introduce students to the principles of methods in epidemiology. The food hygiene foundation provided in PNB204 will be further developed to encompass food poisoning and spoilage. Students will gain a knowledge of relative pest control principles and practices, especially in relation to vectors of disease.
Prerequisites: PNB204, MSB402, PNB232
Credit Points: 30  Contact Hours: 16 per week

■ PNB215 ANATOMY & PHYSIOLOGY I
A study of human anatomy of the body as a whole including a detailed study of the skeletal system.
Credit Points: 10  Contact Hours: 4 per week

■ PNB231 ANATOMY I
An integrated course of lectures and practicals dealing with microscopic structure of the cell, epithelium, connective tissue, bone and cartilage, muscle tissue, nerve tissue, and cardiovascular system. Also deals with the gross anatomical of the skeletal, articular, and cardiovascular systems.
Credit Points: 6  Contact Hours: 3 per week

■ PNB232 ANATOMY II
An extension of PNB131. A course dealing with the microscopic and macroscopic anatomy of the nervous, digestive, lymphatic, integumentary, respiratory, renal, endocrine and reproductive systems.
Prerequisites: PNB131
Credit Points: 6  Contact Hours: 3 per week

■ PNB163 HUMAN ANATOMY I
An integrated course of lectures and practicals dealing with microscopic structure of the cell, epithelium, connective tissue, bone and cartilage, muscle tissue, nerve tissue, and cardiovascular system. Also deals with the gross anatomical of the skeletal, articular, and cardiovascular systems.
Credit Points: 8  Contact Hours: 3 per week

■ PNB165 PHYSIOLOGY II
A course of lectures and practicals. Basic mechanisms - cells, fluids, electrolytes; energy metabolism; essential nutrients; transport mechanisms; blood; communication and control; excitable tissues. Control systems - nervous and endocrine systems. This subject must be taken by students wishing to study nutrition electives.
Co-requisite: CHB201 or CHB242
Credit Points: 8  Contact Hours: 4 per week
Note: This subject is not compatible with PNB231; credit may not be retained for both.
• PNB210 OCCUPATIONAL HEALTH & SAFETY I
This subject will introduce students to the basic concepts of occupational health and safety, such that they can identify health and safety problems in the workplace; be aware of strategies for dealing with such problems, and become familiar with the legislation, workplace health agencies and health personnel associated with the working environment. Topics covered will include the physical, chemical and biological working environments, temporal work patterns and the design and use of protective devices.
Credit Points: 8 Contact Hours: 4 per week

• PNB211 OCCUPATIONAL HEALTH & SAFETY II
This subject develops further the principles covered in PNB210 and highlights their practical application to the workplace. Students will 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.
Prerequisites: PNB210
Credit Points: 8 Contact Hours: 4 per week

• PNB220 SYSTEMATIC ANATOMY
An extension of PNB163. A course dealing with the microscopic and macroscopic anatomy of the nervous, digestive, lymphatic, integumentary, respiratory, renal, endocrine and reproductive systems.
Prerequisite: PNB163
Credit Points: 10 Contact Hours: 3 per week

• PNB225 ANATOMY & PHYSIOLOGY II
A course of lectures and practical exercises involving a basic, yet comprehensive, study of the anatomy and physiology of the various body systems.
Prerequisite: PNB125
Credit Points: 10 Contact Hours: 4 per week

• PNB331 ANATOMY & PHYSIOLOGY I
This subject introduces students to an integrated study of anatomy and physiology at the degree level. Emphasis is placed on gaining an appreciation of the relationship between structure and function at the levels of cells, tissues, organs and organ systems.
Prerequisite: PNB165
Credit Points: 8 Contact Hours: 4 per week
Note: This subject is not compatible with PNB165; credit may not be retained for both.

• PNB322 ANATOMY & PHYSIOLOGY II
The broad objectives outlined in PNB231 are continued. Emphasis in this subject is focused on structure-function relationships at the level of organs and organ systems. The cardiovascular, lymphatic, respiratory, digestive, urogenital and endocrine systems are studied. A review of the actions of drugs on cells, tissues, organs and systems is given at the end of the subject.
Prerequisite: PNB231
Credit Points: 8 Contact Hours: 4 per week
Note: This subject is not compatible with PNB465; credit may not be retained for both.

• PNB261 ANATOMY & PHYSIOLOGY I
This subject will introduce students to an integrated study of anatomy and physiology at the degree level. Emphasis will be placed on gaining an appreciation of the relationship between structure and function at the levels of cells, tissues, organs and organ systems, initially the morphology and physiology of cells and tissues will be examined. The skeletal, muscular, nervous and integumentary systems will be studied.
Credit Points: 12 Contact Hours: 4 per week

• PNB262 ANATOMY & PHYSIOLOGY II
This subject follows on PNB261, integrating the study of structure and function of the human body. The systematic physiology of organs and organ systems continues with the study of the cardiovascular, lymphatic, immune, endocrine, respiratory, digestive, urinary and reproductive systems. Metabolism, nutrition and temperature regulation will be reviewed. A brief study on pregnancy and human development will be included.
Prerequisites: PNB261
Credit Points: 12 Contact Hours: 4 per week

• PNB300 POLLUTION SCIENCE I
The causes, effects, control measures, standards and legislation relating to air pollution and noise.
Prerequisites: CHB242, PHB250
Credit Points: 8 Contact Hours: 4 per week

• PNB301 ADVANCED ANATOMY
On completion of this subject, students should be able to describe the structures, function and anatomical relationship of the components of the lower limb and demonstrate anatomical knowledge which will be fundamental to the understanding of the functional and applied aspects of podiatric anatomy. This subject contains the major topics of osteology, myology, arthrology, angiology and neurology.
Prerequisites: PNB220 Co-requisite: PNB302
Credit Points: 8 Contact Hours: 3 per week

• PNB302 PODIATRIC MEDICINE I
This subject introduces the student to the health, social and economic implications of podiatric care in the general population with particular reference to specialised groups eg. children, diabetics, the aged and sports patients. It also provides foundation studies essential to the pre-clinical student in the diagnosis and treatment of conditions commonly manifesting in the foot.
Prerequisites: PNB220
Co-requisite: PNB420, PNB303
Credit Points: 10 Contact Hours: 5 per week

• PNB303 CLINICAL PODIATRY I
On completion of this subject 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 used during clinical practice.
Prerequisites: MSB031 Co-requisite: PNB302
Credit Points: 8 Contact Hours: 5 per week

• PNB304 PHYSICAL MEDICINE
This subject is designed to introduce the student to a wide range of diagnostic and physical treatment modalities used in modern podiatric practice. On completion of this subject, students should be able to understand the uses, applications, contraindications and limitations of each modality studied in direct connection with the ongoing clinical studies and theoretical component of podiatric medicine lectures.
Prerequisites: PNB435
Co-requisite: PNB304, PNB410
Credit Points: 6 Contact Hours: 2 per week
PNB305 HUMAN NUTRITION I
This subject builds on student's foundations in physiology and biochemistry to gain an appreciation of the meaning of nutrition, of methods used in its study and of food as a source of nutrients; the nature and function of the different nutrients; primary nutrition.
Co-requisite: MSB415 and PNB165 or PNB231
Credit Points: 6 Contact Hours: 3 per week

PNB306 PHARMACOLOGY
This course is designed to ensure that students understand basic system drug therapies their patients may be using, the groups of drugs for specific diseases and their application and relevance to Podiatric and Clinical Podiatry situation. Emphasis is placed on drug groups and their use for specific disease, rather than proprietary brands. Students will be able 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 will be emphasised.
Prerequisites: CHB242 Co-requisite: MSB471
Credit Points: 8 Contact Hours: 5 per week

PNB318 FOOD STUDIES I
The chemical and physical properties of food; food processing theory; food preservation techniques; codes of practice and food standards legislation.
Prerequisite: PNB207 Co-requisite: MSB301
Credit Points: 6 Contact Hours: 3 per week

PNB325 REGIONAL & SECTIONAL ANATOMY
An expansion of the topics introduced in PNB125 and PNB225 to a detailed study of regional and sectional anatomy of the human body.
Prerequisite: PNB225
Credit Points: 8 Contact Hours: 4 per week

PNB363 HUMAN ANATOMY III
An extension of PNB163 Human Anatomy I. This integrated course of lectures and practicals will cover basic embryology, structure and development of the eye, and gross and microscopic anatomy of the major organ systems of the human body.
Prerequisites: PNB163
Credit Points: 10 Contact Hours: 5 per week

PNB405 HUMAN NUTRITION II
An extension of PNB305. The role of nutrients in the maintenance of life; growth and the normal function of the human body; the social influences on food selection; nutritional impact of technology; nutrition guidelines for groups within the community.
Credit Points: 6 Contact Hours: 3 per week

PNB406 ADVANCED ORTHOSES
This subject is designed to demonstrate a broad knowledge of orthotic and prosthetic devices as applicable to podiatric practice. The student will be required to display a high standard of practical skills in producing a range of orthoses eg, butt edge seams, latex bandage technique, rubber butter devices, expandable foams, latex dipped devices, and specialised thermoplastic, display a high standard of practical skills in producing a range of orthoses for specialised patients eg, partial or complete foot or hand amputees, diabetics, arthritic conditions, post operative patients.
Prerequisites: PNB506, PNB503
Co-requisite: PNB603
Credit Points: 6 Contact Hours: 3 per week

PNB410 MEDICINE
Following completion of this subject students should be able to recognise and understand the clinical features, pathogenesis and significance of common conditions affecting the lower limb, eg, oedema; obesity; motor, sensory and trophic disturbances and their resultant effects in paralysis, ataxia, deformity and ulceration; intermittent claudication, vascular spasm and cramp are taught so as to emphasise their significance. Medical conditions with manifestations in the feet are given particular attention.
Prerequisites: MSB430, PNB435
Co-requisite: PNB303
Credit Points: 8 Contact Hours: 3 per week

PNB411 ORTHOPAEDICS
The emphasis of this subject will be on orthopaedic surgery. It will seek to develop a detailed knowledge of general and specific orthopaedic conditions which have an effect on the lower limb and the surgical treatment of systemic conditions as seen by the podiatrist ie, diabetes. In addition the subject will provide an understanding of the special problems associated with children and specific lower limb conditions with emphasis on the surgical techniques used in their treatment.
Prerequisites: PNB503, PNB513
Co-requisite: PNB505
Credit Points: 8 Contact Hours: 3 per week

PNB412 CLINICAL PODIATRY II
At this stage students will be able to follow cases through to observe the 'short-term' effect of therapy and will be 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.
Prerequisites: PNB303, PNB302
Co-requisite: PNB506
Credit Points: 8 Contact Hours: 6 per week

PNB418 FOOD STUDIES II
Food hygiene, construction and operation of food establishments, legislation and standards relating to good hygiene and training programs.
Prerequisites: PNB207, PNB318
Credit Points: 6 Contact Hours: 3 per week

PNB420 ORTHOTIC SCIENCE I
This subject will introduce the student to many of the commonly used types of orthoses and procedures employed in modern podiatric practice. The subject will enable students to discuss the main types of orthoses and procedures in podiatric practice and to give a reasoned explanation on choice of orthotic types and properties of materials. Students should also be able to explain the main techniques employed in producing orthoses ie, non-casting and casting techniques and their uses in orthotic practice.
Prerequisites: PNB460 Co-requisite: PNB302
Credit Points: 6 Contact Hours: 3 per week

PNB421 PODIATRIC MEDICINE II
The foundation for study in the role of therapeutics in patient management including short-term and long-term managements of conditions. It will expand the range of understanding of the wide variety of conditions presenting to the podiatrist. On completion, students should be able to develop an understanding of the biomechanical principles affecting the joints of
the foot and the structural and functional consequences presenting in podiatric practice.

**Prerequisites:** PNB302 Co-requisite: PNB412
**Credit Points:** 12  **Contact Hours:** 4 per week

**PNB422 PODIATRIC ANAESTHESIOLOGY**

This subject is designed to provide a sound understanding of the science of anaesthetics as applicable to the practice of podiatry. Students will be required to understand the pharmacology of local anaesthetics in current use and their clinical usage, and be competent in injection techniques, including local infiltration and local nerve block in the lower limb.

**Prerequisites:** PNB305, PNB421
**Co-requisite:** PNB410
**Credit Points:** 6  **Contact Hours:** 2 per week

**PNB425 IMAGING ANATOMY**

A study of the appearances, on medical images, of normal and abnormal anatomy.

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

**PNB435 HUMAN PHYSIOLOGY**

A course of lectures and practicals. The lectures are the same as PNB165 and PNB465. The course is presented as a one semester program.

**Prerequisite:** PNB363  **Co-requisite:** MSB430
**Credit Points:** 12  **Contact Hours:** 7 per week

**PNB465 PHYSIOLOGY III**

A course of lectures and practicals. Maintenance systems - gastrointestinal; cardiovascular; respiratory; and renal systems. Integrated mechanisms - sexual development; pregnancy; parturition; lactation; control of growth, energy intake, organic metabolism, body temperature, ECF osmolarity and volume, major cations, blood pressure and flow, respiration; response to tissue damage and foreign matter; adaptation to stress and exercise. This subject must be taken by students wishing to study Nutrition electives.

**Prerequisite:** PNB165
**Credit Points:** 8  **Contact Hours:** 4 per week
**Note:** This subject is not compatible with PNB232; credit may not be retained for more than one of these subjects. Consult Course Coordinator.

**PNB481 POLLUTION SCIENCE II**

The causes, effects, control measures, standards and legislation relating to water pollution and solid and hazardous wastes.

**Prerequisites:** CHB242, PHB250
**Credit Points:** 8  **Contact Hours:** 4 per week

**PNB482 OCCUPATIONAL HEALTH**

The basic concepts of toxicology and the body's responses to toxic substances; the basic disease processes in humans and the various agents in the workplace capable of adversely affecting the health of workers.

**Prerequisites:** PNB211, PNB231
**Co-requisites:** PNB232, MSB402
**Credit Points:** 10  **Contact Hours:** 4 per week

**PNB483 HUMAN FACTORS I**

The normal structure and function of relevant systems within the human body and the ways in which the work environment can impinge on normal function; develops an appreciation of the multiple interfaces between humans, machines and the environment; the principles of manual handling and the effects of such physical factors as lighting, temperature and humidity on human performance.

**Prerequisites:** PNB231, MEB035
**Co-requisites:** PNB232, PHN404
**Credit Points:** 6  **Contact Hours:** 3 per week

**PNB485 OCCUPATIONAL HYGIENE I**

Application of the practical skills students have already obtained from Chemistry I, II and III in analytical chemistry to the field of occupational hygiene. The uses and limitations of a range of sampling and analytical equipment in the measurement and assessment of workplace contaminants.

**Prerequisites:** CHB382, PHB250
**Credit Points:** 10  **Contact Hours:** 4 per week

**PNB502 DERMATOLOGY**

This subject is designed to provide an appreciation of the many varieties of skin lesions and their particular relevance when found in the lower limb. The lecture program will consist of classification of skin disease, vascular reaction group, vasculities, ulcers, peripheral vascular disease, tumours, eczema, dermatis, allergy, immunity, infections, psoriasis, squamous eruptions, nails and hair, skin manifestations of internal disease, pharmacology and general therapeutics. The clinical sessions will utilise this information in allowing students the opportunity to see and diagnose many of these conditions.

**Prerequisites:** PNB410, PNB421
**Co-requisite:** PNB503
**Credit Points:** 6  **Contact Hours:** 3 per week

**PNB503 PODIATRIC MEDICINE III**

This subject develops the professional understanding of the general and specific effects of medical and surgical conditions on the human foot. It also expands the concept of total care management in terms of the interdisciplinary approach. Including physical, mechanical and surgical techniques. On completion of this subject students should be able to consolidate the podiatrist role in the health care team across the spectrum of practice.

**Prerequisites:** PNB421
**Co-requisite:** PNB504, PNB604
**Credit Points:** 10  **Contact Hours:** 3 per week

**PNB504 CLINICAL PODIATRY III**

On completion of this subject 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 will also be developed with the wider range of patients being treated and the specialised study of disciplines such as dermatology and radiology further integrating academic and clinic studies.

**Prerequisites:** PNB412, PNB421
**Co-requisite:** PNB304
**Credit Points:** 6  **Contact Hours:** 9 per week

**PNB505 PODIATRIC SURGERY**

The implementation of podiatric surgical techniques based on a strong theoretical component of knowledge. At the conclusion of this course students will be able to understand the principles and techniques of minimal incision surgery.

**Prerequisites:** PNB422, PNB410
**Co-requisite:** PNB603
**Credit Points:** 12  **Contact Hours:** 4 per week
PNB506 ORTHOTIC SCIENCE II
A consolidation of Orthotic Science I; on completion students should be able to discuss the main types of functional and semi-rigid devices employed in orthotic therapy. The subject will also provide an understanding of the main techniques employed in dispensing orthotics made from a positive cast, i.e., cast evaluation, bisection, pouring, modification, intrinsic and extrinsic posting. Students will also be informed how to write a prescription for the dispensing of an orthotic to comply with patients individual requirements i.e., children, adolescent, adult and special requirements of selected cases e.g., in-toe, out-toe, sprinters, marathoners, arthritic, post-operative and obese patient.
Prerequisite: PNB420 Co-requisite: PNB421
Credit Points: 8 Contact Hours: 3 per week

PNB511 HAZARD ASSESSMENT AND MANAGEMENT I
The history of accident causation theory; techniques for accident investigation; recording, analysing and reporting accident information; principles of hazardous chemicals management.
Prerequisites: PNB210, PNB211, MAB252
Credit Points: 8 Contact Hours: 3 per week

PNB512 HUMAN FACTORS II
The application of psychology to the industrial environment; an examination of the key individual, social and organisational factors contributing to health and safety at work; the causes of stress, information processing and learning, performance abilities and work schedules.
Prerequisites: MNB067, PNB483, CMB106
Credit Points: 4 Contact Hours: 2 per week

PNB513 EPIDEMIOLOGY
The broad uses of research and evaluative techniques in the context of health and safety; areas of study include sampling, data collection and data analysis.
Prerequisites: CSB259, MAB252, PNB231, PNB232
Credit Points: 6 Contact Hours: 3 per week

PNB514 PRINCIPLES OF TOXICOLOGY
The basic principles of dose effect and dose response relationships; toxicity testing and the toxic effects of a range of environmental contaminants; environmental and industrial standards.
Prerequisites: PNB307, PNB481, PNB232
Credit Points: 6 Contact Hours: 3 per week

PNB516 PROFESSIONAL PRACTICE I
Investigation of management principles and practices as they may be applied to resolve occupational health and safety problems; an examination of industrial relations processes and the legal framework within which occupational health and safety is addressed; field studies are used to provide students with a practical insight into the application of the principles to which they have been introduced.
Prerequisites: MB035, PNB404
Credit Points: 12 Contact Hours: 6 per week

PNB517 PROJECT I
Researching occupational health and safety problems; the analysis and definition of a problem and design of a suitable research program to address it; a literature review; written report outlining the project. The project will involve independent work under the guidance of experienced supervisors.
Prerequisites: PNB404, MAB252
Co-requisites: PNB513, PNB585, PNB512
Credit Points: 4 Contact Hours: 2 per week

PNB518 FOOD STUDIES III
The various types of food poisoning; food poisoning investigation techniques; laboratory procedures and interpretation of results.
Prerequisites: PNB207, PNB318, PNB418, MSB402
Credit Points: 6 Contact Hours: 3 per week

PNB520 ENVIRONMENT HEALTH MANAGEMENT I
The management of an environmental health unit; the various legal procedures associated with the duties of environmental health officers.
Prerequisites: PNB207, PNB481
Credit Points: 12 Contact Hours: 5 per week

PNB585 OCCUPATIONAL HYGIENE II
Continuation of Occupational Hygiene I; concentrates on the application of the principles to which the student has already been introduced. The subject will extend students' ability to recognise, evaluate and suggest the most efficient control strategies for physical and chemical hazards in the working environment. It will include an analysis of the principles and design of ventilation systems. The subject will examine the elements of successful monitoring programs in the workplace.
Prerequisites: PNB482, MSB402, MAB252, PNB585
Credit Points: 10 Contact Hours: 4 per week

PNB602 SPORTS MEDICINE
This course provides an awareness of the importance of a multidisciplinary approach to the diagnosis, evaluation and treatment of sports injuries. Students will 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.
Prerequisites: PNB503, PNB410
Co-requisite: PNB411
Credit Points: 10 Contact Hours: 3 per week

PNB603 CLINICAL PODIATRY IV
This subject is designed to prepare the student for the transition to private practice. During this semester students will be 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 will be an integral part of clinical learning and sessions conclude with exchange between students and staff over case management.
Prerequisite: PNB504 Co-requisite: PNB411
Credit Points: 6 Contact Hours: 9 per week

PNB610 PROJECT & PROFESSIONAL MANAGEMENT
The two component parts of this subject explain firstly how a professional practice may be set up and how a small practice can operate as a business enterprise. Methods of budgeting, finance and control are explained. Secondly it aims to develop an interest in podiatry research using scientific methods of investigation and presentation. Students will be encouraged to publish these projects as original material in related professional journals.
Credit Points: 6 Contact Hours: 4 per week

PNB611 HAZARD ASSESSMENT & MANAGEMENT II
Continuation of Hazard Assessment and Management I; examination of the systems available to quantita-
Studies subjects for the purpose of practical management.

- **PNB612 ENVIRONMENTAL PROMOTION & EDUCATION**
  - The scope and nature of health promotion; use of resources for such activities; planning, conduct and evaluation of health promotion programs.
  - Prerequisites: MNB067, CMB105
  - Credit Points: 6  Contact Hours: 3 per week

- **PNB613 PROFESSIONAL PRACTICE II**
  - Enables students to apply theoretical knowledge; uses field studies and exercises to further extend students' competence in the practical application of the various principles of occupational health and safety in the workplace. It also examines the current issues in the field of occupational health and safety and aims to equip students to play a role in debates around these issues.
  - Prerequisite: PNB516
  - Credit Points: 12  Contact Hours: 6 per week

- **PNB614 INDUSTRY SPECIALISATIONS**
  - The hazards associated with particular industries including construction, manufacturing, chemical and mining through field trips and specialist lectures; the various laws and standards that apply to these industries and an investigation of the control strategies applicable to the management of hazards in the industries.
  - Prerequisites: PNB511, PNB482, MEB035, PNB404
  - Credit Points: 12  Contact Hours: 6 per week

- **PNB617 PROJECT II**
  - Continuation of the project commenced in the subject Project I. It includes the analysis of the material relevant to the problem selected by the student and the presentation of verbal and written reports outlining the findings of the investigation.
  - Prerequisite: PNB517
  - Credit Points: 10  Contact Hours: 4 per week

- **PNB62 ENVIRONMENTAL HEALTH MANAGEMENT II**
  - Integration of the students' theoretical understanding of physical and biological sciences and application of such understanding to the management of a range of environmental health problems encountered in the professional practice of an environmental health officer.
  - Prerequisites: PNB520, PNB481
  - Co-requisite: PNB481
  - Credit Points: 12  Contact Hours: 6 per week

- **PNB621 PROFESSIONAL PRACTICE**
  - Visits to all types of establishments in Environmental Health Management, Pollution Sciences and Food Studies subjects for the purpose of practical demonstration, evaluation and professional experience.
  - Prerequisites: PNB481, PNB520
  - Co-requisite: PNB620
  - Credit Points: 12  Contact Hours: 6 per week

- **PNB622 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.
  - Prerequisite: PNB520
  - Credit Points: 8  Contact Hours: 3 per week

- **PNB665 CLINICAL PHYSIOLOGY**
  - This subject aims to develop in the student an appreciation of the physiological basis of the pathogenesis, clinical features and treatment of the major disorders of the cardiovascular, respiratory, haematological, renal, gastrointestinal and endocrine systems. In addition, students will be introduced to topics of particular interest to those wishing to pursue a career in nutrition and dietetics, such as chemical carcinogenesis, nutrition in cancer patients, and the metabolic response to stress.
  - Prerequisite: PNB465
  - Credit Points: 10  Contact Hours: 4 per week

- **PNB667 ADVANCED NUTRITIONAL PHYSIOLOGY**
  - This subject examines the links between normal and abnormal food intake and normal and abnormal physiological functions in the human body. Special attention is focused on the role of nutrition in the physiology of the cardiovascular, renal, gastrointestinal and nervous systems.
  - Prerequisites: PNB405, PNB465
  - Credit Points: 10  Contact Hours: 4 per week

- **PND131 ANATOMY**
  - Addresses the general principles of anatomy. Deals with the macroscopic and microscopic structures of the human body. Introductory surface and regional anatomy are dealt with in relation to systemic anatomy.
  - Credit Points: 9  Contact Hours: 4 per week

- **PND241 BIOMEDICAL SCIENCE**
  - Covers aspects of essential biochemical processes, basic physiological principles, fundamentals of disease processes and basic pharmacological principles.
  - Prerequisites: CHD148
  - Credit Points: 6  Contact Hours: 3 per week

- **PND340 CLINICAL PHYSIOLOGY I**
  - Considers the physiological basis of the clinical manifestations, pathogenesis and principles of treatment of the major disorders of the respiratory, cardiovascular, haematological, urinary, digestive and musculo-skeletal systems.
  - Prerequisites: PND241
  - Credit Points: 9  Contact Hours: 4 per week

- **PND421 FOOD & NUTRITION**
  - Addresses the role of nutrients in the body in health and disease. Examines nutritional issues of current significance in the Australian diet. Highlights individuals and groups at risk of nutrition-related disease and suitable goals for dietary modification of these people. Examines why people develop their food habits and their sources of nutrition information.
  - Prerequisites: PND241
  - Credit Points: 6  Contact Hours: 3 per week

- **PND430 PHYSIOLOGY**
  - A course of lectures and practicals. The lectures are the same as PNB615 and PNB465. The course is presented as a one semester program.
  - Prerequisite: MSD114  Co-requisite: MSD410
  - Credit Points: 10  Contact Hours: 6 per week
of cryotherapy, chemotherapy and electrocautery.

Clinical teaching in practical podiatry extends throughout the course. Practical training is given in the management of a wide range of cases of increasing difficulty, these being representative of the wide field of practice in which skills must be at a high level in diagnosis, operating skill, therapeutic procedures and podiatric orthotics.

Prerequisite: PND132
Co-requisites: PND420, PHD441
Credit Points: 20 Contact Hours: 10 per week

**PND432 PODIATRY IV**

Clinical teaching in practical podiatry extends throughout the course. Practical training is given in the management of a wide range of cases of increasing difficulty, these being representative of the wide field of practice in which skills must be at a high level in diagnosis, operating skill, therapeutic procedures and podiatric orthotics.

Prerequisites: PND431
Co-requisites: PND442, PND460
Credit Points: 18 Contact Hours: 10 per week

**PND461 SPECIAL PROCEDURES CLINIC**

A clinic in which procedures under local anaesthesia can be undertaken for those conditions requiring radical treatment. These procedures will include the use of cryotherapy, chemotherapy and electrocautery.

Prerequisites: PND460, PND471, PND710
Co-requisites: PND432
Credit Points: 6 Contact Hours: 2 per week

**PND470 HUMAN GENETICS & DEVELOPMENT**

Genetic principles and their applications in the field and in medicine; normal and abnormal human development.

Prerequisites: BED150, PND120
Credit Points: 2 Contact Hours: 1 per week

**PND540 CLINICAL PHYSIOLOGY II**

Considers the physiological basis of the clinical manifestations, pathogenesis and principles of treatment of the major disorders of the nervous system.

Prerequisites: PND241
Credit Points: 6 Contact Hours: 3 per week

**PND541 CLINICAL PHYSIOLOGY III**

Considers the physiological basis of the clinical manifestations, pathogenesis and principles of treatment of the major disorders of the endocrine, reproductive and integumentary systems.

Prerequisites: PND241
Credit Points: 6 Contact Hours: 3 per week

**PND701 DERMATOLOGY**

Students are taught to appreciate the varieties of skin lesions as they affect the lower limb. The program includes lectures and attendance at a hospital dermatology unit.

Prerequisites: PND469, PND471
Co-requisites: PND731
Credit Points: 4 Contact Hours: 2 per week

**PND731 PODIATRY V**

Clinical teaching in practical podiatry extends throughout the course. Practical training is given in the management of a wide range of cases of increasing difficulty, these being representative of the wide field of practice in which skills must be at a high level in diagnosis, operating skill, therapeutic procedures and podiatric orthotics.

Prerequisites: PND432 Co-requisite: PND750
Credit Points: 26 Contact Hours: 13 per week

**PND732 PODIATRY VI**

Clinical teaching in practical podiatry extends throughout the course. Practical training is given in the management of a wide range of cases of increasing difficulty, these being representative of the wide field of practice in which skills must be at a high level in diagnosis, operating skill, therapeutic procedures and podiatric orthotics.

Prerequisite: PND731 Co-requisite: PND761
Credit Points: 26 Contact Hours: 13 per week

**PND742 ORTHOTICS VI**

This unit follows on from Orthotics IV and teaches the student to adapt previously learned principles of orthotic fabrication to incorporate prosthetic devices where appropriate.

Prerequisite: PND442 Co-requisite: PND732
Credit Points: 6 Contact Hours: 3 per week

**PND752 CLINICAL BIOMECHANICS**

In this subject students are taught the biomechanical principles of foot function as used in the clinical situation.

Prerequisite: PND460 Co-requisite: PND731
Credit Points: 6 Contact Hours: 3 per week

**PND761 SPORTS MEDICINE**

This course follows on from the Orthotics units and the subject Kinesiology and Biomechanics, and is designed to consider the special needs of athletes. Studies are undertaken in those conditions which affect foot function and subsequent athletic performance.

Prerequisite: PND750 Co-requisite: PND732
Credit Points: 6 Contact Hours: 3 per week

**PND770 PROJECT**

Students are required to undertake special projects and to submit a thesis related to either a theoretical or clinical topic of their own choice.

Credit Points: 6 Contact Hours: 2 per week

**PNN101 ENVIRONMENTAL HEALTH**

Currently, there is heightened awareness about the nature of industrialised human activity and its impact upon natural resources and human health. Nurses have traditionally been concerned with the provision of an environment which is conducive to the promotion, maintenance and/or restoration of health. Thus, an understanding of contemporary environmental health issues is vital to the provision of effective health care which meets the needs of today's society. Content will be selected from an introduction of ecosystems or environmental factors and human health.

Credit Points: 6 Contact Hours: 1.5 per week

**PNN102 NUTRITION & LIFESTYLE**

A wide variety of illness has its basis in inappropriate nutrition. In this subject, particular emphasis is placed on current trends in nutrition epidemiology in order to assist practising nurses in their health education efforts with clients.

Credit Points: 6 Contact Hours: 1.5 per week

**PNN161 ANATOMY & PHYSIOLOGY I**

A study of basic functional anatomy covering cells, tissues, and the organ systems of the human body. The lectures and practical work are integrated and emphasise the relationships between structure and function.

Credit Points: 6 Contact Hours: 2 per week
• PNP112 FOOD STUDIES II
A study of the mechanisms and controls of body functions. Stress is placed on fundamental principles and the practical work serves to illustrate these principles, as well as providing experience in physiological recording and investigative techniques.
Credit Points: 8 Contact Hours: 3 per week

• PNP104 APPLIED NUTRITION I
The application of nutrition principles to groups and populations is examined. Tools used in assessment including recommended dietary intakes and food composition tables are discussed. External determinants on nutrition such as food legislation and financial constraints are also discussed. The role of agencies involved in nutrition education are included.
Credit Points: 4 Contact Hours: 2 per week

• PNP108 APPLIED NUTRITION II
The application of nutrition knowledge and assessment techniques to groups of individuals and population. Nutrition problems in Australia as a whole will be addressed as will the nutritional needs of specific groups. Nutrition planning and policy and variations between states will be discussed.
Prerequisites: PNP104, PNP143
Credit Points: 6 Contact Hours: 3 per week

• PNP111 FOOD STUDIES I
The subject provides an overview of the structures and composition of food and its role in providing for nutritional requirements of the community. The impact of processing on nutrients in food is considered. The subject is closely allied with the subjects Foundations of Nutrition and Food Studies II.
Credit Points: 4 Contact Hours: 2 per week

• PNP112 FOOD STUDIES II
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.
Prerequisite: PNP111
Co-requisites: PNP120, PNP108
Credit Points: 6 Contact Hours: 3 per week

• PNP115 OCCUPATIONAL HEALTH & SAFETY ADMINISTRATION I
This fundamental subject will introduce students to basic concepts in occupational health and safety. They will develop both an understanding of and skills in not only basic management principles as they apply to this discipline but also in the development and delivery of health and safety training programs. A sound foundation in the principles and practice of health promotion will also be developed.
Credit Points: 12 Contact Hours: 3 per week

• PNP116 HUMAN FACTORS
This subject will introduce the human factors in occupational health and safety. Basic human anatomy and physiology will be reviewed prior to a discussion of how the physico-chemical environment of the workplace can impinge on normal physiological function. The psychology of humans in the work environment will be discussed with consideration of attitudes towards health and safety. The use of ergonomics, anthropometry and biomechanics in the design of safer workplaces will be reviewed.
Credit Points: 12 Contact Hours: 3 per week

• PNP120 THERAPEUTIC DIETETICS
An extensive study of the application of dietary modifications and nutritional support in clinical settings. The emphasis is on dietary intervention for individuals particularly those with medical or surgical conditions where diet forms part of the treatment. There is a large practical component.
Prerequisites: PNP143, PNP104
Credit Points: 10 Contact Hours: 7 per week

• PNP122 PRACTICE IN THERAPEUTIC DIETETICS
Practical experience and seminar presentations relevant to PNP120. The course will be conducted in institutions off-campus (40 hours per week for 11 weeks).
Prerequisites: Completion of all subjects Semester I & Semester 2
Credit Points: 31 Contact Hours: 40 per week

• PNP123 PRACTICE IN COMMUNITY NUTRITION
This subject enables students gain experience of nutrition and health care of individuals and groups in the community through off-campus practice (40 hours per week for 3 weeks).
Prerequisites: Completion of all subjects Semester I & II
Credit Points: 7 Contact Hours: 40 per week

• PNP124 INTRODUCTION TO DIETETICS PRACTICE I
• PNP125 INTRODUCTION TO DIETETICS PRACTICE II
These subjects offer an introduction to clinical dietetics. They involve one week each principally in the hospital setting. They offer an opportunity to practise interviewing and dietary assessment.
Credit Points: PNP124 - 4; PNP125 - 6
Contact Hours: 40 per week

• PNP132 PRACTICE IN LARGE SCALE FEEDING
Practical experience and seminar presentations relevant to PNP137. The course will be conducted in institutions off-campus (40 hours per week for 4 weeks).
Prerequisites: Completion of all subjects Semester I & Semester 2
Credit Points: 10 Contact Hours: 40 per week

• PNP137 CATERING STUDIES
Introduction to institutional food service administration; the organisation of food service; production; distribution and service of food menu planning; hygiene; maintenance; financial control; human resource management; computer assistance and quality assurance. Field trips are included.
Co-requisites: PNP112
Credit Points: 7 Contact Hours: 5 per week

• PNP142 MEDICINE
Aetiology of disease. Brief description of treatment other than dietary of hypertension, cardiovascular, renal, gastrointestinal and mental diseases, diabetes mellitus. Effect of nutrition on teeth, eyes, skin general dental care and the effects of special diets on teeth, child health, nutrition in pregnancy, lactation, the aged. Brief introduction to pharmacology and proprietary names of drugs.
Credit Points: 4 Contact Hours: 1.5 per week
**PNP143 FOUNDATION OF NUTRITION**

This subject builds on the background of biochemistry and human physiology of the students. It brings together, in an integrated manner, appropriate areas of biochemical chemistry and physiological function, to provide a scientific base on which the study of human nutrition can be built. Special attention is given to the development, structure and function of the gastrointestinal tract and related organs, energy and work, interrelationships between food, additives and drugs.

Credit Points: 12  
Contact Hours: 6 per week

**PNP151 PROJECT I**

**PNP251 PROJECT II**

The aims of these subjects are to introduce and practice research skills which will enable the student to formulate, design and conduct a research project, to analyse and interpret research data and write a scientific report. Additionally, there will be an introduction to costing projects, presenting findings to different audiences and media releases. A start will be made on the community nutrition project for third semester.

Prerequisites: Nil for PNP151; PNP151 for PNP251

Credit Points: PNP151 - 4, PNP251 - 5  
Contact Hours: 1 per week

**PNP215 OCCUPATIONAL HEALTH & SAFETY ADMINISTRATION II**

In this subject, students will develop an understanding of both the legal framework within which the discipline operates and industrial relations concepts and practices in so far as they impinge upon occupational health and safety. Basic statistical techniques will be reviewed as an introduction to the study of concepts of epidemiology applicable to an occupational setting.

Credit Points: 12  
Contact Hours: 3 per week

**PNP415 OCCUPATIONAL HEALTH**

This subject is designed to introduce students to basic disease processes in humans. They will also develop an understanding of the body's various uptake mechanisms of hazardous workplace agents and basic toxicological principles, including the body's various responses to toxic agents. Examples of acute and chronic occupational diseases will be discussed.

Credit Points: 12  
Contact Hours: 3 per week

**PNP416 OCCUPATIONAL HEALTH & SAFETY PROJECT**

This major project gives students an opportunity to research a particular aspect of their theoretical or practical studies, and thereby develop their research techniques, data collection and evaluation skills and ability to work independently under supervision. By submission of a written project report, they will draw upon many of the skills developed throughout the course.

Credit Points: 12

**SVB001 SURVEYING & MAPPING**

Instrumentation for land measurement, contour mapping; types of map, availability and interpretation; simple survey techniques; introduction to remote sensing techniques.

Credit Points: 2  
Contact Hours: 1 per week

**SVB101 SURVEYING & MEASURING**

Basic concepts, applications of surveying, relationship with architecture and building; instrumentation; setting out of procedures; plotting of survey data, computations, cadastral systems, land tenure systems; Titles Office procedures, searching, identification, types of surveys, covenants, encroachments, interpretation of survey plans.

Credit Points: 4  
Contact Hours: 2 per week

**SVB103 MAPPING & SURVEYING FOR FIELD SCIENTISTS**

Introduction to maps, projections, grid, granulites, coordinates, scale and uses; principles of mapping; position fixing, heighting; drafting; simple field instrumentation, aerial photography, remote session.

Credit Points: 8  
Contact Hours: 3 per week

**SVB111 DATA PRESENTATION I**

Drafting instruments and techniques; introductory survey drafting; introductory engineering drawing.

Co-requisite: SVB121

Credit Points: 6  
Contact Hours: 3 per week

**SVB121 LAND SURVEYING I**

Principles of surveying; surveying instrumentation; traversing; levelling; elements of tacheometry; contouring; elementary theory of error; plane surveying computations.

Credit Points: 13  
Contact Hours: 6 per week

**SVB199 INDUSTRIAL EXPERIENCE I**

At least six weeks' employment, approved by Head of Department. Students must submit an industrial experience record form, completed by both student and employer.

Contact Hours: 6 per week

**SVB203 PROJECT SURVEY**

Two surveys of a building site; survey done by theodolite traverse.

Prerequisite: SVB101

Credit Points: 4  
Contact Hours: 2 per week

**SVB211 DATA PRESENTATION II**

Engineering survey drafting; working survey drawings; basic principles of computer graphics, hardware, software; programming; plotter production of maps and plans.

Prerequisites: CSB294, SVB111  
Co-requisite: SVB226

Credit Points: 6  
Contact Hours: 3 per week

**SVB212 DATA PRESENTATION II A**

Develops drafting skills; introduces engineering survey drafting and computer graphics.

Prerequisite: SVB111  
Co-requisite: SVB226

Credit Points: 2  
Contact Hours: 1 per week

**SVB226 LAND SURVEYING II**

Plane surveying computations; detail surveying; reconnaissance surveying; route location; curve theory; setting out surveys; earthworks computation; elements of cadastral surveying.

Prerequisite: SVB121  
Co-requisite: SVB211

Credit Points: 13  
Contact Hours: 6 per week

**SVB270 LAND ADMINISTRATION I**

Introduction to the elements of law; law relating to land title and registration; crown land administration in Queensland.

Credit Points: 6  
Contact Hours: 3 per week

**SVB282 SEMINAR I**

Preparation of technical papers and reports; written and oral presentation; business correspondence; meeting procedures.

Credit Points: 5  
Contact Hours: 2 per week

**SVB299 INDUSTRIAL EXPERIENCE II**

At least six weeks' employment, approved by Head of Department. Students must submit an industrial
experience record form, completed by both student and employer.

**SVB306 SURVEYING I**
Introductory surveying methods, instrumentation; use of level and theodolite for gathering and setting out data points, distance measurement, circular curves, areas and volumes; introductory photogrammetry and digital terrain models.

Credit Points: 8  Contact Hours: 3 per week

**SVB311 DATA PRESENTATION III**
Cadastral plan drawing; introduction to cartography; cartographic reproduction; mapping agencies.

Prerequisite: SVB111 Co-requisite: SVB393
Credit Points: 5  Contact Hours: 3 per week

**SVB331 OBSERVATIONS & ADJUSTMENTS I**
Review of relevant statistical concepts; theory of observations and of random errors; linear and nonlinear functional model, stochastic model, the law of propagation of variances, the error ellipse; practical applications.

Prerequisites: MAB795, MAB499
Co-requisite: MAB795
Credit Points: 4  Contact Hours: 2 per week

**SVB343 PHOTOGRAMMETRY I**
Introduction to photogrammetry; photogrammetric optics; aerial photography; geometry and use of single photographs; geometry and use of the stereogram; students are required to undertake one half day visit to an aerial survey/mapping organisation in the greater Brisbane area.

Prerequisite: PNB170
Credit Points: 6  Contact Hours: 3 per week

**SVB352 LAND STUDIES A**
Introductory ecology; conservation of resources; introduction to physical aspects of land; assessment of physical land parameters; land classifications; land utilisation; street mapping and land use surveys; regional geography; students are required to undertake a full day ecology field trip.

Credit Points: 6 per semester  Contact Hours: 6 per week

**SVB393 LAND SURVEYING III**
Cadastral surveying; field astronomy; off-campus field work.

Prerequisites: SVB121, SVB270
Co-requisites: SVB311, SVB393
Credit Points: 10  Contact Hours: 5 per week

**SVB399 INDUSTRIAL EXPERIENCE III**
At least six weeks' employment, approved by Head of Department. Students must submit an industrial experience record form, completed by both student and employer.

Contact Hours: 6 per week

**SVB412 CARTOGRAPHIC PRACTICE**
Reprographic processes; colour systems, colour separation and colour correction; digital mapping techniques; cartographic data structures; geographical surfaces.

Prerequisite: SVB311
Credit Points: 5  Contact Hours: 3 per week

**SVB430 LAND SURVEYING IV**
Primary traversing; classical triangulation; trigonometrical levelling, precise levelling; off-campus field work.

Prerequisite: SVB121
Co-requisites: SVB431, SVB442
Credit Points: 9  Contact Hours: 4 per week

**SVB431 OBSERVATIONS & ADJUSTMENTS II**
Introduction to least squares adjustment; standard problems I and II; extensive practical applications to linear and non-linear problems with both univariate data sets.

Prerequisite: SVB331
Credit Points: 4  Contact Hours: 2 per week

**SVB442 GEODETIC COMPUTATIONS**
Plane coordinate computation; geometrical geodesy, geometry of spheroid, computation on the spheroid; theory of map projections; the transverse mercator and UTM; computations on the Australian Map Grid.

Prerequisites: MAB795, SVB121
Co-requisite: SVB430
Credit Points: 9  Contact Hours: 4 per week

**SVB443 PHOTOGRAMMETRY II**
Principles of construction; operation of analogue stereoplotters; aerial triangulation; terrestrial photogrammetry; analytical photogrammetry; one half-day visit to an aerial survey/mapping organisation.

Prerequisites: SVB343, MAB795
Co-requisites: SVB451
Credit Points: 11  Contact Hours: 6 per week

**SVB451 LAND STUDIES B**
An introduction to the theory of price; location theory; land economics.

Credit Points: 5  Contact Hours: 3 per week

**SVB470 LAND ADMINISTRATION II**
Introduction to government and public administration; Australian public land administration; private sector land administration.

Credit Points: 4  Contact Hours: 2 per week

**SVB473 LAND INFORMATION SYSTEMS I**
Need for a computerised land information system review of cadastral systems; land title systems; the multipurpose cadastre and automation; survey requirements for land information systems; design principles, retrieval techniques.

Prerequisites: CSB294, SVB211, SVB393
Co-requisite: SVB573
Credit Points: 5  Contact Hours: 3 per week

**SVB535 LAND SURVEYING V**
Hydrographic surveying; topographic surveying.

Prerequisites: MAB495, SVB121
Co-requisite: SVB430
Credit Points: 5  Contact Hours: 3 per week

**SVB551 LAND VALUATION**
Concepts and purposes of valuation; improvements; urban and rural valuation; interest in land; compensation; legislation affecting land valuation; land valuation practice.

Prerequisite: SVB451
Credit Points: 6  Contact Hours: 3 per week

**SVB561 LAND DEVELOPMENT PRACTICE I**
Land development as an economic activity; surveys for subdivision design; site planning; land use deter-
minants; political, economic, social and physical; traffic aspects affecting subdivision design; case studies.
Prerequisites: SVB351, SVB451
Credit Points: 10  Contact Hours: 6 per week

SVB562 LAND INFORMATION SYSTEMS II
Data acquisition, storage and management; spatial identifiers; cartographic display and generalisation in an automated system; implementation of a system.
Prerequisite: SVB473 Co-requisite: SVB412
Credit Points: 4  Contact Hours: 2 per week

SVB571 CADASTRE
Complex and modern problems involved in the cadastre.
Prerequisite: SVB393
Credit Points: 4  Contact Hours: 2 per week

SVB572 LAND ADMINISTRATION III
Queensland case law; legislation affecting land and the survey of land including the registration of interests in land, and statutory control of land development.
Prerequisite: SVB270
Credit Points: 6  Contact Hours: 3 per week

SVB574 LAND ADMINISTRATION IV
An introduction to rural and urban sociology; social aspects of land administration.
Credit Points: 4  Contact Hours: 2 per week

SVB634 TOPICS IN ENGINEERING SURVEYING
Network reliability; deformation surveys; subsidence monitoring; precision alignment and distance measurement; jig surveys; high rise buildings.
Prerequisite: SVB431 Co-requisite: SVB639
Credit Points: 5  Contact Hours: 3 per week

SVB636 LAND SURVEYING VI
Geophysical surveying; mine surveying; field astronomical observation.
Prerequisites: PHB170, SVB430
Credit Points: 6  Contact Hours: 3 per week

SVB639 OBSERVATIONS & ADJUSTMENTS III
The design, preanalysis and optimisation followed by execution, adjustment and assessment of horizontal (two-dimensional) control networks, traverse and level networks (one-dimensional).
Prerequisite: SVB431
Credit Points: 4  Contact Hours: 2 per week

SVB640 GEODESY
An introduction to history; definitions; the gravity field of the earth; level surfaces; spherical harmonies; variations of the gravity field; gravity measurements; geodetic reference systems; datum transformations; satellite geodesy; satellite doppler surveying; the global positioning system; inertial surveying systems, and geodynamics.
Prerequisites: MEB221, PHB170, SVB430, SVB442
Co-requisite: SVB639
Credit Points: 6  Contact Hours: 3 per week

SVB643 PHOTOGRAMMETRY III
Numerical relative and absolute orientation; independent model and bundle methods of block adjustment for triangulation, close range photogrammetry including nonconventional techniques; analytical plotters including generation, manipulation and storage of digital data; the use of micro and mini computers in analytical photogrammetry.
Prerequisites: SVB443 Co-requisite: SVB431
Credit Points: 5  Contact Hours: 3 per week

SVB645 REMOTE SENSING
Definitions and major systems for remote sensing; characteristic spectral reflectance of objects and spectral response of sensors; remote sensing acquisition hardware; remote sensing satellites; thermography and radar; data processing for presentation and enhancement; cartographic correction of remote sensing data for systematic geometric error.
Prerequisite: SVB343
Credit Points: 5  Contact Hours: 3 per week

SVB664 LAND DEVELOPMENT PRACTICE II
Preliminaries of development, data assembly, statutory approvals, elements of design, requirements of communication, hydraulic and energy services, factors affecting development costs, financial and technical controls of land development schemes; projects covering neighbourhood development; residential development, industrial estate development, canal and reclamation estates, commercial development, rural development schemes; design of small towns as associated with mining ventures.
Prerequisites: SVB561, SVB574
Credit Points: 10  Contact Hours: 6 per week

SVB670 LAND ADMINISTRATION V
Organisation theory; development planning procedures; land development analysis.
Prerequisites: SVB470, SVB451
Credit Points: 5  Contact Hours: 3 per week

SVB680 PROFESSIONAL PRACTICE
The history of surveying and surveyors; the surveyor in relation to statutory authorities, civil, commercial and taxation laws; the surveyor as employer, employee, expert witness; surveyor-client-consultant relationships; professional ethics.
Prerequisite: SVB470
Credit Points: 6  Contact Hours: 3 per week

SVB682 SEMINAR II
Preparation and presentation of at least one technically oriented seminar paper in a field germane to surveying.
Prerequisites: SVB282, successful completion of subjects totalling not less than 85 hours of weekly contact time
Credit Points: 2  Contact Hours: 1 per week

SVB683 PROJECT
 Undertake and report on an approved project in the field of surveying. Field trips on site or to local firms may be required.
Prerequisite: Successful completion of subjects totalling not less than 85 hours of weeks contact time
Credit Points: 4 per semester
Contact Hours: 2 per week

SVB684 MAP PRODUCTION PLANNING
Planning of photogrammetric projects; specifications, control, costs, accuracy, elements of critical path method.
Prerequisites: SVB412, SVB443
Co-requisite: SVB643
Credit Points: 5  Contact Hours: 3 per week

SVB685 PROJECT (CARTOGRAPHY)
Undertake a substantial mapping project utilising knowledge gained in photogrammetric, traditional
and computer-assisted methods. The project may be
topographic or thematic.
Prerequisites: SVB311, SVB412
Co-requisite: SVB443
Credit Points: 8 per semester
Contact Hours: 4 per week

- SVB688 PROFESSIONAL PRACTICE A
Preparation required as professional practice either as
employer or employee.
Prerequisites: Successful completion of subjects
totalling not less than 100 hours of weekly contact
including SVB573
Credit Points: 4 Contact Hours: 2 per week

- SVB694 GEODESY II
Review of matrices, the Jacobian matrix, orthogonal
matrices, transformations, coordinate transforma­
tions, rotations in three dimensions, euler angles,
datum transformations, the development of datums.
Prerequisite: SVB640
Credit Points: 5 Contact Hours: 3 per week

- SVP111 CADASTRAL SURVEYING I
The practice of cadastral surveying including sub­
division design. Students may be required to spend
four weeks at a field study centre and be required to
carry out off-campus field work.
Credit Points: 26 Contact Hours: 356 total

- SVP112 SURVEY COMPUTING
Computer applications in the practice of surveying.
Credit Points: 3 Contact Hours: 47 total

- SVP113 OFFICE OPERATIONS
Written and oral communications; interviewing; of­
fice management, industrial relations.
Credit Points: 7 Contact Hours: 90 total

- SVP114 PRACTICE LAW
The significance of court decisions on professional
indemnity claims; statutes and regulations affecting
surveyors. Preparation of brief and appearance in
practice court sessions in conjunction with the Legal
Practice Course.
Credit Points: 2 Contact Hours: 30 total

- SVP115 PROFESSIONAL PRACTICE
The professional organisations in surveying; the con­
ventions of surveying practice; professional
relationships and the responsibilities of professional
practice.
Credit Points: 1 Contact Hours: 8 total

- SVP116 SURVEY PROJECT
The recording and planning of survey projects and
assessing progress.
Credit Points: 7 Contact Hours: 100 total

- SVP211 CADASTRAL SURVEYING II
The practice of cadastral surveying, including mining
and real property surveys. Students may be required
to spend four weeks at a field study centre and be
required to carry out off-campus field work.
Credit Points: 18 Contact Hours: 247 total

- SVP212 BUILDING CONTROL SURVEY
Lectures, tutorials and practical exercises covering
horizontal and vertical building control surveys; in­
terpretation of plans and client relationships. Students
may be required to spend some time on off-campus
field work and inspections.
Credit Points: 3 Contact Hours: 38 total

- SVP213 DETAIL SURVEYS
Surveys for location and presentation of natural and
man-made detail. Students may be required to spend
some time at a field study centre and be required to
carry out off-campus field work.
Credit Points: 2 Contact Hours: 30 total

- SVP214 MAPPING
Mapping techniques and their relative cost.
Credit Points: 6 Contact Hours: 76 total

- SVP215 INNOVATIONS & SYSTEMS
DEVELOPMENT
Assessment of new techniques and equipment, and
the development of an innovative approach to the
practice of surveying.
Credit Points: 2 Contact Hours: 22 total

- SVP216 SURVEYS FOR GOVERNMENT
Decision making in government organisations; sur­
vey services provided by or to local authorities and
government departments; surveying contracts. Stu­
dents may be required to carry out inspections of
several government agencies.
Credit Points: 3 Contact Hours: 38 total

- SVP217 ENGINEERING SURVEYING
Engineering surveys for a variety of development
projects. Students may be required to spend two
weeks at a field study centre and be required to carry
out off-campus field work.
Credit Points: 16 Contact Hours: 210 total

- SVT113 INTRODUCTORY
CARTOGRAPHY
Introduction to graphical presentation as a means of
communication; introduction to map projections; map
types, concepts of scale; the Queensland land tenure
system; introduction to map and plan reproduction;
simple plotting.
Credit Points: 8 Contact Hours: 3 per week

- SVT115 CARTOGRAPHIC
COMPUTATIONS
Calculation and calculating; plane geometry; a review
of algebraic manipulation with cartographic applica­
tions; matrices and transformations as used in
mapping.
Credit Points: 8 Contact Hours: 3 per week

- SVT222 SURVEY DRAFTING
Survey Plan Manual; presentation standard for
microfilming; techniques of survey drafting; sketches
under the Survey Co-ordination Act; identification
survey and detail plans; water course boundaries;
requirements of Lands Department and plotting of
plans for registration.
Prerequisite: SVT113
Credit Points: 8 Contact Hours: 3 per week

- SVT225 SURVEYING
Basic principles of surveying techniques for provi­
sing survey control, especially for mapping purposes;
basic principles of measurement – angular and linear;
historical review of surveying.
Credit Points: 8 Contact Hours: 3 per week

- SVT243 PHOTOGRAMMETRY I
The photographic process, aerial survey and flight
planning; geometry of the single photograph, scale
etc; stereoscopy, stereoscopes and parallax bar;
short treatment of space resection; rectification and
interpretation; one evening visit to an aerial surveying
organisation.
Credit Points: 8 Contact Hours: 3 per week
SVT306 ENGINEERING SURVEYING I
Fundamental survey concepts, coordinate systems, differential and simple trigonometric levelling; angular measurements; bearing and azimuth; linear measurement by steel tape and stadia.
Credit Points: 7 Contact Hours: 3 per week

SVT315 CARTOGRAPHIC COMPUTATIONS II
Computer systems for the solution of cartographic problems; the structure of cartographic data and its relevance to computer solution; applications of mathematical languages.
Prerequisite: SVT115
Credit Points: 8 Contact Hours: 3 per week

SVT316 LAND STUDIES I
Introduction to the physical aspects of land; assessment of physical land parameters, land classification systems; land evaluation.
Credit Points: 8 Contact Hours: 3 per week

SVT334 PHOTOGRAMMETRY II
Use of stereoplottes, relative and absolute orientation; radial line methods; terrestrial photogrammetry; differential rectification and orthophoto construction; positioning and identification of ground control; introduction to remote sensing; one evening visit to a mapping organisation.
Prerequisite: SVT243
Co-requisite: SVT115
Credit Points: 8 Contact Hours: 3 per week

SVT426 LAND STUDIES II
Introduction to the cultural aspects of land use.
Prerequisite: SVT316
Credit Points: 8 Contact Hours: 3 per week

SVT443 PHOTOGRAMMETRY III
The operation of stereoplottes; aerial triangulation; compilation of maps.
Prerequisite: SVT343
Credit Points: 8 Contact Hours: 3 per week

SVT471 LAND LAWS & REGULATIONS
Introduction to the Australian legal system, sources of law; the various acts affecting land and land surveying in Queensland.
Credit Points: 8 Contact Hours: 3 per week

SVT511 CAD SYSTEMS
Principles of digital mapping; the use of an interactive graphics system for mapping operations.
Prerequisite: SVT991
Credit Points: 8 Contact Hours: 3 per week

SVT513 DIGITAL MAPPING
Advanced three-dimensional mapping; analytical plotting systems including digital and graphical mapping; digital evaluation models and unconventional mapping applications; subject will be project oriented.
Prerequisites: SVT443, SVT315
Credit Points: 8 Contact Hours: 3 per week

SVT623 PROJECT MAPPING
Introduction to the role of government and the private sector in project mapping; planning projects for mapping purposes.
Prerequisites: SVT343, SVT443
Credit Points: 4 Contact Hours: 1.5 per week

SVT626 SEMINAR
Preparation of technical papers and reports for both written and oral presentation; business correspondence; meeting procedures.
Credit Points: 4 Contact Hours: 1.5 per week

SVT642 MAP PROJECTIONS I
Introduction to special trigonometry and its application to map projections; tangential, cylindrical, conical and conventional projections using a sphere as reference surface.
Prerequisite: SVT115
Credit Points: 8 Contact Hours: 3 per week

SVT715 CARTOGRAPHY I
Introduction to design; monochrome design; map compilation; the process camera for cartographic use; introduction to lithography.
Credit Points: 8 Contact Hours: 3 per week

SVT742 MAP PROJECTIONS II
Geodesy: geometry of ellipse and ellipsoid; descriptive treatment of gravity; role of geodesy in mapping; computations of spheroid; the traverse mercator projection, UTM and the Australian Map Grid; computations; geographic to grid and vice versa, computations on the grid.
Prerequisite: SVT642
Credit Points: 8 Contact Hours: 3 per week

SVT815 CARTOGRAPHY II
Map production; registration systems; scribbling and masking techniques; printing methods including letter press, gravure, offset lithography and silk screen, paper and ink manufacture; colour theory; Munsell's system, colour synthesis, colour correction and proving.
Prerequisite: SVT715
Credit Points: 8 Contact Hours: 3 per week

SVT826 CARTOGRAPHIC ADMINISTRATION
Introduction to government and public administration; theory of organisations and its application to mapping agencies.
Credit Points: 8 Contact Hours: 3 per week

SVT915 CARTOGRAPHY III
Standard mapping, economics of standard mapping, standard sheet sizes, map specifications, map accuracy; use of orthophotos as control for mapping; thematic mapping; special cartographic techniques, airbrush tinting, hill shading etc.
Prerequisite: SVT815
Credit Points: 8 Contact Hours: 3 per week

SVT916 CARTOGRAPHY IV
Digital methods in cartography; compilation of data for computer-assisted cartography; coordinate systems and digitising; representation of geographic surfaces; methods of display and analysis of spatial data.
Prerequisites: SVT991, SVT315
Credit Points: 8 Contact Hours: 3 per week

SVT945 REMOTE SENSING
Introduction to remote sensing; data and information; review of electromagnetic propagation; spectral sensitivity and response; systems in current use; cartographic use of remote sensing imagery.
Prerequisite: SVT343
Credit Points: 8 Contact Hours: 3 per week
SVT991 COMPUTER GRAPHICS I
Basic elements of computer graphics; systems hardware and software; the AUTO-DRAFT system.
Prerequisite: SVT315
Credit Points: 8  Contact Hours: 3 per week

SVT992 COMPUTER GRAPHICS II
Generation of data for computer-assisted mapping; programming techniques for automated drafting; the HP Graphics language for driving plotters.
Prerequisites: SVT991, SVT315
Credit Points: 8  Contact Hours: 3 per week
## ALPHABETICAL LIST OF SUBJECTS
### Gardens Point campus

These subjects are listed in alphabetical order as a basis for reference to the Outline of Subjects section which is presented in subject code order.

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- LPP416: Urban Policy Implementation
- LPP407: Urban Policy Processes
- LPP322: Urban Structure
- CEP310: Urban Transportation Planning
- PNA850: Urological Physiology & Anatomy
- LPP906: User & Character Design Studies

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**V**
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SUBJECT SYNOPSIS
Northern Campuses

This section provides synopses of the subjects offered on the University’s Northern Campuses. The synopses are presented in alpha-numeric order according to their codes and provide the following information:

• code;
• subject title;
• brief outline of content of subject;
• prerequisite subject(s) where applicable;
• credit point value (first numeral);
• class contact in hours per week where applicable (second numeral).

Subject coding and numbering
The format of the coding system is as follows:

(i) two letters to represent discipline areas. A list of discipline areas appears below.
(ii) first numeral represents the level of course in which the subject is normally offered.

1  Associate Diploma
2  Diploma
3  Degree
4  Graduate Diploma
5  Masters Degree

(iii) for some teacher education courses the second numeral represents course strands as follows:
0, 1, 2  Curriculum and Discipline Studies
3      Studies in Education
6      Studies in the Teaching/Learning Process
7      Specialist Studies
8      Liberal Studies
9      Field Studies

(iv) the remaining numerals provide each subject with a unique number in the series 00-99.

Discipline Areas
AB  Aboriginal Studies
AC  Accounting
AD  Administration and Management
AE  Aesthetics
AR  Art
AS  Asian Studies
BC  Biochemistry
BI  Biology
BM  Business Machines
CC  Child Care
CE  Ceramics
CH  Chemistry
CL  Counselling
CO  Computing
CR  Community Recreation
CS  Consumer Studies
CT  Clothing and Textiles
CU  Curriculum Studies
CW  Community Welfare
DA  Dance
DP  Drawing and Painting
DR  Drama
DS  Design Studies
DY  Developmental Psychology
EC  Economics
ED  Education
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AC3002 ACCOUNTING PRINCIPLES
Introduction to accounting; basic assumptions inherent in accounting; recording and reporting to management on assets, liabilities, revenue and expenses; short and long-term concepts; overview of managerial accounting concepts and techniques.
Credit Points: 12  Contact Hours: 4 per week

AC3013 ACCOUNTING
Accounting concepts and methods; recording business transactions in basic books of account; measurement of capital and income in business enterprises; preparation of financial statements; accounting for inventory; accounting for fixed assets; control of cash and receivables; single entry accounting; non-trading concerns; analysis and interpretation of financial reports.
Credit Points: 12  Contact Hours: 4 per week

AC3014 FINANCIAL ACCOUNTING 1
Accounting entries appropriate to differing forms of business organisation, partnerships, branches and companies; fund statements, extended payment transactions, revenue recognition, relevant accounting standards.
Prerequisite: AC3013
Credit Points: 12  Contact Hours: 4 per week

AC3015 BUSINESS FINANCE 1
Establishment of a conceptual and institutional framework for analysis of corporate financial decision-making and behaviour of capital markets.
Prerequisites: AC3013, EC3028 and MK3032
Credit Points: 12  Contact Hours: 4 per week

AC3016 FINANCIAL ACCOUNTING 2
Accounting for companies to comply with legal requirements; professional accounting standards and exposure drafts; company taxation; liquidations; preparation of consolidated accounts and equity accounting.
Prerequisite: AC3014
Credit Points: 12  Contact Hours: 4 per week

AC3017 MANAGERIAL ACCOUNTING 1
Accounting information for management planning and control, budgeting, cost accounting concepts, job costing and process costing techniques; direct and absorption costing.
Prerequisite: AC3013
Credit Points: 12  Contact Hours: 4 per week

AC3018 AUDITING
Auditing concepts and procedures; review and evaluation of internal control systems; audit of computer-based systems; impact of computer or internal control; sample evidence, statistical sampling applied to auditing populations; audit reports; recommendations of professional bodies; legal and ethical environment of auditors; duties, rights and liabilities of auditors.
Prerequisites: AC3014, CO3104 and MK3032
Credit Points: 12  Contact Hours: 4 per week

AC3019 BUSINESS FINANCE 2
Analysis of the investment, financing and dividend decisions of the firm. Specific topics include capital budgeting, discounting techniques of investment analysis and capital structure issues.
Prerequisite: AC3015
Credit Points: 12  Contact Hours: 4 per week

AC3023 FINANCIAL ACCOUNTING 3
Objectives and methodology of financial accounting theory; concepts of accounting methods for assets, profit, capital maintenance, equities and liabilities; accounting for changing prices; contemporary developments in accounting theory.
Prerequisites: AC3014, AC3015 and AC3025
Credit Points: 12  Contact Hours: 4 per week

AC3024 BUSINESS FINANCE 3
Continuation of investment analysis and financial management sections of AC3015 and AC3019; relationship between financial policy and security prices; investigation into behaviour of security prices and capital markets to draw together accounting studies completed.
Prerequisite: AC3019
Credit Points: 12  Contact Hours: 4 per week

AC3025 MANAGERIAL ACCOUNTING 2
Design, implementation and uses of cost accounting systems to provide financial information required by managers for recurring decisions with reference to manufacturing organisations.
Prerequisites: AC3015 and AC3017
Credit Points: 12  Contact Hours: 4 per week

AC3027 COMPUTER APPLICATIONS IN PUBLIC PRACTICE 1
Concepts and audit implications of computer-based systems: hardware, systems software, applications software, database systems, data communications, centralised vs distributed systems, networks. Systems development and systems controls: analysis of systems development methods, documentation, control objectives, types of control. Audit procedures and techniques relevant to EDP-based systems; exposure to commonly used packages.
Prerequisite: AC3026
Credit Points: 12  Contact Hours: 4 per week

AC3028 COMPUTER APPLICATIONS IN PUBLIC PRACTICE 2
Reinforcement and further development of such topics as: income, allowable deductions, trusts, companies, partnerships, primary production and provisional tax; use of computer packages in tax; preparation of returns via computer systems; application of programming skills in developing small packages and modifying existing packages.
Prerequisites: AC3027 and LW3015
Credit Points: 12  Contact Hours: 4 per week

AC3029 INTERNATIONAL FINANCE
Introduction - the multinational firm; the international monetary system; fundamental exchange rate theories; forecasting exchange rates; international debt markets; international equity markets; international cost of capital and financial structures; the foreign investment decision and political risk; international capital budgeting decisions; measuring foreign exchange risk; exposure; managing foreign exchange risk; international taxation considerations.
Prerequisite: AC3015
Credit Points: 12  Contact Hours: 4 per week

AC3032 ACCOUNTING INFORMATION SYSTEMS 1
Reinforcement of accounting concepts through the study of financial modeling in accounting cases; use of electronic spreadsheet packages to implement
computerised accounting applications; introduction to Accounting Information Systems (AIS) and accounting data design.

Co-requisite: AC3013
Credit Points: 12  Contact Hours: 4 per week

AC3033 ACCOUNTING INFORMATION SYSTEMS 2
Reinforcement of further accounting concepts through the study of, and 'hands-on' experience with, a popular accounting package; advanced use of fourth generation database systems and spreadsheets to implement current accounting applications; advanced study of Accounting Information Systems and accounting data design; data retrieval and manipulation techniques of share price and company data files for business finance projects.
Prerequisite: AC3013, AC3032 or CO3104
Credit Points: 12  Contact Hours: 4 per week

AC3034 ACCOUNTING & CONTROL SYSTEMS
Accounting packages, systems and applications executing on various hardware platforms; introduction to the management control framework; application of the controls in accounting application software and systems; controls necessary in the accounting systems conversion process.
Credit Points: 12  Contact Hours: 4 per week

AC3040 INTRODUCTORY ACCOUNTING
Overview of accounting; double entry; recording, classifying and reporting business; transactions; accounting for cash; accounting for receivables and payables; accounting for inventories; accounting for non-current assets; accounting for payroll; single entry.
Credit Points: 10  Contact Hours: 5 per week

AC3041 ACCOUNTING 1
Accounting for partnerships; accounting for companies; accounting for non-current liabilities; statement of sources and applications of funds; company financial statements; auditing; analysis and interpretation of financial statements.
Credit Points: 10  Contact Hours: 5 per week

AC3042 BUSINESS MANAGEMENT
Management theory; business planning and control; business forecasting; marketing management; production management; personnel management and control; financial planning and control: an overview.
Credit Points: 10  Contact Hours: 3 per week

AC3043 COMPUTERS IN ACCOUNTING EDUCATION 1
Business information systems concepts; accounting applications; controls and accounting; systems software-DOS; application software-accounting package; application software-spreadsheet package; and their applicability to business education.
Credit Points: 10  Contact Hours: 4 per week

AC3044 MANAGEMENT ACCOUNTING
The nature of management accounting; cost concepts; budgeting and standards for control; cost profit volume analysis; job and process costing; standard costs; direct and absorption costing; and their applicability to business education.
Credit Points: 10  Contact Hours: 4 per week

AC3045 SMALL BUSINESS ENTERPRISE
Small business in terms of its entrepreneurial qualities, management, planning, financing; its legal and economic environment, and its growth and development.
Credit Points: 10  Contact Hours: 3 per week

AC3046 COMPUTERS IN ACCOUNTING EDUCATION 2
System design, implementation and running a computer installation; database query languages; the Unix operating system; business graphics; expert systems; communications; computer networks; and their applicability to business education.
Prerequisite: AC3040 or AC3043
Credit Points: 10  Contact Hours: 4 per week

AC3047 ACCOUNTING 2
Tax effect accounting; reorganisation of capital; liquidations; accounting for leases; accounting ethics and social responsibility; financial mathematics; project evaluation; the capital market; lease financing. Incompatible with AC3049 and AC3050.
Prerequisite: AC3041
Credit Points: 10  Contact Hours: 4 per week

AC3048 BUSINESS ORGANISATION
The interrelationship of key characteristics of the business organisation: people, strategies, structures, technology and business environment.
Prerequisite: AC3042
Credit Points: 10  Contact Hours: 4 per week

AC3049 CORPORATE FINANCE
The nature of corporate finance; financial mathematics; project evaluation; short term asset management; the capital market; short and long term finance; dividend policy; and relevant computer applications. Incompatible with AC3047
Prerequisite: AC3040
Credit Points: 10  Contact Hours: 4 per week

AC3050 FINANCIAL ACCOUNTING
Tax effect accounting; reorganisation of capital; liquidations; amalgamations; accounting for leases, consolidations, accounting ethics and social responsibility; computer applications. Incompatible with AC3047.
Prerequisite: AC3040
Credit Points: 10  Contact Hours: 4 per week

AC3701 COMPANY ACCOUNTING
Accounting procedures and records required on formation of a company; procedures for alteration of capital structure and for liquidations, amalgamations and consolidations of companies; professional and legal requirements of accounting reporting.
Prerequisite: Tertiary studies in accounting or relevant teaching experience
Credit Points: 12  Contact Hours: 3 per week

AC4020 PROFESSIONAL YEAR – ACCOUNTS
Analysis of current accounting standards; development of the ability to solve complex practical accounting issues (This subject is a compulsory component of the Chartered Accountants Professional Year).
Prerequisite: AC4026
Credit Points: 24  Contact Hours: 6 per week

AC4021 PROFESSIONAL YEAR – AUDIT & E.D.P.
An examination of auditing concepts; exposure to recent auditing research; this subject is an extension of undergraduate auditing studies and is a compulsory
component of the Chartered Accountants Professional Year.
Prerequisite: AC4026
Credit Points: 12  Contact Hours: 4 per week

**AC4022 PROFESSIONAL YEAR – TAXATION**
Advanced taxation planning; examination of different tax structures; alienation of income; implications of anti-avoidance legislation; objections and appeals against assessments (This subject is a compulsory component of the Chartered Accountants Professional Year).
Prerequisite: AC4024
Credit Points: 24  Contact Hours: 6 per week

**AC4023 COMPUTERS IN TAXATION**
Further development of such topics as: superannuation, eligible termination payments, Fringe Benefit Tax, provisional tax; the application of financial modelling and database packages; exposure to packaged taxation software, taxation return preparation software; expert system concepts and the application of expert systems in taxation.
Credit Points: 12  Contact Hours: 4 per week

**AC4024 TAXATION PLANNING**
Operation of international tax agreements; revenue law other than income tax law; solving complex taxation problems; Sales Tax legislation; Stamp Duty legislation.
Credit Points: 12  Contact Hours: 4 per week

**AC4025 COMPUTER APPLICATIONS IN ACCOUNTING**
Control aspects of systems development and design; analysis of system development methods, documentation, control objectives, types of control; audit concepts, exposure to audit software; hardware and software selection process; exposure to accounts and word processing packages.
Credit Points: 12  Contact Hours: 4 per week

**AC4026 ACCOUNTING PRACTICE**
Conceptual and technical knowledge of the practice of management accounting including: cost accounting methods and systems; an introduction to micro computer modelling packages and their application to management accounting practice.
Credit Points: 12  Contact Hours: 4 per week

**AC4027 ADVANCED FINANCIAL MANAGEMENT**
Utility theory; capital asset pricing model; option pricing theory; Roll's critique of capital asset pricing model; the futures market; money and banking in international markets.
Credit Points: 12  Contact Hours: 4 per week

**AC4030 ADMINISTRATIVE ACCOUNTING**
Theoretical concepts underlying accounting information; basic accounting procedures; internal control systems; bank reconciliation; analysis and interpretation of financial statements; external reporting issues; understanding annual reports; cost-volume-profit analysis; preparation of budgets; analysis of budget variances.
Credit Points: 12  Contact Hours: 4 per week

**AD1004 INTRODUCTION TO MANAGEMENT**
Examination of basic management skills and their application in the workplace.
Credit Points: 12  Contact Hours: 4 per week

**AD1005 COMMUNICATION**
Principles of effective communication; techniques of oral and written communication; reading and listening to gain information; interviewing, report writing; preparing documentation and manuals.
Credit Points: 12  Contact Hours: 4 per week

**AD1008 WRITTEN ENGLISH**
The appreciation and study of correct English writing style in the business profession; grammar, punctuation, spelling, usage and composition.
Credit Points: 12  Contact Hours: 4 per week

**AD1009 WRITTEN & SPOKEN ENGLISH**
The development of the written and spoken language skills used in business communication; report writing, letter writing, speech writing, intra-office communication; presentational speaking, interviewing and meeting procedure.
Credit Points: 12  Contact Hours: 4 per week

**AD3025 OFFICE TECHNOLOGY 1**
The concepts and applications of office automation and their relevance to the school curriculum; workflow in both traditional and automated office systems; the components of office systems and how these components interrelate.
Credit Points: 10  Contact Hours: 3 per week

**AD3026 OFFICE SKILLS**
Integrated office assignments of an increasingly complex nature involving the application of advanced typing and word processing principles and their relevance to the school curriculum; fostering initiative and problem-solving skills related to the production of business correspondence, documents and form design.
Credit Points: 10  Contact Hours: 3 per week

**AD3027 BUSINESS COMMUNICATIONS**
Knowledge and skills associated with all forms of office communication and their relevance to the school curriculum; verbal, non-verbal, written, electronic and visual communications.
Credit Points: 10  Contact Hours: 3 per week

**AD3028 RECORDS MANAGEMENT**
The scope and relevance of information and records management in business organisations, including paper-based as well as electronic information systems; and their relevance to the school curriculum.
Credit Points: 10  Contact Hours: 3 per week

**AD3029 EXECUTIVE SECRETARIAL FUNCTION**
Organisation of and preparation for meetings, business functions, and conferences; travel arrangements, initiating correspondence, conducting interviews, public relations; and their relevance to the school curriculum.
Prerequisite: AD3027
Credit Points: 10  Contact Hours: 3 per week

**AD3030 OFFICE TECHNOLOGY 2**
Applications of office automation in a business organisation and their relevance to the school curriculum; evaluation and description of the impact that office automation has on that organisation and the people who work there.
Prerequisite: AD3025
Credit Points: 10  Contact Hours: 3 per week

**AD3031 OFFICE TRANSCRIPTION A**
Progressive development of transcription skills to an advanced level; dictation material consisting of a
wide range of business correspondence including technical, legal and medical.
Credit Points: 10 Contact Hours: 4 per week

**AD3032 OFFICE TRANSCRIPTION B**
Progressive development of audio transcription skills to an advanced level; transcription material consisting of a wide range of business correspondence including technical, legal and medical.
Credit Points: 10 Contact Hours: 4 per week

**AD3033 SUPERVISION & ADMINISTRATION**
Supervision procedures; policy and procedures manuals; work measurement; creating the work environment; forms management; controlling administrative operations.
Prerequisites: AD3025 and AD3027
Credit Points: 10 Contact Hours: 3 per week

**AD3034 OFFICE MANAGEMENT**
The role of administrative management; policy making procedures involving administrative operations, communication management and information management.
Prerequisites: AD3030 and AD3033
Credit Points: 10 Contact Hours: 3 per week

**AD3035 FIELD STUDY PROJECT**
An individual research project investigating an approved aspect of office administration in a local business organisation.
Prerequisites: AD3030 and AD3033
Credit Points: 10 Contact Hours: 2 per week

**AD3040 ORGANISATIONAL COMMUNICATION I**
An introduction to the basic concepts of organisational communication—effective business speaking and writing; organisational behaviour; and interpersonal communication.
Credit Points: 12 Contact Hours: 4 per week

**AD3041 ORGANISATIONAL COMMUNICATION 2**
Continuation of AD3040.
Prerequisites: AD3040 and AD3050
Credit Points: 12 Contact Hours: 4 per week

**AD3042 SPOKEN COMMUNICATION**
Development of successful verbal communication in contemporary business and professional situations.
Co-requisite: AD3040
Credit Points: 12 Contact Hours: 4 per week

**AD3043 GROUP COMMUNICATION**
Development of an in-depth understanding of the theoretical concepts of small group interaction; interviews and group problem-solving.
Prerequisites: AD3040 and AD3042
Credit Points: 12 Contact Hours: 4 per week

**AD3044 WRITTEN COMMUNICATION**
Development of proficiency in writing for a variety of business and professional contexts; the use of desktop publishing and other aids to produce effective written communications; the impact of the 'electronic office' on written communications.
Credit Points: 12 Contact Hours: 4 per week

**AD3045 MEDIA MANAGEMENT**
The use of the print and broadcasting media to improve organisational communications; instruction in basic news writing and other media practices; the development of in-house and external media programs.
Prerequisite: AD3040
Credit Points: 12 Contact Hours: 4 per week

**AD3046 TRAINING & DEVELOPMENT**
The development of skills and concepts used in training and development; introductory consultancy skills; training needs analysis; processes and methods; training education.
Prerequisite: AD3047
Credit Points: 12 Contact Hours: 4 per week

**AD3047 MANAGEMENT PROCESSES**
Basic management skills; management roles, and organisation structure and design; human resource management; industrial relations and administrative reform.
Co/Prerequisite: AD3048
Credit Points: 12 Contact Hours: 4 per week

**AD3048 MANAGEMENT & INDUSTRIAL RELATIONS**
The development of modem management and industrial relations; contemporary managerial processes in the organisation and in society; relations between managers and the state; industrial regulation; the control of work, and representative organisations; unions and workers; strategic management; management task planning and change; leadership and motivation; control and evaluation; organisational power and politics.
Credit Points: 12 Contact Hours: 4 per week

**AD3049 AUSTRALIAN GOVERNMENT**
An introduction to Government in Australia; an examination of processes and institutions; Commonwealth Parliament, the electoral system, political parties and pressure groups; Australian Constitution and the judiciary; public policy formulation; the Public Service.
Credit Points: 12 Contact Hours: 4 per week

**AD3050 PERSPECTIVES ON ORGANISATION & MANAGEMENT**
Classic and contemporary views of organisation work and management; concepts and skills necessary for analysing and understanding organisations and organisational processes; mechanistic stereotypes of organisations; organic views of organisations, organisations as political systems; organisational analysis.
Prerequisite: AD3047
Credit Points: 12 Contact Hours: 4 per week

**AD3051 MANAGEMENT POLICY & STRATEGY**
Issues of management policy and strategy in both private and public sectors, including organisational context, techniques and processes involved in the formulation of policy and strategy, the problems of moving from advocacy to implementation and evaluation and review.
Prerequisites: AD3047 and AD3050
Credit Points: 12 Contact Hours: 4 per week

**AD3052 STRATEGIC HUMAN RESOURCE MANAGEMENT**
The role of human resource/personnel management in the strategic management of both private and public sector organisations; theory and practice including human resource planning, recruitment and selection, induction and training, management and organisation development, career planning and development,
motivation and job satisfaction, and performance evaluation.
Prerequisite: AD3048
Credit Points: 12  Contact Hours: 4 per week

AD3053 PROFESSIONAL COMMUNICATION
The communication process; listening and non-verbal communication; style in technical writing, oral and audiovisual presentations. Interviews, negotiation skills, small group communication, meeting, writing instruction manuals and technical papers.
Credit Points: 12  Contact Hours: 3 per week

AD3054 INTERNATIONAL OPERATIONS
Introduction; structure - purpose of structure, control and coordination; logistics - what is business logistics, implications for coordination and control; control - accounting, information and planning; review and technological trends.
Prerequisite: AD3048
Credit Points: 12  Contact Hours: 4 per week

AD3055 INTERNATIONAL HUMAN RESOURCE MANAGEMENT
Cultural differentiation; organisational structure and cultural differential; communicating across cultural boundaries - dynamics, skills; multicultural teams; cross-cultural leadership, motivation and decision-making; negotiating with foreigners; cross-cultural transitions; comparative human resource management; comparative employee relations; doing business in South East Asia.
Prerequisites: AD3040 and AD3048
Credit Points: 12  Contact Hours: 4 per week

AD4010 BUSINESS COMMUNICATION
The development of strategic communication skills for application within the contemporary business and professional organisation; listening and non-defensive communication; negotiation, interviewing and assertion; group communication processes and meeting procedure; oral reporting; proposal and report writing; the study of managerial communication involving organisational climate, behaviour and politics.
Credit Points: 12  Contact Hours: 3 per week

AD4011 ARTS ADMINISTRATION & SOCIETY
The conceptual, historical and philosophical foundations of the arts and arts administration in Australia; the role of arts organisations in meeting the cultural needs of society and the individual; organisational structures and planning processes for arts organisations; facilities for the arts; policy-making in the arts; government and the arts; community arts; current research and practices in arts administration.
Credit Points: 12  Contact Hours: 5 per week

AD4012 THE ARTS INDUSTRY
The framework of the arts as an industry; contracts and artists' rights; personnel and industrial relations; marketing the arts; law and the arts; tickets and subscriptions; government funding and private sponsorship; communications and use of the media; management case studies; operational procedures within arts organisations.
Prerequisite: AD4011
Credit Points: 12  Contact Hours: 5 per week

AD4013 STRATEGIC MANAGEMENT THOUGHT & PRACTICE 1
Philosophy and development of management; leadership; managerial roles and skills; decision making and problem solving; organisational design; organisational change; organisational analysis using metaphors; organisational dynamics; creativity and control; management of human resources; strategic thinking. Incompatible with AD3048
Credit Points: 12  Contact Hours: 4 per week

AD4014 STRATEGIC MANAGEMENT THOUGHT & PRACTICE 2
Continuation of AD4013.
Credit Points: 12  Contact Hours: 4 per week

AD4015 ISSUES IN OFFICE ADMINISTRATION
Issues in office administration (roles in the workplace; interpersonal relations; organisational culture and climate) and development of practical skills within an appropriate learning framework to deal with these issues.
Credit Points: 12  Contact Hours: 4 per week

AE3000 THE CREATIVE PROCESS

The aesthetic dimension of everyday life; exploration of the personal significance of creative acts; theories of creativity and the dichotomy between the commonality of art and the artist as a special person; investigation of the interdependence of idea and form; independent practical study.
Credit Points: 10  Contact Hours: 3 per week

AR2040 ART & MUSIC EDUCATION

The arts in the school curriculum; visual acuity; expressive potentials of elements and media; appreciation of artists' works; musical literacy; practical work with classroom instruments; classroom singing; music as an impressive art; planning a teaching/learning sequence of art and music activities.
Credit Points: 12  Contact Hours: 6 per week

AR2041 ART EDUCATION
Perspectives on art education; children's artistic development; planning an art program; approaches used in the teaching of art; evaluation of learning in art.
Credit Points: 6  Contact Hours: 3 per week

AR2042 THE WORLD OF THE ARTS
Children's literature and drama; music and movement; frameworks for listening and moving; music and dance relationships, program planning, visual arts.
Credit Points: 8  Contact Hours: 3 per week

AR2800 TWENTIETH CENTURY ARTS & CULTURE
The forces which shaped arts in this century; the nature and intentions of twentieth-century art forms; the extent to which the arts share similar values and characteristics; the role of the arts in modern society.
Credit Points: 5  Contact Hours: 2 per week

AR2803 UNDERSTANDING ART
Practical and theoretical studies in the history and meaning of art and design, using drawing and design exercises as a personal means of coming to terms with the complexity of modern art.
Credit Points: 5  Contact Hours: 2 per week

AR2805 EXPRESSIVE ARTS & EARLY CHILDHOOD
Development of individual skills in art, music and drama suitable for young children; children's theatre.
Credit Points: 8  Contact Hours: 3 per week

AR3005 ARTS IN SOCIETY
Images of the artist in various cultures; artistic modes (music, dance, drama, visual arts); functions of the

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the arts (ritual, celebration, revolt); the role and place of the arts in contemporary Australian society.
Credit Points: 10  Contact Hours: 3 per week

**AR3006 SIGNS & MEANINGS**

Concepts of the sign advanced by Saussure and Peirce; how signs are organised into codes or rule-governed systems; how these systems depend on agreement amongst their users and how they rest upon a shared cultural background; how signs interact with the cultural and personal experience of the user (Barthes' notions of connotation, myth and symbol; Jacobson's metaphor/metonymy dichotomy); the function of ideology particularly in relation to the ideas advanced by Raymond Williams and Barthes.
Credit Points: 10  Contact Hours: 3 per week

**AR3016 INDEPENDENT STUDY: VISUAL ARTS**

Students are required to design and carry through a major program on their own initiative following negotiation and consultation with lecturing staff.
Credit Points: 20

**AR3017 PROFESSIONAL STUDIES**

Studio workshop management; business principles; legal principles; promotion and marketing.
Credit Points: 10  Contact Hours: 3 per week

**AR3018 THE MAKING OF MODERNISM**

The birth of modern art from French Impressionism to the eve of the Second World War; the major movements and their theoretical underpinnings.
Credit Points: 10  Contact Hours: 4 per week

**AR3019 EUROPEAN & AMERICAN ART**

Major developments in the visual arts since 1945 with a particular examination of post-modernism; the role of the artist in contemporary society; the role of the media/art critic in shaping contemporary art practice.
Prerequisite: AR3018
Credit Points: 10  Contact Hours: 4 per week

**AR3020 CURRENT DEBATES ON THE NATURE OF ART**

An examination of the theoretical debates and their visual manifestations in contemporary Australia and overseas.
Prerequisite: AR3019
Credit Points: 10  Contact Hours: 4 per week

**AR3021 HISTORY OF AUSTRALIAN ART**

Development of Australian art since its human settlement 40,000 years ago; the visual arts since European settlement, contemporary Western and Aboriginal art.
Prerequisite: AR3019
Credit Points: 10  Contact Hours: 4 per week

**AR3022 PRACTICUM 1**

Four weeks work experience in visual arts related locations such as public and commercial galleries, conservation, State Library, Queensland Museum.
Credit Points: 10

**AR3023 PRACTICUM 2**

Shared responsibility by graduating students for all aspects of their graduation exhibition.
Credit Points: 10

**AR3024 RESEARCH METHODS SEMINAR**

Training in the research and writing of a theoretical/historical dissertation. Compulsory elective for students intending to undertake Honours Studies.
Credit Points: 20  Contact Hours: 15 per week

**AR3025 RESEARCH PROJECT**

Students undertake a substantial piece of supervised research after academic advisement. In some cases this might include practical work and associated seminars.
Credit Points: 80

**AR3028 FOUNDATION ART STUDIES 1**

Students will be exposed to a wide variety of experiences – lectures, seminars, tutorials, discussions, audiovisual presentations, performances, field trips, gallery visits and studio practice, in which they undertake a number of individual and group activities. These activities will act as departure points for the investigation of personal concepts. Students will be given the opportunity to select whatever medium or media they deem appropriate to the solution of problems inherent in the realisation of these concepts as art forms.
Credit Points: 20  Contact Hours: 12 per week

**AR3029 ADVANCED ART STUDIES 2**

Students pursue their chosen area of artistic inquiry, and subject this inquiry to analysis, to critical comparison, and to an assessment of the values which have arisen or been developed in the course of artistic production.
Prerequisite: AR3028, AR3031 and AR3032
Credit Points: 10  Contact Hours: 6 per week

**AR3031 FOUNDATION ART STUDIES 2**

Students submit a proposed outline of the art forms they wish to undertake, in consultation with an appropriate supervisor. These proposals will be formalised into written agreements which will include: a description of the work; the proposed duration of its undertaking; the criteria for its assessment.
Credit Points: 20  Contact Hours: 12 per week

**AR3032 ADVANCED ART STUDIES 1**

Students select the media areas in which they intend to work, and develop a program of practical activity in consultation with staff. Gallery visits, studio talks etc. form a significant part of this subject.
Prerequisites: AR3028 and AR3031
Credit Points: 10  Contact Hours: 16 per week

**AR3033 ART CURRICULUM, DESIGN & DEVELOPMENT**

Consideration of Art curriculum provisions at conceptual, contextual, procedural/translational levels using topics selected from the following domains: culture/society; subject knowledge; teaching strategies; the child learner; negotiation and examination of these topics in terms of curriculum theory, design and development.
Prerequisites: CU3004
Credit Points: 12  Contact Hours: 3 per week

**AR3702 ADVANCED THREE-DIMENSIONAL STUDIES**

The role of drawing and the preparation of three-dimensional design both as a point of reference, stimulus or source, and as working drawings; work with a variety of media; development of programs suitable for implementation in the school situation.
Prerequisites: Studies in art at Diploma of Teaching level or equivalent experience.
Credit Points: 12  Contact Hours: 3 per week

**AR3803 VISUAL AWARENESS & COMMUNICATION**

Psychological reactions to being visually aware; classifying explanatory diagrams/pictures as educative symbols; aesthetic response; interpretation of
personal vision; strategies for designing visual messages; analysis, visual exploration and interpretation of painting, sculpture, advertising; the environment and the action and reaction of the viewer.

Credit Points: 12 Contact Hours: 3 per week

**AR3804 HISTORY OF PAINTING & GRAPHICS**

Painting and graphics in the seventeenth century; Italian Baroque, French Classicism, Flemish and Dutch painting. Painting and graphics in the eighteenth century: naturalism, landscape and cityscape painting on the Continent, English painting and graphics. Neo-Classicism and the beginnings of Romanticism.

Prerequisite: Studies in art at Diploma of Teaching level or equivalent experience.

Credit Points: 12 Contact Hours: 3 per week

**AR4007 UNDERSTANDING THE WORLD OF THE ARTS 1**

The nature of music; elements of music such as rhythm, melody, harmony and expression; graphic and traditional notation; performance using classroom instruments and voice; listening in order to gain an appreciation of music, its historical development and cultural significance. Art in the school curriculum; expressive potential of appropriate media for schools; appraisal of artists' works; sequencing of art objectives and activities.

Credit Points: 8 Contact Hours: 2 per week

**AR4008 UNDERSTANDING THE WORLD OF THE ARTS 2**

Objectives and evaluation in the arts; the structure of a program: investigation of syllabi, curriculum guides and the developmental stages of children in relation to visual education and music education; development of classroom music and art subjects.

Credit Points: 4 Contact Hours: 2 per week

**AR4016 ART EDUCATION PROGRAM DESIGN & PRACTICE**

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

Prerequisite: CU4017

Credit Points: 12 Contact Hours: 3 per week

**AR4017 APPLIED STUDY IN ART EDUCATION**

Supervised individual academic investigation of existing, or innovative facets of art; art education or education displaying professional achievement and/or reflection.

Credit Points: 12

**AS3004 ASIAN CULTURAL STUDIES**

"Traditional" Asian values and beliefs; impact of these values and beliefs on social structures, decision making, technological development; western colonialism, imperialism and neo-imperialism and their impact on Asian cultures; the emergence of contemporary Asian cultures.

Credit Points: 12 Contact Hours: 4 per week

**AS3005 ASIAN POLITICAL ECONOMY**

History and social development of Asia from economic and political perspectives; case studies of the economic and political development of certain Asian countries and regions; current political and economic issues in the Asian region, including their impact upon Australia; political and economic theories and concepts and their application to Asia and its relationship to Australia.

Prerequisite: AS3004

Credit Points: 12 Contact Hours: 4 per week

**AS3006 INTERNATIONAL BUSINESS STRATEGIES**

Environmental context of international business; interaction with international home societies; business customs, protocol and values; methods of operation in Asian Pacific countries; trade policy issues; international agreements and conventions; organisation of international business; negotiation in the international business arena; the practice of international business negotiation; the future.

Prerequisite: AS3005

Credit Points: 12 Contact Hours: 4 per week

**AS3007 INTERNATIONAL ENVIRONMENT OF BUSINESS**

Field of international business, global trade and investment patterns; profile of Australian internationalisation in context of global trends; theories of international business; political/economic environment - industrial and developing countries; international trade infrastructure - trade agreements; legal environment - property, technology transfer; financial environment - balance of payments; labour environment - comparative labour relations; cultural environment; meaning of culture; future directions of international business.

Prerequisites: AS3004 and AS3005

Credit Points: 12 Contact Hours: 4 per week

**BC3025 BIOCHEMISTRY**

The meaning and function of intermediary metabolism; nucleic acids; vitamins and coenzymes; bioenergetics; carbohydrate metabolism; biological oxidation; lipid metabolism; regulation of carbohydrates and lipid metabolism; amino acid metabolism.

Prerequisite: CH3025

Credit Points: 12 Contact Hours: 5 per week

**BI2803 AUSTRALIAN BIOLOGY**

The theory of plate tectonics and the geological history of the Australian continent; theories of Gondwanan origins of Australian flora and fauna; the distinctive nature of Australian terrestrial vertebrate and insect fauna; Australian ecosystems; survival strategies of Australian animals and plants.

Credit Points: 10 Contact Hours: 4 per week

**BI3012 PATTERNS OF LIFE**

Three major themes within biology; evolution, ecology and systematics; the breadth of diversity of life; patterns of structure and function; the development of ecological and evolutionary theories.

Co-requisite: BI3013

Credit Points: 10 Contact Hours: 4 per week

**BI3013 HUMAN PHYSIOLOGY**

The basic concepts of cellular structure, function, reproduction; physiological systems and their function and structure; the fundamental concepts of biology.

Co-requisite: BI3012

Credit Points: 10 Contact Hours: 4 per week

**BI3014 ECOLOGY**

Theoretical principles of ecology at the levels of population, communities and ecosystems; terrestrial and freshwater ecosystems; field work.

Prerequisite: BI3012

Credit Points: 10 Contact Hours: 4 per week
B13015 STRUCTURES & FUNCTIONS IN BIOLOGY
The principles of structure, physiology and behaviour in a range of different types of animals; the principles of plant structure and function; anatomy, photosynthesis, respiration, water relationships; the genetic basis of evolution.
Prerequisite: B13012
Credit Points: 10 Contact Hours: 4 per week

B13025 BIOLOGICAL SCIENCE
Basic concepts of cellular biology; haematology; circulatory system; lymphatic system; immunology; respiratory system; excretory system; sense organs; reproductive system; human population and food.
Credit Points: 10 Contact Hours: 4 per week

B13702 AUSTRALIAN FAUNA
Uniqueness and diversity of Australian fauna; methods and resources for identification of fauna; adaptation; behaviour; conservation and economic considerations. Voluntary study school for external students.
Prerequisite: Science studies at Diploma of Teaching level
Credit Points: 12 Contact Hours: 3 per week

B13703 AUSTRALIAN FLORA
The major groups of Australian plants; origins, adaptation and radiation of Australian flora; plant ecosystems; biological, social and economic implications of plants and plant communities; techniques of cultivation and study of plants in the school environment. Incompatible with extensive tertiary studies in botany.
Credit Points: 12 Contact Hours: 3 per week

B13801 THE HUMAN SPECIES
Characteristics of the biological groups in which the human species is placed; variation within the human species; comparative animal behaviours; genetics; theories of the presence and distribution of the human species; development of the theory of evolution; fossils; natural environment and ecological principles; human population growth; tools and technology; impact of the human species; environmental strategies and options; application to teaching. Incompatible with tertiary anthropology studies.
Credit Points: 12 Contact Hours: 3 per week

CE2800 ELEMENTARY CERAMICS
The nature of clay; elements and principles of design in clay; simple, traditional and contemporary methods of applying decoration to clay surfaces; firing levels and techniques.
Credit Points: 5 Contact Hours: 2 per week

CE2801 CLAY STUDIES 1
The nature of clay and glazes; practical application of various ceramic techniques and decorating styles; firing techniques; appreciation of ceramic history.
Credit Points: 8 Contact Hours: 3 per week

CE2802 CLAY STUDIES 2
Development of creativity through imagemaking in a ceramic context; practical application of low temperature techniques and firing styles; appreciation of ceramics in contemporary culture.
Credit Points: 8 Contact Hours: 3 per week

CE2805 CERAMICS 2
Builds on CE2800 and develops building and firing technique to stoneware temperatures. Further design work and theoretical studies.
Prerequisite: CE2800
Credit Points: 10 Contact Hours: 4 per week

CE3701 ADVANCED CERAMICS
The nature of clays suitable for various ceramic techniques and skills; exploration of creative starting points and ideas; firing techniques and procedures; applicable decorative/glazing techniques.
Prerequisite: Tertiary level work in ceramics
Credit Points: 12 Contact Hours: 3 per week

CE4002 CLAY MATERIALS 1
Develop ceramic knowledge, artistic concepts, and practical/technical skills; investigation of selected historical ceramic areas; understanding of the relationship between ceramics and the maker’s culture; development of personal imagery and design.
Credit Points: 12 Contact Hours: 3 per week

CE4003 CLAY MATERIALS 2
Detailed specialisation in individually selected styles; emphasis on conceptual matters and imagery; expansion of ceramic knowledge and technical formats; investigation of contemporary trends, influences and issues in Australian ceramics.
Prerequisite: CE4002
Credit Points: 12 Contact Hours: 3 per week

CH3005 FOUNDATIONS OF CHEMISTRY
Consideration of the simplest methods and the fundamental ideas of chemistry in a way which stresses common substances and highlights aspects where chemistry has a significant role for people, science and society.
Co-requisite: CH3006
Credit Points: 10 Contact Hours: 4 per week

CH3006 GENERAL CHEMISTRY
Major theories related to the impact of chemistry on the everyday affairs of humankind; the importance of various substances and common processes to society; related chemical concepts, facts, terminology and conventions related to the content topics; water and aqueous solutions, reaction rates, bonding, acid-base properties, organic form and function.
Co-requisite: CH3005
Credit Points: 10 Contact Hours: 4 per week

CH3007 PRINCIPLES OF INORGANIC CHEMISTRY
States of matter; bonding; descriptive inorganic chemistry; coordination chemistry and electrochemistry.
Prerequisite: CH3006
Credit Points: 10 Contact Hours: 4 per week

CH3008 PRINCIPLES OF PHYSICAL CHEMISTRY
Atomic and molecular structure; kinetics; equilibrium; gases; liquids and solids; thermodynamics; surface chemistry.
Prerequisite: CH3006
Credit Points: 10 Contact Hours: 4 per week

CH3021 PRINCIPLES OF CHEMISTRY
Atomic theories, chemical bonding, water, pH; chemical reactions and energetics, overview of inorganic chemistry, properties of selected inorganic compounds.
Credit Points: 8 Contact Hours: 4 per week

CH3025 ORGANIC CHEMISTRY
The chemistry of carbon; covalent bonding; families of organic compounds, their properties and reactions; bio-molecules and polymers, carbohydrates, lipids, proteins, enzymes.
Credit Points: 10 Contact Hours: 4 per week
CL4001 FOUNDATIONS OF COUNSELLING
The nature of the counselling process and helping relationship: the theoretical bases of the major counselling approaches; counselling skills of the major approaches; ethical issues in counselling; counselling applied in particular situations.
Prerequisites: HW3006, PY3016 and PY3017
Credit Points: 10  Contact Hours: 3 per week

CL4002 PRACTICUM 2
Advanced skill training workshops; supervised counselling experience involving work with clients; interaction of student and supervisor.
Co-requisite: CL4007
Credit Points: 5

CL4003 COUNSELLING & HUMAN DEVELOPMENT
Major theoretical approaches to human development: age/ stage perspective, life event and transition perspective, individual variability perspective; nature of research in developmental psychology; psychological transitions in the life-span; relevance of developmental theories and concepts to personal development.
Prerequisites: CL4000 or CL4001
Credit Points: 10  Contact Hours: 3 per week
CL4014 PRACTICUM 3
Further supervision of counselling work with a specific emphasis on the student's work context and the development of a professional role.
Prerequisite: CL4005
Credit Points: 10

CL4015 INTERACTIONAL COUNSELLING
The interactional conceptualisation of counselling; models of interactional influence; placebo model, relativisation model and contextual model; developing interactional skills; paradoxical interventions; interactional change strategies.
Prerequisite: CL4007
Credit Points: 5
Contact Hours: 1.5 per week

CL4016 GROUP COUNSELLING
The concept of group counselling; organisation of group counselling; leader and members' behaviour; group techniques; evaluation of group counselling; application of group counselling.
Prerequisite: CL4007
Credit Points: 5
Contact Hours: 1.5 per week

CL4017 THE COUNSELLOR & THE ORGANISATION
Helping organisations as bureaucracies; organisation's response to social change; stress within helping organisations; teamwork among professional helpers; counsellor roles.
Prerequisite: CL4001
Credit Points: 5
Contact Hours: 1.5 per week

CL4018 INDEPENDENT STUDY
Independent counselling-related studies under the supervision of a member of staff. Studies must be approved by the Course Coordinator.
Prerequisite: CL4007
Credit Points: 5
Contact Hours: 1.5 per week

CL4019 FAMILY COUNSELLING 2
Models of family counselling; relating theory to practice; stages of family counselling; use of teams in family counselling.
Prerequisite: CL4013
Credit Points: 5
Contact Hours: 1.5 per week

CO1025 INTRODUCTION TO COMPUTERS
Overview of computer applications in business; computer hardware and software; input and output devices; storage devices; business information systems; concepts of data processing; computers in society; introduction to microcomputers using application software packages.
Credit Points: 12
Contact Hours: 4 per week

CO1026 COMMERCIAL PROGRAMMING
Modular programming: structured design; introduction to COBOL programming; basic elements of COBOL; report generation, control breaks, tables, disk file processing.
Prerequisite: CO1035
Credit Points: 12
Contact Hours: 4 per week

CO1027 SYSTEMS ANALYSIS
Systems in business; overview of system analysis and design; system life cycle; tools and techniques of systems analysis; communication; file organisation and design.
Prerequisite: CO1025
Credit Points: 12
Contact Hours: 4 per week

CO1028 COMPUTER LANGUAGES
Advanced programming concepts and structures; further algorithm development; testing and debugging; inspection and walkthroughs; practical computer programming using appropriate languages.
Prerequisite: CO1025
Credit Points: 12
Contact Hours: 4 per week

CO1029 MICROCOMPUTERS: HARDWARE & APPLICATIONS
Overview of microcomputer systems; microprocessors; operating system functions on microcomputers; application packages and programming on microcomputers; evaluation and selection.
Prerequisites: CO1025 and CO1035
Credit Points: 12
Contact Hours: 4 per week

CO1030 COMPUTER NETWORKS
Concepts of data communications; communications hardware; distributed processing issues; online systems using networking; back-up, recovery and security; design considerations, queueing and system timing; local area networks.
Prerequisite: CO1025
Credit Points: 12
Contact Hours: 4 per week

CO1031 SOFTWARE DEVELOPMENT
Introduction to commercial software engineering; structured design, development and testing techniques; advanced COBOL programming; data base programming.
Prerequisite: CO1026
Credit Points: 12
Contact Hours: 4 per week

CO1032 DATABASE SYSTEMS 1
Overview of database management systems; relational model, relational algebra and normalisation; query languages including SQL; network and hierarchical models; database management; practical work involving database systems and query languages.
Prerequisite: CO1025
Credit Points: 12
Contact Hours: 4 per week

CO1033 DATABASE SYSTEMS 2
Analysis of organisations and their information needs; design, implementation, management and evaluation of an information system; fourth generation techniques in the development of information systems.
Prerequisite: CO1032
Credit Points: 12
Contact Hours: 4 per week

CO1034 PROJECT
Individual work related to an application of computers in business or other approved area.
Prerequisites: CO1027 and other subjects as required
Credit Points: 12

CO1035 SOFTWARE PRINCIPLES
Problem solving and the computer; design of algorithm; program design; basic algorithms; introduction to data structures; testing and debugging; documentation; practical experience using appropriate programming language.
Credit Points: 12
Contact Hours: 4 per week

CO1036 SYSTEMS DESIGN
Structured design techniques; tools and methods of design; large system construction and implementation; project management and control; implementation and maintenance issues; alternative design methodologies and strategies.
Prerequisite: CO1027
Credit Points: 12
Contact Hours: 4 per week
CO2039 PROBLEM SOLVING WITH COMPUTER GRAPHICS
Problem solving and design principles appropriate to generating graphic images; the syntax, data structures and control structures of a programming language suitable for the generation of computer graphics; writing programs to generate static computer graphics; spatial concepts; dynamic computer graphics; advanced programming.
Credit Points: 10 Contact Hours: 3 per week

CO2041 COMPUTING IN THE PRIMARY SCHOOL
Introduction to computers; programming and problem solving using LOGO; applications in the curriculum; general applications.
Credit Points: 6 Contact Hours: 2 per week

CO2082 PERSONAL COMPUTING
History of the development of the personal computer; computer terms; features of the personal computer; computer operation; software and programming.
Credit Points: 5 Contact Hours: 2 per week

CO2084 WRITING & COMPUTERS
Text editing; text formatting; form handling and printer commands; characteristics of word processing packages; interaction between word processing packages, data bases and spreadsheet programs; sociological and economic implications of the electronic processing of text; language generators.
Credit Points: 8 Contact Hours: 3 per week

CO2087 COMPUTER STUDIES 1
History of computing and computing devices; strategies for problem solving (algorithm, design, flowcharted); computer aided instruction; word processing.
Credit Points: 8 Contact Hours: 3 per week

CO2088 COMPUTER STUDIES 2
Computer applications; data base; spreadsheet; graphics; word processing; authoring software packages are used in various student initiated projects.
Prerequisite: CO2087
Credit Points: 8 Contact Hours: 3 per week

CO2082 COMPUTER PROGRAMMING
Programming, problem-solving constructs, algorithm development, concepts associated with communicating with a computer including structured programming, data representation and control structures.
Credit Points: 10 Contact Hours: 5 per week

CO2036 COMPUTERS IN THE SCHOOL CURRICULUM
Computers in the school environment and in the curriculum; methods for teaching computing; use of computer technology and its impact on schools and society. Access to appropriate microcomputer required.
Prerequisite: CU2040
Credit Points: 12 Contact Hours: 3 per week

CO2060 COMPUTER SYSTEMS & ARCHITECTURE
Single and multi-user operating systems; interaction with computer systems and management of stored information; definition and implementation of algorithms in suitable language; selection of computable representation for real world concepts and application in computer programs; hierarchy of levels of abstraction; adoption of abstracted views of real world information processing or problem-solving situations; capabilities and limitations of conventional, sequential processing machine architectures.
Credit Points: 10 Contact Hours: 3 per week

CO3061 COMPUTER APPLICATIONS
Application of technologies in a teaching context; the use of writing and publishing software; graphics design software; numerical software tools; personal and project management tools; communications technologies and computer peripherals used in the production of computer generated materials.
Credit Points: 10 Contact Hours: 3 per week

CO3062 COMPUTATIONAL & MATHEMATICAL FOUNDATIONS
Fundamental structures and operations; set theory, algorithms, model building, problem solving and computer implementation.
Credit Points: 10 Contact Hours: 3 per week

CO3063 DATA BASE THEORY & TECHNIQUES
Logical and physical models of information systems; the characteristics of these models; use of a structured query language to query existing curriculum databases and construct new ones; the sociological implications of the utilisation of public and private data bases.
Credit Points: 10 Contact Hours: 3 per week

CO3064 PROGRAMMING PRINCIPLES
The development of computer software; data and procedural abstraction; modular programming, stepwise refinement and bottom-up techniques.
Prerequisite: CO3060
Credit Points: 10 Contact Hours: 3 per week

CO3065 INFORMATION SYSTEM MODELLING
Modelling of information systems, in particular relational systems; fact oriented approaches; conceptual schema design.
Prerequisite: CO3063
Credit Points: 10 Contact Hours: 3 per week

CO3066 ARTIFICIAL INTELLIGENCE
Artificial intelligence as a discipline; philosophical issues, knowledge representation, reasoning and heuristic methods used in AI; introduction to AI programming.
Prerequisites: CO3060 and CO3062
Credit Points: 10 Contact Hours: 3 per week

CO3068 COMPUTATIONAL LINGUISTICS
The nature of language; the expression of ideas in language; formalisable grammars and methods of representing both syntax and semantics in computable form; philosophical arguments concerning the computability of natural language understanding; studies of relevant programs and programming techniques.
Credit Points: 10 Contact Hours: 3 per week

CO3068 ROBOTICS & CONTROL TECHNOLOGY
Geometry, kinematics and control of robotic systems; the design of feedback, control loops and sensors for control applications; programming techniques and specialised languages used for robotic and control applications.
Prerequisite: CO3064
Credit Points: 10 Contact Hours: 3 per week
CO3070 PROJECT PLANNING & IMPLEMENTATION
Planning, implementation and management of projects involving the use of computers.
Prerequisites: CO3064, CO3065 and CO3066
Credit Points: 10  Contact Hours: 3 per week

CO3071 COMPUTER EDUCATION PROJECT
Trialling and development of new ideas and innovative uses of computers in education.
Prerequisite: CO3070
Credit Points: 10  Contact Hours: 3 per week

CO3072 INFORMATION SYSTEM IMPLEMENTATION
Implementation of a curriculum or administrative information system in a school environment.
Prerequisite: CO3065
Credit Points: 10  Contact Hours: 3 per week

CO3073 INFORMATION SYSTEM IMPLEMENTATION 2
Extension of CO3072.
Prerequisite: CO3072
Credit Points: 10  Contact Hours: 3 per week

CO3074 HEURISTIC PROGRAMMING
Heuristic based programming in a suitable language (Lisp or PROLOG); the standard heuristic methods (best-first, hill-climbing, difference reduction, AI); adaptation or variations on these methods for particular problem-solving situations.
Prerequisites: CO3064 and CO3066
Credit Points: 10  Contact Hours: 3 per week

CO3075 HUMAN-COMPUTER INFORMATION
The limits that exist to the understanding of human cognition with particular reference to the construction of computer models; the utility and limitations of the tool metaphor to describe human-computer interaction; pre-understanding and background required for effective tool use; model building by the user; identification of forms of linguistic communication; tool construction and use.
Prerequisites: CO3060, CO3061, CO3062 and CO3063
Credit Points: 10  Contact Hours: 3 per week

CO3080 COMPUTING FOR SCIENCE EDUCATORS
The practical aspects of electronic communication in science; introductory programming in an appropriate language; computer interfacing in science experiments; application of available technology in a data capture and reduction; computer modelling and simulation in science.
Credit Points: 10  Contact Hours: 4 per week

CO3085 BUSINESS SYSTEMS 1
System development life cycle; investigation and analysis; modelling tools; data analysis; data dictionary; data flow diagrams; file design; implementation, installation and review.
Prerequisite: CO3104
Credit Points: 12  Contact Hours: 4 per week

CO3086 BUSINESS SYSTEMS 2
Overview of structured analysis and design; structured specification; transition to design guidelines and strategies; detailed file design; online screen dialogue design; practical design of business systems. Incompatible with CO3109
Prerequisites: CO3085 and CO3097
Credit Points: 12  Contact Hours: 4 per week

CO3087 PROGRAMMING LANGUAGES
Furthersoftwaredvelopment;techniquesofprogram development; top-down design and modularity; computer programming using other appropriate languages. Incompatible with CO3103 and CO3105
Prerequisite: CO3095
Credit Points: 12  Contact Hours: 4 per week

CO3088 COMPUTER ORGANISATION
Multilevel machines; CPU structure and functioning; conventional machine instructions and microprogramming; assemblers, compilers and interpreters; computer operating systems.
Prerequisite: CO3095
Credit Points: 12  Contact Hours: 4 per week

CO3089 COMMERCIAL SYSTEMS DEVELOPMENT
Production of reliable software; standards and documentation; programming for large systems; managing software development; programming using advanced COBOL.
Prerequisite: CO3095 (BAppSc - CO3104)
Credit Points: 12  Contact Hours: 4 per week

CO3090 DATABASE SYSTEMS 1
Database system architecture; storage structures and database models; relational database systems; relational algebra and calculus; further normalisation theory; advanced use of database languages including SQL.
Prerequisite: CO3104
Credit Points: 12  Contact Hours: 4 per week

CO3091 INDUSTRY PROJECT
Individual work related to an application of computers in business or other approved area.
Prerequisite: CO3085 or CO3109 plus subjects as required
Credit Points: 12  Contact Hours: 4 per week

CO3092 ONLINE SYSTEMS
Data communication techniques; communication hardware; network and online system design; security, back-up and recovery; online systems operation; practical development of online system.
Incompatible with CO3108 and CO3110
Prerequisite: CO3089
Credit Points: 12  Contact Hours: 4 per week

CO3093 SYSTEMS PLANNING
Information system classifications; corporate modelling and data base developments; management of information systems development; costing and development strategies; information systems trends.
Prerequisites: (CO3090 or CO3102) or (CO3109 or CO3085)
Credit Points: 12  Contact Hours: 4 per week

CO3095 COMMERCIAL APPLICATIONS DEVELOPMENT
Development of algorithms; program design; programming style; structured programming concepts; file processing; report generation; practical programming using COBOL.
Prerequisite: CO3101
Credit Points: 12  Contact Hours: 4 per week
**CO3096 COMPUTER SYSTEMS MANAGEMENT**
Management of computer installation; overview of computer equipment of different manufacturers; organisation of personnel; evaluation and selection of hardware and software; physical security and administrative controls.
Prerequisite: CO3085 or completion of 96 credit points for the BAppSc
Credit Points: 12  Contact Hours: 4 per week

**CO3097 INFORMATION ANALYSIS**
Introduction to database systems; database concepts; conceptual data modelling; normalisation; relational database design and implementation; information analysis; conceptual schema design; data definition languages.
Prerequisite: CO3104 or equivalent
Credit Points: 12  Contact Hours: 4 per week

**CO3098 DATABASE SYSTEMS 2**
Advanced database concepts; performance and reliability criteria; recovery, integrity, concurrency and security; optimisation techniques; distributed database systems.
Prerequisite: CO3090
Credit Points: 12  Contact Hours: 4 per week

**CO3099 DECISION SUPPORT SYSTEMS**
Overview of decision support systems; use of computers to assist in decision making; integrating optimisation models with information systems; expert systems.
Prerequisite: CO3097 and MK3022
Credit Points: 12  Contact Hours: 4 per week

**CO3100 INTRODUCTION TO SOFTWARE ENGINEERING**
Sets; propositional calculus; predicate calculus; matrices; graphs; trees; Boolean algebra; finite state automata; turning machine; Halting problem; complexity; formal methods; Z notation; case studies; refinement.
Credit Points: 12  Contact Hours: 3 per week

**CO3101 INTRODUCTION TO SOFTWARE ENGINEERING**
Conversion of problems to algorithmic solutions; design, coding, testing and debugging programs; structured programming techniques; style and documentation.
Credit Points: 12  Contact Hours: 3 per week

**CO3102 CONCEPTS IN COMPUTER SYSTEMS**
Computer evolution, computer hardware and architecture; input, output and storage devices; computer systems, computer software levels, data communications; applications packages and an introduction to SQL. Incompatible with CO3101
Credit Points: 12  Contact Hours: 3 per week

**CO3103 DATA STRUCTURES**
Prerequisite: CO3100 and CO3101
Credit Points: 12  Contact Hours: 3 per week

**CO3104 INTRODUCTION TO INFORMATION SYSTEMS**
Basic information system concepts; the utilisation of information; microcomputer packages and equipment; office automation; introduction to SQL.
Credit Points: 12  Contact Hours: 3 per week

**CO3105 SYSTEMS SOFTWARE**
Systems structure, kernel architectures, user perspective, file system, buffer cache, control processes, system call interface, interrupt handling, process scheduling, memory management. Shell programming, system management. Introduction to C.
Prerequisite: CO3101
Credit Points: 12  Contact Hours: 3 per week

**CO3106 SOFTWARE ENGINEERING**
Specification methods; modular programming techniques; language support for modular programming; debugging techniques.
Prerequisites: CO3101 and CO3109
Credit Points: 12  Contact Hours: 3 per week

**CO3108 INTRODUCTION TO COMPUTER NETWORKS**
Distributed system architecture and open system interconnection; data communications hardware; data communications software, network management; local area networks; future trends in networking.
Prerequisite: CO3095 or CO3104
Credit Points: 12  Contact Hours: 3 per week

**CO3109 SYSTEMS ANALYSIS & DESIGN**
Information systems and their development; the systems development life cycle; project management; structured analysis and design tools and techniques; security and controls; systems documentation; system conversion; testing; implementation planning and user training.
Prerequisite: CO3104
Credit Points: 12  Contact Hours: 3 per week

**CO3110 SYSTEMS DEVELOPMENT PROJECT**
The design, development and implementation of a computer based system; demonstration of the working system.
Prerequisites: CO3109 and subjects as required by supervisor
Credit Points: 12  Contact Hours: 3 per week

**CO3111 SOCIAL IMPLICATIONS OF COMPUTING**
The change in employment trends; personal information held in databases. Privacy: legal aspects of data gathering. Codes of conduct for professionals. Intellectual property and copyright. Unauthorised access to information.
Prerequisite: 96 credit points of computing
Credit Points: 12  Contact Hours: 3 per week

**CO3112 GRAPHICS SYSTEMS**
Hardware and software of graphics systems; coordinate systems and algorithms for two-dimensional graphics; standard graphics systems; two-dimensional and three-dimensional transformations; hidden surfaces, shading, colouring and animation.
Credit Points: 12  Contact Hours: 3 per week

**CO3113 KNOWLEDGE ENGINEERING**
Introduction to knowledge engineering; definition, history of artificial intelligence, current trends. Knowledge representation; rule based, frame based and logic programming. Knowledge manipulation; search methods, inferencing and inference engines.
Language for knowledge representation and manipulation. Expert systems; Bayesian measures of certainty, systems which explain their conclusions. Applications of knowledge engineering.

**Prerequisite:** C03103

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

**C03114 INTELLIGENT INFORMATION SYSTEMS**

The different aspects of the conceptual schema: structure, validation rules, deduction rules; storage. Implementation techniques: views and triggered procedures. Combination of an inference engine with a DBMS.

**Prerequisites:** C03090 and C03112

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

**C03115 NETWORKS**

The Open System Interconnection (ISO) model: physical layer, medium access sublayer, data link layer, network layer, transport layer, session layer, presentation layer, applications layer. A detailed exposition of each layer.

**Prerequisites:** C03105 and C03108

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

**C03116 SPECIAL TOPIC**

The subject is designed to give students an opportunity to explore an area of mutual interest with a topic supervisor.

**Prerequisites:** As determined by the topic supervisor

**Credit Points:** 12

**C03117 STATISTICS & SIMULATION TECHNIQUES**

Descriptive techniques for ungrouped data; probability distributions; sampling distributions; introduction to SPSS/SA; simulation techniques; discrete simulation models; queuing theory; introduction to stochastic processes; analysis of output and validation of models; random number generators.

**Prerequisites:** C03100 and C03101

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

**C03118 TRANSACTION BASED SYSTEMS**

Transaction processing systems (TPS) requirements; transaction rates, atomic events, multiple access; disk performance, performance tuning; distributed TPS, planning for TPS, capacity planning for TPS.

**Prerequisite:** C03089

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

**C03712 COMPUTERS & EDUCATION**

An overview of microcomputer hardware and software with emphasis on the usefulness of various hardware components in schools; development of programming skills through a study of algorithms and their computer implementation in a high level language; critical examination of a variety of uses of computers in education; the impact of computer technology on society in general and education in particular.

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

**C04035 COMPUTER SYSTEMS**

Algorithms; principles of structured programming; programming languages; hardware and operating systems.

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

**C04036 COMPUTERS IN EDUCATION**

Range of possible uses of computers in education; impact of information technologies on learning, curriculum development and teaching strategies; the computer as an administrative tool in education; social implications of the use of computers.

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

**C04037 STRUCTURED PROGRAMMING**

Extends the programming concepts introduced in C04035; advanced topics in programming: functions; data abstraction; recursion, pointers; use of programming tool boxes.

**Prerequisite:** C04035

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

**C04038 COMPUTER EDUCATION PROJECT**

Types of educational and administrative problems which are and are not amenable to a computer solution; factors unique to planning computer related activities; evaluation and publishing.

**Prerequisites:** C04035, C04036 and C04045

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

**C04039 TEACHING COMPUTER STUDIES: SECONDARY**

The nature of computer studies at secondary school level; existing computer studies subjects; frames of reference for teaching computer studies; application to particular subject areas; relating computer studies to the total school curriculum.

**Prerequisites:** C04035 and C04036

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

**C04040 COMPUTERS IN PRIMARY EDUCATION**

Computer-based techniques for teaching problem-solving strategies; application of word processing and other software packages to the language arts curriculum; the computer as an information resource for the classroom; teaching and learning with microcomputers; computers, society and education.

**Prerequisite:** C04036

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

**C04041 COMPUTERS & SCHOOL ADMINISTRATION**

Application of computer to educational administration; student information system; data bases, spreadsheets, text processing and graphics packages; timetabling and resource utilisation; financial accounting; office automation.

**Prerequisites:** C04036 and C04045

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

**C04042 ARTIFICIAL INTELLIGENCE**

Overview of artificial intelligence research, its current and future impact on society; computer capabilities and the human mind; methods and techniques used in AI programming; overview of logic programming in PROLOG and Pascal.

**Prerequisites:** C04035 and C04037

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

**C04043 COMPUTER GRAPHICS**

Use of computer-generated graphics in education; examination and use of a selection of graphics packages running on microcomputers; programming for computer graphics.

**Prerequisite:** C04035

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

**C04044 MODELLING INFORMATION SYSTEMS**

Knowledge representation; very high level problem description and data base languages; development of information processing systems.

**Prerequisite:** C04043

**Credit Points:** 12  **Contact Hours:** 3 per week
- **CO4045 INFORMATION SYSTEMS & EDUCATION**
  Information storage; types and models of information systems; knowledge representation; data bases and data base languages; social impact of information systems.
  Credit Points: 12  Contact Hours: 3 per week

- **CO4046 COMPUTER TOOLS FOR TEACHING**
  Application of computers to educational activities; use of software packages for: graphic presentation, text processing and numerical analysis; development of teaching materials.
  Prerequisite: CO4035
  Credit Points: 12  Contact Hours: 3 per week

- **CO4050 ADVANCED DATABASE TECHNOLOGY**
  Integrity constraints in a database; backup and recovery; security issues; transaction handling; data communications and distributed databases; database engines; comparison of contemporary DBMS.
  Prerequisite: CO4052
  Credit Points: 12  Contact Hours: 4 per week

- **CO4051 COMMERCIAL SYSTEMS**
  Overview of business systems; tools and techniques of systems analysis; structured approaches to systems analysis; introduction to systems design; selection, acquisition and installation of a computer; implementation and documentation; project management.
  Prerequisite: CO3104 or equivalent
  Credit Points: 12  Contact Hours: 4 per week

- **CO4052 DATABASE MANAGEMENT SYSTEMS**
  Three-level database architecture; storage structures and data models; relational database model; IBM's DB2; network database systems; CODASYL model; hierarchical database systems and IMS; comparison of commercial database systems.
  Prerequisite: CO3104 or equivalent
  Credit Points: 12  Contact Hours: 4 per week

- **CO4053 KNOWLEDGE ENGINEERING**
  ‘Intelligent’ information systems; the ISO three-schema model; knowledge representation (KR); knowledge manipulation (KM); languages for KR and KM; expert systems; applications of knowledge engineering techniques.
  Prerequisite: CO3097 and CO3100
  Credit Points: 12  Contact Hours: 4 per week

- **CO4055 MICROCOMPUTER APPLICATIONS**
  Introduction to the applications of microcomputers in a business environment; hardware and software components of a microcomputer system; operating system functions; database management systems and spreadsheets; trends in microcomputer technology and applications.
  Credit Points: 12  Contact Hours: 4 per week

- **CS3026 CONSUMERS & THE LAW**
  The place of the consumer in the Australian economy; the consumer in the market place; alternatives to mass consumption; legal procedures; legal requirements regarding business transactions and business organisations; consumer protection; family and the law.
  Credit Points: 9  Contact Hours: 4 per week

- **CS3031 CONSUMER EDUCATION**
  Consumer education in the school curriculum; curriculum content in the consumer education curriculum; examination of various teaching strategies with emphasis on developmental discussion approaches; games and simulation, inquiry approaches, team teaching, audiovisual aids, community resources; curriculum development and innovation.
  Prerequisite: CU3040 or equivalent (Students not from secondary schools or TAFE colleges must obtain approval from the Head of School before enrolling.)
  Credit Points: 12  Contact Hours: 3 per week

- **CT2800 CREATIVE CLOTHING**
  Use and care of the sewing machine; choosing patterns; fitting adjustments; codes and layouts; fabric selection; clothing construction processes; garment making.
  Credit Points: 5  Contact Hours: 2 per week

- **CT3701 CLOTHING DESIGN**
  Influences on fashion; fashion research and analysis; concepts of design; design development; apparel production; consumer demand; fashion change and consumer acceptance; teaching strategies and resources.
  Credit Points: 12  Contact Hours: 3 per week

- **CU3005 INTRODUCTION TO CURRICULUM & TEACHING STUDIES A**
  The nature of the subject/discipline and its role and contribution as a medium for education; introduction to relevant Queensland Years 8-10 and Years 11-12 syllabuses and the organisation of learning into school work programs, semester/term courses, teaching units and lessons; lesson and activity planning routines and models; basic teaching strategies for practice teaching.
  Prerequisite: A minimum of 100 credit points in the Discipline Studies Strand. Students preparing in two teaching areas should have a minimum of 40 credit points in Discipline Studies in each of the two unless prior arrangements have been made with the Course Coordinator.
  Credit Points: 15

- **CU3006 INTRODUCTION TO CURRICULUM & TEACHING STUDIES B**
  The nature of the subject/discipline and its role and contribution as a medium for education; introduction to relevant Queensland Years 8-10 and Years 11-12 syllabuses and the organisation of learning into school work programs, semester/term courses, teaching units and lessons; lesson and activity planning routines and models; basic teaching strategies for practice teaching.
  Prerequisite: A minimum of 100 credit points in the Discipline Studies Strand. Students preparing in two teaching areas should have a minimum of 40 credit points in Discipline Studies in each of the two unless prior arrangements have been made with the Course Coordinator.
  Credit Points: 15

- **CU3007 CURRICULUM PLANNING & IMPLEMENTATION A**
  The curriculum development process; advantages/disadvantages of the broad framework/modified objectives model in use in Queensland secondary schools; principles of curriculum design and implementation; school-based curriculum development; translating a syllabus into a school work program; planning modules of learning; diagnosing and responding to student strengths and problems; factors affecting the relationship between planning and teaching; planning an assessment pro-
program; alternative approaches to assessment; assessment requirements in Queensland schools; writing a variety of assessment instruments; curriculum evaluation.  
Prerequisites: CU3005 and CU3006  
Credit Points: 10

CU3008 CURRICULUM PLANNING & IMPLEMENTATION
The curriculum development process; advantages/disadvantages of the broad framework/modified objectives model in use in Queensland secondary schools; principles of curriculum design and implementation; school-based curriculum development; translating a syllabus into a school work program; planning modules of learning; diagnosing and responding to student strengths and problems; factors affecting the relationship between planning and teaching; planning an assessment program; alternative approaches to assessment, assessment requirements in Queensland schools; writing a variety of assessment instruments; curriculum evaluation.  
Prerequisites: CU3005, CU3006 and CU3007  
Credit Points: 10

CU3009 DIRECTIONS & ISSUES IN CURRICULUM STUDIES
The nature of innovation, ideological and contextual influences on curriculum change, teachers' beliefs and responses to innovations.  
Co-Requisites: CU3010 and TS3003  
Prerequisites: CU3005, CU3006, CU3007 and CU3008  
Credit Points: 10

CU3010 DIRECTIONS & ISSUES IN CURRICULUM STUDIES B
The nature of innovation, ideological and contextual influences on curriculum change, teachers' beliefs and responses to innovations.  
Co-Requisites: CU3009 and TS3003  
Prerequisites: CU3005, CU3006, CU3007 and CU3008  
Credit Points: 10

CU3040 TEACHERS & THE CURRICULUM
Introduction to the concepts of curriculum and of the relationship of curriculum theory and practice; consideration of the role of the teacher as a curriculum analyst, designer and change agent in the context of curriculum theory, school-based curriculum development and a selected educational issue; the development of a proposed curriculum action incorporating situational analysis, design, implementation and evaluation.  
Credit Points: 12  
Contact Hours: 3 per week

CU3041 EVALUATION IN CURRICULUM DEVELOPMENT
Basic concepts of evaluation; models of curriculum evaluation; procedures for undertaking an evaluation within the social context of the school; data-gathering methods; report writing.  
Prerequisites: CU3040 or equivalent  
Credit Points: 12  
Contact Hours: 3 per week

CU3042 INTRODUCTION TO CURRICULUM CONSTRUCTION
Curriculum terminology and theory; the key elements of a curriculum; the pressures or influences that affect decision making; the process of curriculum development; school-based curriculum development and innovation.  
Credit Points: 12  
Contact Hours: 3 per week

CU4015 CURRICULUM & RESOURCE DEVELOPMENT IN HRE
Curriculum as political activity – the case of human relationship education; models of curriculum development; program building for specific school/community environments. Participatory curriculum policy development and decision making.  
Credit Points: 12  
Contact Hours: 3 per week

CU4016 APPLIED STUDY IN HRE
Develop, implement, evaluate an HRE program in a specific school or community; initiate curriculum development and change in the school setting.  
Credit Points: 12  
Contact Hours: 3 per week

CU4017 ART CURRICULUM FOUNDATIONS
Overview and understanding of aims, content and agenda of historical and contemporary art education orientations; assumptions by movements in relation to art theories, child development, teachers’ role and classroom practice; investigation of strengths and weaknesses, theory and practice and historical, social and intellectual influence on past and present art education philosophies.  
Credit Points: 12  
Contact Hours: 2 per week

CU4018 CURRICULUM EVALUATION: ARTS EDUCATION
Awareness of historical perspective of curriculum evaluation; critically analyse dilemmas in contemporary modes of curriculum evaluation; evaluate an existing curriculum project.  
Credit Points: 12  
Contact Hours: 2 per week

CU4020 CURRICULUM FOUNDATIONS OF MUSIC EDUCATION
Conceptual frameworks for understanding educational practice and curriculum theory; analysis of existing curriculum theories through socio-political, sociocultural, socio-historical, ideological constraints.  
Credit Points: 12  
Contact Hours: 3 per week

CU4021 ISSUES IN MUSIC EDUCATION
Developments in arts education in Queensland within P-10 framework; role of arts/music education; develop a process of learning that is critical in nature; contributions made by history, anthropology, psychology and philosophy to arts education.  
Credit Points: 12  
Contact Hours: 3 per week

CU4022 APPLIED STUDIES (PRACTICAL)
Study of movement, voice and classroom instruments and associated literature; write and arrange music for classroom use; develop teaching strategies for voice, movement and instrumental music, rehearsal and conducting techniques.  
Credit Points: 12

CU4023 APPLIED STUDIES (CURRICULUM)
Portrayal of the context within which a curriculum design process can occur; design of a curriculum in music in local context; rationalisation of such a design using principles of curriculum design and evaluation.  
Credit Points: 12  
Contact Hours: 2 per week

DA1100 CLASSICAL MAIN STUDY
Principles of the classic techniques; practical work includes barre work, adagio, pirouettes, allegro, pointe work and pas de deux.  
Credit Points: 12  
Contact Hours: 8 per week
DA1101 CONTEMPORARY BASIC STUDY 1
Principles of the contemporary technique; practical work includes floor and centre work, combinations, dance vocabulary, analysis of dance sequences.
Credit Points: 8 Contact Hours: 3 per week

DA1104 REPERTOIRE 1
Study of selected repertoire pieces; rehearsal of individual aspects of the repertoire work; performance of all or part of the selected repertoire.
Credit Points: 5 Contact Hours: 2 per week

DA1105 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.
Credit Points: 5 Contact Hours: 2 per week

DA1106 MUSIC 1
Introduction through the Kodaly concept of music; reading, writing and signing of simple musical examples.
Credit Points: 5 Contact Hours: 3 per week

DA1107 APPLIED ANATOMY 1
Skeletal structure with emphasis on the vertebral column, pelvic girdles, and upper and lower appendages; types of joints; structure and stabilising factors of joints; principal muscle groups responsible for joint movement.
Credit Points: 5 Contact Hours: 2 per week

DA1108 DANCE STYLES 1
Study of both the folk dance and tap dance styles. Practical work includes: folk steps and dances from selected parts of the world; basic tap dance combinations and routines for performance.
Credit Points: 5 Contact Hours: 2 per week

DA1109 BODY ALIGNMENT
Body and self image; basic working positions; posture as a dynamic concept; body scanning; alignment.
Credit Points: 5 Contact Hours: 1.5 per week

DA1114 REPERTOIRE 2
Study of selected repertoire pieces; rehearsal of individual aspects of the repertoire work; rehearsal of corps aspects of the repertoire; performance of all or part of the selected repertoire.
Prerequisite: DA1104
Credit Points: 5 Contact Hours: 3 per week

DA1115 DANCE COMPOSITION 2
Discussion and understanding of approaches to choreography; practical experimentation with choreographic themes in class; arrangement of steps and gestures to give both form and purpose to dance; graded compositional studies for both children and adults.
Prerequisite: DA1105
Credit Points: 5 Contact Hours: 2 per week

DA1116 MUSIC 2
Continuation of DA1106.
Prerequisite: DA1106
Credit Points: 5 Contact Hours: 3 per week

DA1117 APPLIED ANATOMY 2
Principles which govern human stability and motion; the ways in which muscles work to produce movement; simple machines of the body; movement and injury; dance injuries.
Prerequisite: DA1107
Credit Points: 5 Contact Hours: 1.5 per week

DA1119 PRACTICE PERIOD 1
Daily technique classes; structure of rehearsals; individual tutorial work for compositions and featured roles; personal preparation for rehearsals and performances; technique and dress rehearsals; critical evaluation during season and post-performance evaluation.
Credit Points: 20

DA1121 CONTEMPORARY DANCE 1
Consolidation of contemporary dance technique.
Prerequisites: DA1101 and DA1142
Credit Points: 10 Contact Hours: 7.5 per week

DA1122 REPERTOIRE 3
Study of selected repertoire pieces; refinement of required technique; interpretation and style; adaptation of works as necessary for variable venues; performances of all or part of the selected repertoire studied.
Prerequisite: DA1114
Credit Points: 5 Contact Hours: 2 per week

DA1123 DANCE COMPOSITION 3
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 works, discussion of criteria for evaluation and assessment of dance works.
Prerequisite: DA1134
Credit Points: 5 Contact Hours: 3 per week

DA1124 DANCE STYLES 3
Study of both the character and jazz dance styles; practical work includes basic technique, step combinations, solo and group choreographic work.
Prerequisite: DA1134
Credit Points: 5 Contact Hours: 2 per week

DA1125 HISTORY OF DANCE
Early development of dance technique; social and religious functions of dance; development of dance throughout the Renaissance period; the European and Russian contribution to classical ballet; the rise of modern dance in Europe and America; the development of dance in Australia.
Credit Points: 5 Contact Hours: 2 per week

DA1126 CLASSICAL BALLET 2
Consolidation of classical ballet technique.
Prerequisite: DA1135
Credit Points: 10 Contact Hours: 7.5 per week

DA1128 REPERTOIRE 4
Study of selected repertoire work of different styles; refinement of required technique, interpretation and style; adaptation of works as necessary for variable venues; performance of all or part of the selected repertoire studied.
Prerequisite: DA1122
Credit Points: 5 Contact Hours: 3 per week

DA1129 DANCE COMPOSITION 4
Preparation of short solo pieces for another dancer; preparation of group works with emphasis on particular elements of composition; investigation of costuming, lighting and sound accompaniment for group composition; choreography of a work for public performance.
Prerequisite: DA1123
Credit Points: 5 Contact Hours: 2 per week
DA1130 DANCE STYLES 4
Continuation of DA1124.
Prerequisite: DA1124
Credit Points: 5 Contact Hours: 3 per week

DA1131 PROFESSIONAL AWARENESS STUDIES
Studies in the latest developments in all areas of the dance community.
Credit Points: 5 Contact Hours: 3 per week

DA1133 PRACTICE PERIOD 2
Daily technique class; structured rehearsals; individual tutorial work for compositions and featured roles; personal preparation for rehearsals and performances; technical and dress rehearsals; critical evaluation during season and post-performance evaluation.
Prerequisite: DA1119
Credit Points: 20

DA1134 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.
Prerequisite: DA1108
Credit Points: 8 Contact Hours: 3 per week

DA1135 CLASSICAL BALLET 1
Consolidation of the classical ballet technique.
Prerequisites: DA1100 and DA1143
Credit Points: 10 Contact Hours: 4 per week

DA1136 STAGECRAFT 1
Basic principles of stage production including make-up, stage lighting design and operation; sound recording and operation.
Credit Points: 5 Contact Hours: 2 per week

DA1137 CONTEMPORARY DANCE 2
The origins and dramatic impulses which are the source of movement in various types of falls, jumps and travelling steps; interpretation of short choreographic sequence.
Prerequisite: DA1121
Credit Points: 8 Contact Hours: 2 per week

DA1138 STAGECRAFT 2
Basic principles of costuming for dance including properties of fabric design and construction.
Credit Points: 5 Contact Hours: 2 per week

DA1142 CONTEMPORARY MAIN STUDY 2
Practical work includes floor work, centre work and basic combinations; combinations to develop flexibility, strength and coordination; wider vocabulary of contemporary dance techniques; 'off balance' technique.
Credit Points: 12 Contact Hours: 6 per week

DA1143 CLASSICAL BASIC STUDY 2
Practical work includes barre work, adagio, pirouettes, allegro, batterie, pointe work and pas de deux.
Prerequisite: DA1100
Credit Points: 8 Contact Hours: 5 per week

DA2801 HISTORICAL & ETHNIC DANCE
Dances from Medieval and Renaissance periods of Europe and their influence on and relationship to the ethnic and modern dances of the twentieth century; examination of the music, dance and culture of peoples from various parts of the world.
Credit Points: 8 Contact Hours: 3 per week

DA2802 CREATIVE DANCE
Elements of dance and the nature of rhythm; the nature of creativity and movement and expression in dance; movement phrases in dance-like form; music and dance; space and dance; relationships and form; drama, movement, music and dance; assessment.
Credit Points: 8 Contact Hours: 3 per week

DA2804 DANCE TECHNIQUES 1
Development of jazz techniques, through response to rhythmic structure of jazz movement, correct alignment of the body as required by the technique, understanding and experience of expression through jazz dance combinations in informal presentation; construction and development of jazz sequences.
Credit Points: 5 Contact Hours: 3 per week

DA2809 NATIONAL & FOLK DANCE
Development of steps and style of selected National and Folk Dances. Understanding of cultural background of selected populations, investigation of costumes appropriate to selected populations. Demonstration of selected National and Folk dances.
Credit Points: 10 Contact Hours: 3 per week

DA2810 MOVEMENT FOR YOUNG CHILDREN
Examines the predisposition of young children towards rhythm in movement and sound; seeks to identify how this might be used to enhance their early education; play element in relation to the above; situations in which creative learning experiences might emerge; workshops.
Credit Points: 8 Contact Hours: 3 per week

DA2811 JAZZ FOR FITNESS
Appreciating the body as a functional instrument and tool for expression through physical skills; understanding and using movement concepts in a variety of contexts; demonstrating spatial and rhythmic awareness; application of anatomical knowledge.
Credit Points: 10 Contact Hours: 4 per week

DA3000 CONTEMPORARY TECHNIQUE 1
The basic contemporary dance vocabulary (contraction, release); study of Graham Technique with particular reference to development of strength, flexibility and placement of spine and limbs.
Credit Points: 10 Contact Hours: 7 per week

DA3001 CONTEMPORARY TECHNIQUE 2
Continuation of DA3000. Basic combinations of movements; analysis of dance sequences.
Prerequisite: DA3000
Credit Points: 10 Contact Hours: 7 per week

DA3037 ADVANCED PERFORMANCE 1
Study of highly technical dance styles. Exploration of the life context of the dancer as an artist.
Prerequisite: Audition
Credit Points: 20 Contact Hours: 7 per week

DA3038 ADVANCED PERFORMANCE 2
Continuation of highly technical dance styles. Exploration of the rehearsal and performance work ethic.
Prerequisite: DA3037
Credit Points: 20 Contact Hours: 7 per week

DA3039 ADVANCED PERFORMANCE 3
Synthesis of all elements of study culminating in public performance.
Prerequisite: DA3038
Credit Points: 20 Contact Hours: 7 per week
DA3050 COMPOSITION I
Introduction to the domain of composition, providing a sound grounding in contemporary approaches to dance making including: developing a personal movement language and an investigation of how dance presents/creates meaning.
Credit Points: 10  Contact Hours: 4 per week

DA3051 DANCE ANALYSIS & HISTORY
Introduction to the analysis of dances through a concentration on the dance as text; a study of various historical contexts of dance art.
Credit Points: 20  Contact Hours: 3 per week

DA3052 ANATOMY & ALIGNMENT
The anatomical structure and alignment techniques, their function and application to increase movement range and lessen dance injuries.
Credit Points: 15  Contact Hours: 3 per week

DA3053 CONTEMPORARY TECHNIQUE 1
The basic contemporary dance vocabulary; study of Graham, Cunningham or Limon Technique with particular reference to development of strength, flexibility and placement of spine and limbs. Basic combinations of movements; analysis of dance sequences.
Credit Points: 20  Contact Hours: 4.5 per week

DA3054 CLASSICAL TECHNIQUE 1
Review and consolidation of the fundamental technique and its application designed to reinforce and develop an appropriate range of technical skills within the four tier practical level system.
Credit Points: 10  Contact Hours: 4.5 per week

DA3055 MUSIC 1
Elements of music: concepts of beat, accent, rhythm and phrasing. Introduction to keyboard skills; study of style in the nineteenth century. Notation, history, literature, score reading and aural skills.
Credit Points: 5  Contact Hours: 3 per week

DA3056 CONTEMPORARY TECHNIQUE 2
Technical work including off-balance turns and rapid changes of weight, level and direction; exploration of rhythm. Continued emphasis on performance of sequence work.
Prerequisite: DA3053
Credit Points: 20  Contact Hours: 7.5 per week

DA3057 CLASSICAL TECHNIQUE 2
Consolidation of technique; study of a variety of selected approaches to classical ballet and develop an appropriate range of technical skills within the four tier practical level system.
Prerequisite: DA3054
Credit Points: 10  Contact Hours: 4.5 per week

DA3058 COMPOSITION 2
The conceptual base of the medium and of the heuristic principles governing the making of dance; exploration of more formal dynamic, temporal and spatial structures, deemed historically appropriate as a means of structuring movement and conveying a choreographer's intention. The power and responsibility of the artist; the finite possibilities for the interpretation of a work; ownership of choreographic works once they enter the public domain.
Prerequisite: DA3050
Credit Points: 10  Contact Hours: 4 per week

DA3059 HISTORY OF AUSTRALIAN THEATRE DANCE
A study of the development of dance as an art form in Australia in the twentieth century.
Prerequisite: DA3051
Credit Points: 10  Contact Hours: 3 per week

DA3060 MUSIC 2
Continuation of DA3055. More complicated keyboard skills; study of the twentieth century musical style, vocal and improvisation studies.
Prerequisite: DA3055
Credit Points: 5  Contact Hours: 3 per week

DA3061 PRACTICUM
Consolidation of the student's knowledge and skills in direct artistic experience in real contexts.
Credit Points: 20

DA3062 DANCE IN THE COMMUNITY
Introductory studies of dance in the community; exploring the role of the dance in the community; procedures for establishing a dance project; basic program planning and teaching approaches for community dance.
Credit Points: 12  Contact Hours: 4 per week

DA3064 DANCE RESEARCH
Practical training in scholarly methods and professional skills.
Credit Points: 5  Contact Hours: 2 per week

DA3065 WRITINGS ON DANCE
Strategies for reading, and writing exposition and argument, with emphasis on clarity of expression and presentation of thought.
Prerequisites: AR3006, DA3064 and DA3066
Credit Points: 5  Contact Hours: 2 per week

DA3066 DANCE IN AUSTRALIAN SOCIETY
The ritual, artistic and social functions of dance in contemporary Australian society.
Co-requisite: DA3064
Prerequisite: AR3005
Credit Points: 10  Contact Hours: 3 per week

DA3067 PROFESSIONAL DEVELOPMENT STUDIES
Preparation for the dance industry; preparation of curriculum vitae and funding applications; auditions; contracts, press relations and management.
Credit Points: 5  Contact Hours: 2 per week

DA3068 DANCE INDEPENDENT STUDY
Students are required to design and carry through a major program on their own initiative after negotiation and consultation with lecturing staff.
Prerequisites: DA3064 and DA3068
Credit Points: 20

DA3069 PRODUCTION TECHNIQUES
Study and practice in elements of theatre production; lighting, sound and costume.
Credit Points: 10  Contact Hours: 6 per week

DA3070 ENQUIRIES INTO THE PHILOSOPHY OF DANCE
Study into theories of dance from Noverre to Rainer; reading, discussion and analysis of philosophical writings on issues in art and dance.
Credit Points: 30  Contact Hours: 3 per week

DA3071 RESEARCH PROJECT
Students undertake a substantial piece of supervised research after academic advice. In some cases
ELECTIVE

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

Co-requisite: DA3054 and DA3066

Prerequisites: A grade of 5 or above in DA3051 and DA3059

Credit Points: 10  Contact Hours: 3 per week

DA3073 ADVANCED ANALYSIS 2: MODERN DANCE

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

Co-requisite: DA3065

Prerequisites: A grade of 5 or above in DA3051 and DA3059

Credit Points: 10  Contact Hours: 3 per week

DA3074 ADVANCED ANALYSIS 3: COMPARATIVE STUDY

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

Prerequisites: A grade of 5 or above in DA3051, DA3072 or DA3073

Credit Points: 10  Contact Hours: 1 per week

DA3075 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.

Co/Prerequisite: DA3056

Credit Points: 10  Contact Hours: 5 per week

DA3076 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.

Co/Prerequisites: DA3072 and DA3075

Credit Points: 10  Contact Hours: 5 per week

DA3077 ADVANCED COMPOSITION 3

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

Co/Prerequisites: DA3073 and DA3076

Credit Points: 10  Contact Hours: 5 per week

DA3078 DANCE IN THE COMMUNITY 1

Indepth studies in teaching for dance; program planning and teaching approaches for specific dance groups.

Prerequisite: DA3062

Credit Points: 10  Contact Hours: 3 per week

DA3079 DANCE IN THE COMMUNITY 2

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

Prerequisite: DA3078

Credit Points: 10  Contact Hours: 3 per week

DA3080 DANCE IN THE COMMUNITY 3

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

Prerequisite: DA3079

Credit Points: 10  Contact Hours: 3 per week

DA3081 ANALYSIS & HISTORY — ELECTIVE

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

Credit Points: 20  Contact Hours: 3 per week

DA3082 COMPOSITION 1 — ELECTIVE

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

Credit Points: 10  Contact Hours: 4 per week

DA3083 COMPOSITION 2 — ELECTIVE

The conceptual base of the medium and of the heuristic principles governing the making of dance; exploration of formal dynamic, temporal and spatial structures, deemed historically appropriate as a means of structuring movement and conveying a choreographer's intention. The power and responsibility of the artist; the finite possibilities for the interpretation of a work and ownership of choreographic works once they enter the public domain.

Prerequisite: DA3082

Credit Points: 10  Contact Hours: 4 per week

DA3084 TECHNIQUE, ANATOMY & ALIGNMENT — ELECTIVE

The basic contemporary dance vocabulary; study of Graham, Cunningham or Limon Technique with particular reference to development of strength, flexibility and placement of spine and limbs; basic combinations of movements; analysis of dance sequences; the anatomical structure and alignment techniques, their function and application to increase movement range and lessen dance injuries.

Credit Points: 20  Contact Hours: 7.5 per week

DA3085 DANCE IN EDUCATION

Study of philosophy of the arts in education and of dance in particular; role and profile of an arts educator; investigation of domains involved in arts learning.

Credit Points: 15  Contact Hours: 4 per week

DA3086 FOLK DANCE

A study of folk dances — their historical and cultural contexts; incorporating both practical and academic work.

Credit Points: 10  Contact Hours: 4 per week

DA3087 JAZZ & POPULAR DANCE

A study of the history and sociology of jazz and popular dance; examination of jazz and popular dance in the media; practical study of jazz and popular dance styles.

Credit Points: 10  Contact Hours: 4 per week

DP2890 PAINTING & DRAWING

Pictorial exercises based on colour, form, mass and space; drawing from the live model; appreciation; criticism.

Credit Points: 5  Contact Hours: 2 per week
DP2808 DRAWING
Practical studies in space and form, involving extensive studio work, history of drawing, gallery visits and analytical criticism of drawings, experimental graphic processes.
Credit Points: 5 Contact Hours: 4 per week

DP2809 DRAWING, PAINTING & PRINTMAKING 1
Drawing and painting as a means of exploring and developing ideas; exploration of printing technique, colour, surface scale and content; relief printmaking (lino cuts); planographic printing (monotype and paperprint); silkscreen printing (drawn and photographic images).
Credit Points: 8 Contact Hours: 3 per week

DP2810 DRAWING, PAINTING & PRINTMAKING 2
Continuation of DP2809 with exploration of at least one process approach or technique to an advanced level.
Prerequisite: DP2809
Credit Points: 8 Contact Hours: 3 per week

DP3001 DRAWING 1
Exploration of the nature of perception and the forming of concepts; analysis of modes of drawing; exploration of the nature and function of the mark in drawing.
Credit Points: 5 Contact Hours: 4 per week

DP3002 DRAWING 2
Continuation of DP3001 with emphasis on drawing as an art activity in its own right; the place of drawing in the contemporary context; interpretation of space, mass and volume; the mark as a symbol or referent; analysis of cartoons, comic strips, advertisements and visual illustrations to establish the relationship these forms of drawing have with each other, with art as a whole and with contemporary Australian society; comparison of 'high' art and 'popular' art; means by which the occupation of space and the passage of time are represented in contemporary drawing.
Prerequisite: DP3001
Credit Points: 5 Contact Hours: 4 per week

DP3003 DRAWING 3
Development of a comparative knowledge of drawing periods and styles; 'primitive' drawing; 'unsophisticated' drawings; refinement and adaptation of traditional forms in drawing; the impact of different cultural idioms in drawing upon each other; motives behind drawing; work involving other media.
Prerequisite: DP3002
Credit Points: 5 Contact Hours: 4 per week

DP3004 DRAWING 4
In consultation with lecturing staff students undertake a program of activities related to their progress as artist/advocate.
Prerequisite: DP3003
Credit Points: 5 Contact Hours: 4 per week

DP3005 DRAWING 5
Continuation of DP3004.
Prerequisite: DP3004
Credit Points: 5 Contact Hours: 4 per week

DP3006 DRAWING 6
Continuation of DP3005.
Prerequisite: DP3005
Credit Points: 5 Contact Hours: 4 per week

DP3701 ADVANCED PAINTING STUDIES
Exploratory work in space, form, colour and mass; foundations and implications of contemporary directions in painting; criticism and analysis.
Prerequisite: Artistic ability demonstrated in folio of work
Credit Points: 12 Contact Hours: 3 per week

DP3801 DRAWING
Examination of established systems of drawing by historical reference and exploration of materials; methods by which shape and volume can be determined by drawing techniques; the line as a means of expression and communication; methods and techniques for creating solid form by the use of various media; perspective; rendering; perceptual organisation and expressive effects; use of drawing for teachers who require visual expression and delineation within their areas. Incompatible with Art major at Diploma of Teaching (Secondary Art) level.
Credit Points: 12 Contact Hours: 3 per week

DP4002 PAINTING & DRAWING 1
Introducing and developing an active awareness of both historical and contemporary issues in painting and drawing through studio practice and tutorials; the knowledge and skills appropriate to the range of available media will be pursued in both studio classes and professional practice.
Credit Points: 12 Contact Hours: 3 per week

DP4003 PAINTING & DRAWING 2
Further development of traditional and experimental imagery through studio workshops, discussions and professional practice.
Credit Points: 12 Contact Hours: 3 per week

DR2801 CURRENT THEATRE
Visits covering the major Brisbane theatre companies involving discussions with actors or directors; visits to the major theatre company workshops in Brisbane; study of the plays concerned including the period and the playwright; introduction to relevant aspects of acting, directing and design; reviews.
Credit Points: 5 Contact Hours: 2 per week

DR2806 THEATRE GAMES
Study of a wide variety of theatre and drama games for their intrinsic interest and to demonstrate the ways in which a leader may choose and run games with a group; game theory; game leadership style; group dynamics; game sequencing.
Credit Points: 5 Contact Hours: 2 per week

DR2807 WORKSHOP THEATRE
Selection, rehearsal and performance of a short scripted play at workshop standard.
Credit Points: 5 Contact Hours: 2 per week

DR2808 DRAMA PROCESS & THEATRE
Individual, pair and group work in workshop sessions dealing with the drama process (role play, storytelling, movement, mime, improvisation, drama). Theatre styles; seminar presentations on realism and naturalism, the absurd, Brechtian theatre, theatre of cruelty, children's theatre.
Credit Points: 8 Contact Hours: 3 per week

DR2809 DRAMA PROCESS & CHILDREN'S THEATRE
The drama process and methodology: role play, storytelling, movement, mime, improvisation, drama.
Children's theatre: script, staging, child involvement and participation.
Prerequisite: DR2808
Credit Points: 8 Contact Hours: 3 per week

DR2814 COMMUNICATION THROUGH DRAMA
Voice and speech development; creative and developmental drama; interpretation of literature; group discussion techniques; oral skills of the classroom.
Credit Points: 5 Contact Hours: 3 per week

DR2816 PLAY PRODUCTION
Self-discovery at students' own level through drama; developing a character through textual study; preparation and presentation of a play as a group effort, including technical theatre aspects of a public performance.
Credit Points: 10 Contact Hours: 5 per week

DR2817 CHILDREN'S THEATRE
Analysis of children's theatre, its techniques, aims and values; preparation and presentation of a production for children; organisation of a school's tour.
Prerequisite: DR2814
Credit Points: 10 Contact Hours: 5 per week

DR2821 DEFINING DRAMA
The multivariate nature of drama; drama as an art form; relationships and role; early role taking abilities of children; the elements of drama; theatre study.
Credit Points: 10 Contact Hours: 3 per week

DR3004 ACTING 1
Stanislavski: exercise work in realistic acting in order to eliminate bad habits and theatrical dishonesty. Realism: acting classes involving selected extracts from a modern realistic play, finding the playwright's truth, development of appropriate interpretive acting skills; Brecht: lectures and practice on distancing techniques.
Credit Points: 10 Contact Hours: 4 per week

DR3005 ACTING 2
Focus on Shakespeare; work on verse, small scenes and soliloquies.
Prerequisite: DR3004
Credit Points: 10 Contact Hours: 4 per week

DR3006 VOICE & MOVEMENT 1
Body awareness; sense of space; breathing; expression and articulation; text and context; research.
Credit Points: 10 Contact Hours: 4 per week

DR3007 VOICE & MOVEMENT 2
Awareness through movement; freeing the natural voice; development of holistic response to text; exploration of physical and emotional levels in characterisation; review of research relative to the study of voice and movement; alternative teaching styles; comparative analysis and personal synthesis.
Prerequisite: DR3006
Credit Points: 10 Contact Hours: 4 per week

DR3008 STAGECRAFT 1
Scenery construction; stage properties (budget and purchase procedures, hiring and borrowing, categorisation, storage and use); stage lighting (electricity, rigging and focusing of lanterns, maintenance and repairs, operating principles); stage costumes (hire of costumes, principles of pattern styling, use of sewing machine, fabric construction, the use of fabrics to create costumes).
Credit Points: 10 Contact Hours: 4 per week

DR3009 STAGECRAFT 2
Theatre sound: the need for sound effects, use of live and recorded effects, use of stage sound equipment. Stage management: the range of stage management tasks, the role of the stage manager in coordinating and enhancing theatre production. Basic lighting design: use of colour and lighting angles, 'painting' with light, computer controlled equipment, stage lighting organisation and documentation. Theatre administration: funding applications, front-of-house organisation, systems of ordering, purchasing, petty cash.
Credit Points: 10 Contact Hours: 4 per week

DR3012 DEVELOPMENT OF THEATRE 1
What theatre does and how it affects its audience; dramatic illusion; theatrical conventions; origins of theatre; Greek drama/theatre; medieval theatres in Europe; theatre in the Orient; theatre of the English Renaissance; theatre of the Italian Renaissance; royal theatre of France and England; England's popular theatre of the nineteenth century.
Credit Points: 10 Contact Hours: 3 per week

DR3013 DEVELOPMENT OF THEATRE 2
Realism; naturalism; symbolism/expressionism; epic theatre; absurd; current theatre; South East Asian theatre; Australian theatre to World War 2; post-war Australian theatre; community theatre.
Prerequisite: DR3012
Credit Points: 10 Contact Hours: 3 per week

DR3014 ELEMENTS OF DRAMA
Minimal drama (fiction plus tension); the three dimensions of expression (light/dark, movement/stillness, sound/silence); the three elements of dramatic form (space, time, communication); symbols and meaning; distance from the action; from ideas to communication.
Credit Points: 10 Contact Hours: 4 per week

DR3015 INTRODUCTORY THEATRE STUDIES
An introduction to shaping the theatrical event as director, designer, playwright.
Credit Points: 10 Contact Hours: 4 per week

DR3017 PLAYWRITING
Dramatic structure (tension, climax and resolution; focus and audience distance); fitting an appropriate style to a dramatic theme; the relationship between action, theme and character, developing a scenario; imagery (the relationship between the visual and the linguistic); dramatic writing, dialogue and staging.
Prerequisite: DR3015
Credit Points: 10 Contact Hours: 3 per week

DR3018 DIRECTING
Functions of the director from casting to rehearsal to performance; organisational procedures and relationship to other production staff; the director's role as an intermediary between text, actor and audience; differing definitions of that role; personal style; project.
Prerequisite: DR3015
Credit Points: 10 Contact Hours: 3 per week

DR3019 DRAMA PROCESS
Workshops involving individual, face-to-face and group role-play; participant enrolment, leader-in-role and intervention; identification with role; negotiation, devising and consequent decision making; the operation and management of dramatic tension and resolution; structuring for the theme and for the
dramatic moment; distancing devices; reflection, re- 

enactment and re-making.
Prerequisite: DR3014
Credit Points: 10 Contact Hours: 3 per week

DR3022 DESIGN
Establishing the scene; staging alternatives; lighting 

and scenery; costume design; scale models and draw- 

ings.
Prerequisite: DR3008
Credit Points: 10 Contact Hours: 3 per week

DR3023 THEATRE STUDIES OPTION
Specialised work in one of the theatre studies areas: 

directing, design, playwrighting or theatre in 

education.
Prerequisites: DR3017, DR3018 and DR3022
Credit Points: 10 Contact Hours: 3 per week

DR3025 PRACTICUM 1
Students are provided with an opportunity to practise 

as artists within a specific community and to partici- 

pate in an artistic/advocacy project in the 

community. Elective studies influence the emphasis 

of the practicum, which will involve one of the three 

main communities identified: artistic, public, institu- 

tional.
Credit Points: 15

DR3026 PRACTICUM 2
See DR3025.
Prerequisite: DR3025
Credit Points: 15

DR3027 PRACTICUM 3
See DR3025.
Prerequisite: DR3026
Credit Points: 15

DR3028 ADVANCED DESIGN 1
Research project on the origins and development of 

design and theatre; practical design involvement in a 

Departmental production.
Prerequisite: DR3022
Credit Points: 10

DR3029 ADVANCED DESIGN 2
Analysis of the philosophy and practice of a specific 

designer; assignment to a major production as assis- 

tant designer.
Prerequisite: DR3028
Credit Points: 10

DR3031 DRAMA ACROSS THE 
CURRICULUM
Processed models of curriculum applied to drama 

method; drama methods for the classroom; dramatic 

contexts and power in the classroom; content analysis 

and planning; implementation of a lesson sequence 

based on dramatic action; preparation of curriculum 

materials. Compulsory study school for external stu- 

dents.
Prerequisite: CU3040 or equivalent
Credit Points: 12 Contact Hours: 3 per week

DR3035 ADVANCED DESIGN 3
Secondment as designer or associate designer to a 

professional, amateur or community theatre project 

(approximately 7 weeks).
Prerequisite: DR3029
Credit Points: 20

DR3036 ADVANCED DIRECTING 1
Research project on the origins and development of 

the role of the director; practical work assisting the 

director of a production.
Prerequisite: DR3018
Credit Points: 10

DR3037 ADVANCED DIRECTING 2
Analysis of the philosophy and practice of a major 

director; assignment to a major production as assistant 

director.
Prerequisite: DR3036
Credit Points: 10

DR3038 ADVANCED DIRECTING 3
Directing for film and television; secondment as 

director or associate director to a professional, 

amateur or community theatre project (approximately 

7 weeks).
Prerequisite: DR3037
Credit Points: 20

DR3039 ADVANCED PLAYWRITING 1
Secondment to a major production within or out­side 

the University as Dramaturg (researcher and inter­ 

pretative consultant). Scriptwriting project.
Prerequisite: DR3017
Credit Points: 10

DR3040 ADVANCED PLAYWRITING 2
Study of a selected scriptwriting style. A major 

playwrighting project in any dramatic medium.
Prerequisite: DR3039
Credit Points: 10

DR3041 INDEPENDENT STUDY: DRAMA
Students are required to devise an outline of study 

and/or action after negotiation and consultation with 

lecturing staff and carry out the approved program 

with regular tutorial consultation.
Credit Points: 20

DR3044 THEATRE PRODUCTION
Specific major tasks of acting or management duties 

for two or more productions by the Drama Depart­ 

ment, requiring a high level of personal responsibility.
Credit Points: 40

DR3046 VOICE 2
The structure of blank verse; the development of 

English; importance of individual words and sounds 

in written and spoken texts; the use of performance 

space; development of voice and speech.
Prerequisite: DR3075
Credit Points: 5 Contact Hours: 2 per week

DR3047 VOICE 3
The structure of contemporary texts, including poetry, 

drama and narrative prose; radio technique and 

recording effective voice-overs; continued develop­ 

ment of voice.
Prerequisite: DR3046
Credit Points: 5 Contact Hours: 2 per week

DR3051 ELEMENTS OF DANCE
Physical skills including: elongation of the spine; 

movement from the centre; alignment; articulation; 

opposition; lift and placement; basic combinations of 

locomotor movements; elements of dance; style; per­ 

formance skills.
Credit Points: 5 Contact Hours: 2 per week
DR3052 DANCE STYLES
A range of dance styles and their corresponding conceptual and historical bases; performance skills; performance abilities.
Prerequisite: DR3051
Credit Points: 5 Contact Hours: 2 per week

DR3053 MUSICIANSHIP 1
Aural comprehension and notation of rhythm and pitch: vocal technique; principles of style.
Credit Points: 5 Contact Hours: 3 per week

DR3054 MUSICIANSHIP 2
Advanced study of the aural perception and notation of rhythm and pitch; introduction to the principles of harmony. Chord structure and chord progression; consolidation of personal vocal technique; style in vocal music performance.
Prerequisite: DR3053
Credit Points: 5 Contact Hours: 3 per week

DR3055 THEATRE GRAPHICS
The principles and practices of accurate research, including the design of questionnaires and surveys; use of appropriate software in the analysis of statistical information; report writing.
Credit Points: 10 Contact Hours: 3 per week

DR3056 ARTS RESEARCH & EVALUATION 1
Accessing and collation of pertinent resources, critical observation techniques; case study methods.
Credit Points: 10 Contact Hours: 3 per week

DR3057 ARTS RESEARCH & EVALUATION 2
Study of a major play in production (or other project involving performance) from one particular frame of reference.
Prerequisites: DR3071 and DR3072
Credit Points: 10 Contact Hours: 3 per week

DR3058 PRACTICUM 3
See DR3025.
Prerequisite: DR3026
Credit Points: 10

DR3059 VOICE 1
The psychological and physiological underpinning of the voice; structure of texts; development of voice and speech; development of an introductory training program.
Prerequisite: DR3007
Credit Points: 5 Contact Hours: 2 per week

DR3060 MOVEMENT
Physical Theatre genres: Asian forms including Kabuki, Noh, Kalkhakali; European forms including Greek, Commedia, Restoration. Movement arts: stage combat, 't'ai Chi'; acrobatics and tumbling.
Prerequisite: DR3007
Credit Points: 5 Contact Hours: 4 per week

DR3061 THE PERFORMING ARTS ENVIRONMENT
Introduction to the context for performing arts management; economies 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.
Credit Points: 10 Contact Hours: 3 per week

DR3062 MARKETING THE PERFORMING ARTS
General principles of marketing; applications in performing arts situations; planning, targeting, costing and implementation up to the point of sale contact in the front of house.
Credit Points: 10 Contact Hours: 3 per week

DR3063 FINANCIAL MANAGEMENT IN THE PERFORMING ARTS
Planning and monitoring the use of money in the performing arts, including the preparation of funding submissions in not-for-profit situations.
Credit Points: 10 Contact Hours: 3 per week

DR3064 ISSUES IN PERFORMING ARTS MANAGEMENT
Community arts development; legal matters; safety issues and selected current issues, eg, multiculturalism, tourism.
Credit Points: 10 Contact Hours: 3 per week

DR3065 PRODUCTION PLANNING
Opportunity for students to apply the theory and practice learnt in other subjects to production situations; the planning and initial preparations for productions being undertaken in theatre production.
Credit Points: 10 Contact Hours: 3 per week

DR3066 TECHNICAL ASPECTS OF DESIGN
Analysis of text for design purposes - set, costumes and props; adapting to space; the influence of particular staging systems on design choices; scale drawings and models; lighting and the set.
Credit Points: 5 Contact Hours: 2 per week

DR3067 ACTING 3
Study of differing philosophies of theatre and their role to performance; exercises and practical work on selected texts by Chekhov, and the Absurd or Theatre of Cruelty.
Prerequisite: DR3005
Credit Points: 10 Contact Hours: 4 per week

DR3068 ACTING 4
Introduction to the different techniques of acting for the camera; research, rehearsal and performance in one play.
Prerequisite: DR3077
Credit Points: 10 Contact Hours: 4 per week

DR3069 VOICE 4
Development of a research program in advanced vocal techniques; diagnosis of individual needs; analysis of the vocal technique of a number of professional actors and/or speakers in a range of settings; development of audition materials suitable for a variety of venues.
Prerequisite: DR3047
Credit Points: 5 Contact Hours: 2 per week

DR3070 THEATRE GRAPHICS
The principles and practices of accurate research, including the design of questionnaires and surveys; use of appropriate software in the analysis of statistical information; report writing.
Credit Points: 10 Contact Hours: 3 per week

DR3071 ARTS RESEARCH & EVALUATION 1
Accessing and collation of pertinent resources, critical observation techniques; case study methods.
Credit Points: 10 Contact Hours: 3 per week

DR3072 PROFESSIONAL STUDIES
Theatre and Australian society; funding and status of Australian theatre; different manifestations (professional, amateur, community); historical patterns; models of initiatives in theatre; designing for a community need; preparing a curriculum vitae; job applications, meeting procedures.
Prerequisite: DR3013
Credit Points: 10 Contact Hours: 3 per week

DR3073 ARTS RESEARCH & EVALUATION 2
Study of a major play in production (or other project involving performance) from one particular frame of reference.
Prerequisites: DR3071 and DR3072
Credit Points: 10 Contact Hours: 3 per week

DR3074 PRACTICUM 3
See DR3025.
Prerequisite: DR3026
Credit Points: 10

DR3075 VOICE 1
The psychological and physiological underpinning of the voice; structure of texts; development of voice and speech; development of an introductory training program.
Prerequisite: DR3007
Credit Points: 5 Contact Hours: 2 per week

DR3076 MOVEMENT
Physical Theatre genres: Asian forms including Kabuki, Noh, Kalkhakali; European forms including Greek, Commedia, Restoration. Movement arts: stage combat, 't'ai Chi'; acrobatics and tumbling.
Prerequisite: DR3007
Credit Points: 5 Contact Hours: 4 per week

DR3077 ACTING 3
Study of differing philosophies of theatre and their role to performance; exercises and practical work on selected texts by Chekhov, and the Absurd or Theatre of Cruelty.
Prerequisite: DR3005
Credit Points: 10 Contact Hours: 4 per week

DR3078 ACTING 4
Introduction to the different techniques of acting for the camera; research, rehearsal and performance in one play.
Prerequisite: DR3077
Credit Points: 10 Contact Hours: 4 per week

DR3079 VOICE 4
Development of a research program in advanced vocal techniques; diagnosis of individual needs; analysis of the vocal technique of a number of professional actors and/or speakers in a range of settings; development of audition materials suitable for a variety of venues.
Prerequisite: DR3047
Credit Points: 5 Contact Hours: 2 per week

DR3080 THE PERFORMING ARTS ENVIRONMENT
Introduction to the context for performing arts management; economies 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.
Credit Points: 10 Contact Hours: 3 per week

DR3081 MARKETING THE PERFORMING ARTS
General principles of marketing; applications in performing arts situations; planning, targeting, costing and implementation up to the point of sale contact in the front of house.
Credit Points: 10 Contact Hours: 3 per week

DR3082 FINANCIAL MANAGEMENT IN THE PERFORMING ARTS
Planning and monitoring the use of money in the performing arts, including the preparation of funding submissions in not-for-profit situations.
Credit Points: 10 Contact Hours: 3 per week

DR3083 ISSUES IN PERFORMING ARTS MANAGEMENT
Community arts development; legal matters; safety issues and selected current issues, eg, multiculturalism, tourism.
Credit Points: 10 Contact Hours: 3 per week

DR3084 PRODUCTION PLANNING
Opportunity for students to apply the theory and practice learnt in other subjects to production situations; the planning and initial preparations for productions being undertaken in theatre production.
Credit Points: 10 Contact Hours: 3 per week

DR3085 TECHNICAL ASPECTS OF DESIGN
Analysis of text for design purposes - set, costumes and props; adapting to space; the influence of particular staging systems on design choices; scale drawings and models; lighting and the set.
Credit Points: 5 Contact Hours: 2 per week
DR3087 LIGHTING 1
Design theory; lighting control; communication in the production team.
Prerequisite: DR3009
Credit Points: 5  Contact Hours: 2 per week

DR3088 SOUND 1
Design theory; sound control; communication in the production team.
Prerequisite: DR3009
Credit Points: 5  Contact Hours: 3 per week

DR3089 STAGE MANAGEMENT
Coordination; pre-production planning; rehearsals; the bump in; technical rehearsal.
Prerequisite: DR3009
Credit Points: 5  Contact Hours: 3 per week

DR3090 LIGHTING 2
Advanced theory; procedures and planning; current practice.
Prerequisite: DR3087
Credit Points: 5  Contact Hours: 3 per week

DR3091 SOUND 2
Advanced design theory; procedures and planning; current practice.
Prerequisite: DR3088
Credit Points: 5  Contact Hours: 3 per week

DR3092 THE STAGE SET 1
Working drawings; costing and materials selection; safety procedures; construction.
Prerequisite: DR3009
Credit Points: 5  Contact Hours: 3 per week

DR3093 WARDROBE COORDINATION
Period costume; the psychology of dress; introductory design.
Credit Points: 5  Contact Hours: 3 per week

DR3094 THE STAGE SET 2
Advanced construction techniques; flying; stage mechanics.
Prerequisite: DR3092
Credit Points: 5  Contact Hours: 2 per week

DR3095 STAGE PROPERTY COORDINATION
Construction techniques; working drawings; elements of design.
Prerequisite: DR3009
Credit Points: 5  Contact Hours: 3 per week

DR3096 CHILDREN'S PLAY TO PERFORMANCE
The function of children's dramatic play, role taking and fantasy in social development from ages 1 to 18.
Credit Points: 10  Contact Hours: 4 per week

DR3097 THEATRE IN EDUCATION
The defining characteristics of theatre-in-education and participatory theatre forms; skills in group leadership, negotiation of ideas and forms, planning and conducting drama events; dynamics of leadership including management of space, time, energy levels and group rhythms. Fieldwork project; developing leadership skills as part of an existing piece of theatre-in-education.
Credit Points: 10  Contact Hours: 4 per week

DR3098 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; various modes of knowing, including propositional knowledge and tacit understandings.
Credit Points: 10  Contact Hours: 4 per week

DR3099 ADVANCED DRAMA PROCESS
The nature of experiential drama; pace and time; shape and externals; reflection and refraction; evaluation; devising process drama.
Credit Points: 10  Contact Hours: 4 per week

DR3100 RESEARCH PROJECT
Students undertake a substantial piece of supervised research after academic advisement. In some cases this might include practical work and associated seminars.
Credit Points: 40

DR3101 DRAMATURGY
Students investigate the roles of dramaturgy in western theatre. Major practical exercise as production dramaturgy on a current production.
Prerequisites: DR3071 and DR3072
Credit Points: 10  Contact Hours: 2 per week

DR3102 CONTEMPORARY AUSTRALIAN PLAYWRIGHTS
Students study a number of current Australian playwrights; seminar papers focus on each writer, with input from directors, actors and writers.
Prerequisites: DR3071 and DR3072
Credit Points: 10  Contact Hours: 2 per week

DR3103 TEXTUAL ANALYSIS
Students extend the analytical framework undertaken in AR3006 in the application to dramatic texts. This includes consideration of interaction of various codes within a dramatic text, historical and cultural factors, additional codes operating in a film version of a play text, and the semiotic codes operating in dramatic performance.
Prerequisites: AR3006, DR3071 and DR3072
Credit Points: 10  Contact Hours: 2 per week

DR3104 GRADUATE SEMINAR
Students have a weekly seminar during their final semester where staff discuss current research interests, and students report on issues arising in their own thesis work.
Prerequisites: DR3071 and DR3072
Credit Points: 10  Contact Hours: 2 per week

DR3108 THEATRE PROJECT
Identification and practice of appropriate research, analytical and imaginative skills; rehearsal procedures; identification and practice of ensemble skills; personal expression; development of confidence and skill; roles and methodology inherent in designated stagecraft areas; articulation of the performance process.
Credit Points: 20  Contact Hours: 8 per week

DR3802 EDUCATIONAL DRAMA
Practical introduction to educational drama techniques available to all teachers (teacher-in-role, enrolment of students, dramatic exercises, analyses, simulations); fieldwork project: planning, teaching and evaluating a simple program. Incompatible with tertiary studies in drama or substantial experience in teaching drama.
Prerequisite: Relevant studies at Diploma of Teaching level or equivalent. All students must have access to a class of children.
Credit Points: 12  Contact Hours: 3 per week

DR5000 ARTS RESEARCH METHODS 1
The role and processes of research in the arts; defining the research tradition; qualitative research; emerging
arts research processes; reporting of research findings.
Credit Points: 12  Contact Hours: 3 per week

Dr5001 Arts Research Methods 2
Focuses on the artist as researcher/teacher; the critic as assessor; and on the audience and community in which the art work is produced. An interpretive analysis of a major performance exhibition of art work.
Prerequisite: Dr5000  Credit Points: 12  Contact Hours: 3 per week

DS2800 Lettering & Layout
Use of lettering pens and brushes in a variety of lettering styles; consideration of good lettering as it relates to graphic design and the visual environment; production of lettering charts; teaching charts; overhead transparencies; posters.
Credit Points: 5  Contact Hours: 2 per week

DS2801 Printmaking I
Exploration of a wide range of printmaking devices; (a) relief: preparation of a surface by addition (collage), and by subtraction (linoleum); (b) intaglio: intaglio, engraving, paper drypoint.
Credit Points: 5  Contact Hours: 2 per week

DS2805 Printmaking 2
Further development of technical skills introduced in DS2801, including collagraphs, relief and intaglio.
Prerequisite: DS2801  Credit Points: 10  Contact Hours: 2 per week

DS3025 Design Studies
Art elements and principles; qualities of natural and non-natural materials; design process; design presentation; effects of changing technology on form and construction; ergonomics.
Credit Points: 10  Contact Hours: 4 per week

DS4007 Printmaking 1
Relief printmaking—raised and incised blocks in lino; wood and glued materials; intaglio printmaking—etching, engraving, dry point and aquatint; planographic printmaking—lithography, monoprints and transfer prints; stencil printmaking—silk screening with cut, draw and photographic stencils; presentation of prints.
Credit Points: 12  Contact Hours: 3 per week

DS4008 Printmaking 2
Continuation of DS4007. Motivational sources; creation and external applications of techniques and media related to printmaking; exploration of related art areas.
Prerequisite: DS4007  Credit Points: 12  Contact Hours: 3 per week

DY3031 Adult Development & Learning
Foundations of adult learning; the nature of the learning process; the context of adult learning; curriculum construction and program development.
Prerequisite: CU3040 or equivalent  Credit Points: 12  Contact Hours: 3 per week

EC1003 Macroeconomic Analysis
The structure of the Australian economy; determination of income, employment and the price level; government policy in relation to aggregate labour market variables.
Credit Points: 12  Contact Hours: 4 per week

EC1004 Elements of Labour Economics
Price theory and its application to the Australian labour market—demand and supply of labour; determination of wages and employment; factors influencing the relative wage structure.
Credit Points: 12  Contact Hours: 4 per week

EC1006 Political Economy of Australia
An overview of Australia's political economy; the processes and interest groups which affect the formulation and implementation of government policy; an introduction to important contemporary issues in the political economy of Australia.
Credit Points: 12  Contact Hours: 4 per week

EC3025 Economics
The role of the economic system in promoting economic growth and in allocating resources; economic growth and social well-being; the market system and market failure; the public sector and public finance; the macroeconomy; money and the economy.
Credit Points: 10  Contact Hours: 4 per week

EC3028 Economics 1
Basic economic principles and concepts; introduction to microeconomics: demand curves and demand functions; elasticity of demand; supply curves and supply functions; elasticity of supply; pricing under competition and monopoly; introduction to macroeconomics: national accounting concepts; aggregate supply and aggregate demand; inflationary and deflationary gaps; the multiplier.
Credit Points: 12  Contact Hours: 4 per week

EC3029 Economics 2
Macroeconomics; cardinal and ordinal utility theory; the theory of production and costs in the short-run and the long-run; short-run and long-run adjustment under perfect competition and monopoly; regulation of monopolies; macroeconomics; the theory of income determination in a three and four sector economy; international trade and the balance of payments; IS-LM curve analysis.
Prerequisite: EC3028  Credit Points: 12  Contact Hours: 4 per week

EC3030 International Economics
Concepts of international trade; price theory of international trade; systems of adjustment of balance of payments; theory of foreign exchange; future of Australia's trade relations with Japan, China and South East Asia.
Prerequisite: EC3029  Credit Points: 12  Contact Hours: 4 per week

EC3040 Introduction to Economics
Fundamental economic concepts; application of concepts, principles and models to economic problems; interpretation and application of economic statistics and graphs; analysis and evaluation of current issues, problems and policies in economics.
Credit Points: 10  Contact Hours: 3 per week

EC3041 Microeconomics
Key analytical concepts of microeconomics; application of microeconomic models in the examination and analysis of the activities of consumers, business, trade unions and government agencies in the Australian economy; analysis and evaluation of current
microeconomic issues and policies; private and public sector utilisation; utilisation of principles.

Prerequisite: EC3040
Credit Points: 10 Contact Hours: 3 per week

EC3042 MACROECONOMICS
Macroeconomic study defined in terms of problems, content and methods; application of appropriate principles and models to macroeconomic problems; interpretation, design and application of diagrammatic and econometric models; current issues and policies of the Australian macroeconomy; differentiation of schools of thought on policy choice of the Australian macroeconomy.
Prerequisite: EC3040
Credit Points: 10 Contact Hours: 3 per week

EC3043 INTERNATIONAL ECONOMICS
Introduction to international trade and finance; identification, explication and application of appropriate concepts in the study of international economics; interpretation and analysis of events in international economies, especially as they relate to the Australian context; theories of trade and protection; economic integration; balance of payments; foreign exchange markets; international monetary systems; and international economics education.
Credit Points: 10 Contact Hours: 3 per week

EC3044 ECONOMIC DEVELOPMENT
Evolution of development and global education; meanings and measures of economic development; schools of economic development thought; human resources and development; economic and social dualism; resource systems and development; international trade, finance and development; global interdependency and dependency; development policies and planning; economic development studies and international understanding.
Credit Points: 10 Contact Hours: 3 per week

EC3045 COMPARATIVE ECONOMIC SYSTEMS
Comparative study as an educational tool; methods of comparing economic systems; systemic factors and economic performance; cross-cultural transfer of economic systems; socialist planning; socialist and economic reforms; planning in a market economy; structural change and economic development; comparative economic systems and international education.
Credit Points: 10 Contact Hours: 3 per week

EC3046 AUSTRALIAN POLITICAL ECONOMY
Political economy; definition; theories; World Systems Theory; Dependency Theory; Theories of Development; Australia and historical development; 'settler' democracy, core/periphery model of British Empire; structural re-adjustment of financial and industrial world capital/labour markets in twentieth century (Jiro Tokuyama, E. Mandel, Trilateral Commission, K. Hopkins/I. Wallerstein); free trade monetarist and import replacement Protectionism; the effect on Australian political economy of the present four bloc world system - EEC, USA/Canada, Japan 'Yen' block, USSR.
Prerequisite: EC3040
Credit Points: 10 Contact Hours: 3 per week

EC3047 RESOURCES PLANNING & DEVELOPMENT
The social, economic and political implications of the distribution, management and consumption of resources; evaluation of the impact of resources development on social and economic well-being and environmental quality; clarification of the concept of a just society in terms of resources development.
Prerequisite: EC3040
Credit Points: 10 Contact Hours: 3 per week

EC3048 ASIAN ECONOMIES
Asian economies and Australia's links with them; economics of China, Japan, Korea, ASEAN; foreign aid; trade relationships.
Prerequisite: EC3040
Credit Points: 10 Contact Hours: 3 per week

EC3050 CONSUMER STUDIES
The nature of the consumer society in the Australian economy; the interdependent roles of the consumer, business and the government; consumer behaviour; consumer products and services; marketing and advertising; managing consumer finances and the wise use of credit; consumer protection; current consumer issues; and educating the consumer.
Credit Points: 10 Contact Hours: 3 per week

ED2094 CLASS PROGRAM DEVELOPMENT
Curriculum design and models; curriculum concepts; the primary curriculum; curriculum components (objectives, content, methodology, evaluation); curriculum development; school and classroom curriculum processes.
Credit Points: 10 Contact Hours: 3 per week

ED2334 UNDERSTANDING CHILDREN: DEVELOPMENT
Perspectives on development and learning; understanding children; fundamental issues in child development; contexts of human development; aspects of development (physical, language, cognitive, personality, social, moral); motivation and development; abnormal development; research literature.
Credit Points: 10 Contact Hours: 3 per week

ED2335 UNDERSTANDING CHILDREN: LEARNING
Contemporary explanations of the nature of learning; the importance of learning theory in the development of teaching methods; motivation and learning; personality and learning; self-concept and learning; assessment of learning; intelligence; creativity; exceptionality; social behaviour; the research process.
Credit Points: 10 Contact Hours: 3 per week

ED2336 SOCIAL, SCHOOL & POLITICAL CONTEXTS
The social context: role of the school in promoting society's educational goals; nature of society and its structures; the social processes that operate in schools. The school context: society's educational expectations of schools; organisational aspects of the school as a basis for considering teacher expectations, pupils' experiences, and control; models of schooling, functions and characteristics of schools. The political context: political decision making and its effects on schools; ideologies underlying educational practices; operation of power in various educational settings.
Prerequisites: ED2334 and ED2335
Credit Points: 10 Contact Hours: 3 per week

ED2337 CULTURAL, LEARNING & FUTURE CONTEXTS
The cultural context: Australia as a multicultural society, culture and education; schools as agents of cultural reproduction; school responses to cultural groups. The learning context: views of learning,
teaching and learning, education and learning; learning processes and environments, freedom; models of teaching and learning, learning contexts. The future context: the contribution of the school in an era of change; diversity in education, work and non-work, lifestyles; learning in the future; computers in education; learning to cope with change.

Prerequisites: ED2334 and ED2335
Credit Points: 10  Contact Hours: 3 per week

ED2338 ISSUES OF KNOWLEDGE, POWER & QUALITY/EQUALITY
The nature and place of knowledge in education; power as an initiating, organising and maintaining influence in education; equality seen as equality of educational opportunity; poverty and the schools; rural education; groups and sexism and interacting with quality as a primary criterion in education.

Prerequisites: ED2334, ED2335, ED2336 and ED2337
Credit Points: 10  Contact Hours: 3 per week

ED2339 ISSUES OF VALUES, COMPETITION & CHANGE
Values: bases of moral and religious values, conflicting moral and cultural values, pluralism of values and professional considerations for teachers, aesthetic values in the school, taboos; moral and affective education, religious education, sex education, political education, pressure groups. Competition: the relative merits of competition, cooperation and individualisation as teaching/learning strategies; rational bases for synthesising preferences of values. Change: nature and reality of change; understanding its dynamic: responses to mastery of change in self, others, workplace and community.

Prerequisites: ED2334, ED2335, ED2336 and ED2337
Credit Points: 10  Contact Hours: 3 per week

ED2345 EDUCATION & THE FAMILY
The family as the primary socialising agent where children are concerned; various family patterns as they relate to social class, geographical location, and the multicultural nature of Australian society; the influence of changing social conditions on the modern family.

Credit Points: 10  Contact Hours: 3 per week

ED2352 EDUCATION & SCHOOLING
The school within the community and the school as a community; transition from home to school; school-community interaction; alternative schooling; overt and hidden curricula; educational measurement; the difference between education and schooling.

Credit Points: 10  Contact Hours: 3 per week

ED2357 EDUCATION & SOCIETY 1
Relationships between the school and the wider society; Australian education systems: societal, system and intra-school pressures on school administrators; social class and attitudes (particularly racial attitudes) and their relationship to the concept of equality of educational opportunity.

Prerequisite: ED2352
Credit Points: 10  Contact Hours: 3 per week

ED2358 EDUCATION & SOCIETY 2
Specific concerns within education today; the effect of social change (particularly in technology and the nature of work) on education; the effect of mass media on education; teachers and the law.

Prerequisite: ED2357
Credit Points: 10  Contact Hours: 3 per week

ED2365 FAMILIES IN CRISIS
The differing crisis situations which confront families in modern, industrialised societies; facets of children's lives which affect behaviour in the early years; meeting appropriately the needs of children from families in crisis situations.

Prerequisite: ED2345
Credit Points: 10  Contact Hours: 2 per week

ED2366 PHILOSOPHY & YOUNG CHILDREN
Children as philosophers; children with the capacity to philosophise; implications for the early childhood 'curriculum', and the nature of the learning environment provided.

Prerequisite: ED2345
Credit Points: 10  Contact Hours: 2 per week

ED2367 THE IMAGE OF CHILDHOOD
The nature and image of childhood and how it has changed over the centuries; the nature of the child and education theory; implications for teachers at all levels of education, but especially early childhood teachers.

Prerequisite: ED2345
Credit Points: 10  Contact Hours: 2 per week

ED2368 SOCIOLOGY OF PARENTHOOD
The notion of parenting in general and the parental role in particular; the changes that have occurred in child rearing practices, patterns of socialisation and aspects of social legislation pertinent to the family as a social unit.

Prerequisite: ED2345
Credit Points: 10  Contact Hours: 2 per week

ED2369 ALTERNATIVE EDUCATION
Problems confronting conventional schooling; various modes of alternative education; alternative modes of education which are available in early childhood education.

Prerequisite: ED2352
Credit Points: 10  Contact Hours: 2 per week

ED2370 GENDER, SCHOOL & SOCIETY
The nature of sex roles in Australian society and the ways in which these are reinforced and perpetuated in the family, the media, and in particular the school; strategies for combating discrimination in the school; the work-life patterns of teachers.

Prerequisite: ED2352
Credit Points: 10  Contact Hours: 2 per week

ED2371 SCHOOLS & COMMUNITIES
The range of interrelationships between schools and their communities; skills and techniques for analysing school-community relationships; case studies; student involvement in fieldwork and the development of appropriate practical skills.

Prerequisite: ED2352
Credit Points: 10  Contact Hours: 2 per week

ED2372 SOCIALISATION THROUGH PLAY
The socialisation of a child in both the home and the school; socialisation through play, both individual and in the form of a game; study of socialisation through the medium of play.

Prerequisite: ED2352
Credit Points: 10  Contact Hours: 2 per week

ED2373 LEGAL ISSUES & THE TEACHER
The nature of "education law" as it affects the teaching of children in the early and lower school; analysis of legal rights and obligations as these affect teachers,
children and parents; custody and access; discrimination, school discipline, supervision and administrative practices.
Credit Points: 10 Contact Hours: 2 per week

**ED2600 ANALYSIS OF TEACHING & LEARNING**

Constructional objectives; the planning of learning episodes; evaluation of pupil progress; organisational decisions affecting children; the decision-making process in primary classrooms; personal and professional qualities considered desirable for teachers; preparation, implementation and analysis of teaching; teaching sequences and teaching skills.
Credit Points: 8 Contact Hours: 3 per week

**ED2601 COMMUNICATION PROCESSES IN THE CLASSROOM**

Theories of communication; verbal and non-verbal behaviour; interpersonal interaction; the expository/discovery continuum; application of communication skills to the teaching/learning process.
Credit Points: 8 Contact Hours: 3 per week

**ED2602 EDUCATIONAL TECHNOLOGY & THE CLASSROOM**

Applications and innovations in educational technology; instructional design; educational problems; context of classroom; teachers as users of educational media; print and non-print resources; computers; future development.
Credit Points: 8 Contact Hours: 3 per week

**ED2603 CONTEXTS FOR TEACHING & LEARNING**

The concept of teaching the individual learner; learning groups; the open classroom; the autonomous learner.
Prerequisites: ED2600, ED2601 and ED2602
Credit Points: 8 Contact Hours: 3 per week

**ED2604 DEVELOPING CHILDREN'S POTENTIAL**

Identifying the high-potential learner; individual program planning; major issues in current literature; creativity; the parent/teacher partnership; interpersonal communication skills; information sharing.
Prerequisites: ED2600, ED2601 and ED2602
Credit Points: 8 Contact Hours: 3 per week

**ED2605 CHILDREN WITH LEARNING PROBLEMS**

Rationale for intervention programs; categories and causes of learning problems; principles of diagnosis and remediation; strategies and programs for children with learning problems; socio-emotional problems influencing learning; the concept of the professional team.
Prerequisites: ED2600, ED2601 and ED2602
Credit Points: 8 Contact Hours: 3 per week

**ED2700 CONTEXTS FOR TEACHING & LEARNING (E.E.)**

Teaching and learning in early childhood education; the concept of early teaching; the individual learner; grouping techniques; techniques for the management and control of groups; the open classroom; approaches for delimiting the learner.
Credit Points: 8 Contact Hours: 3 per week

**ED2703 ISSUES IN EDUCATION**

The question of quantity in early education; age for beginning formal education; accelerated teaching programs; human development and curriculum development; premature emphasis on basic learning skills; intellectual stimulation or emotional security. The goals of early education: philosophical, sociological and psychological influences on goals; cognitive, affective and psychomotor goals; the selection of goals; translation of goals into classroom experiences; the curriculum (integrated or undifferentiated).
Credit Points: 10 Contact Hours: 3 per week

**ED2704 INTEGRATED CURRICULUM DEVELOPMENT**

Sources of early curricula; curriculum models; integrated curriculum development for early education; developing curricula for children with special needs.
Credit Points: 8 Contact Hours: 3 per week

**ED2705 EARLY EDUCATION CLASSROOM PROCESSES**

The functions of the teacher of young children; creating a challenging and healthy learning environment; enhancing development through play; enhancing language and thinking; enhancing affective development; enhancing aesthetic development; extension of the teacher's professional development.
Credit Points: 8 Contact Hours: 3 per week

**ED2706 EARLY EDUCATION: HUMAN DEVELOPMENT**

Early doctrines of child development; the ecology of human development; personality development; physical and social development; the development of cognition and perception; language development; moral development; aesthetic development; the child's world; methods of studying children.
Credit Points: 4 Contact Hours: 1 per week

**ED2707 ADMINISTRATION PROCESS IN EARLY EDUCATION**

The leadership role in the planning, implementation and evaluation of early education programs; the diverse roles of the early childhood educator; the leadership role and the administration of early childhood centres; review and refine the philosophy, policy and practice of early education.
Credit Points: 4 Contact Hours: 1 per week

**ED2800 MOTOR SKILL ACQUISITION IN TAFE**

Teaching models used in trades; development of refined techniques to improve existing practices; safety aspects related to bending, lifting etc. in specific work areas; perceptual motor concepts of adolescence; application of concepts to assessment criteria and remediation; fine motor development.
Credit Points: 8 Contact Hours: 3 per week

**ED302B INDEPENDENT STUDY**

Self-initiated and self-directed academic study in an area of interest which allows study either to a depth not possible in electives, or in an area not covered by the current Bachelor of Education program. An independent study can be taken by any student who has completed, or will have completed, 4 subjects of the course, and meeting certain requirements laid down in the 'Independent Study Guide'.
Credit Points: 12

**ED3031 CRITICAL ANALYSIS OF SCHOOLING**

Application of sociological theories to the analysis of selected developments in Australian education during nineteenth and twentieth centuries; the traditional and revisionist explanations for state involvement in education, exploration of links with contemporary issues such as meritocratic versus reproduction views.
of schooling; sociology of the curriculum; inequality of educational opportunities.

Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective
Credit Points: 10  Contact Hours: 3 per week

**ED3032 ISSUES IN ABORIGINAL EDUCATION**

Educational implications of the historic, economic and political factors relating to the position of Aborigines in Australian society; theoretical approaches to culture, language and learning; classroom strategies; curriculum issues; Aboriginal studies; policies and programs in Aboriginal education including separate schooling; Aboriginal participation and meeting community needs.

Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective
Credit Points: 10  Contact Hours: 3 per week

**ED3033 CRITICAL PERSPECTIVES ON SCHOOL KNOWLEDGE**

Selection of classroom knowledge; the epistemological aspects; sociology of knowledge; historical perspectives on the curriculum; teachers and texts; curriculum debates; politics of school knowledge; academic freedom and 'dangerous knowledge'.

Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective
Credit Points: 10  Contact Hours: 3 per week

**ED3037 TEACHING & CLASSROOM CONTEXTS**

The culture of the school, the culture of the classroom, teachers’ culture and students’ subcultures; ethnographic approaches and other strategies to assist understanding of classroom dynamics; the social organisation of schools and critical reflection about the teaching process; practical implications for teaching.

Prerequisites: SY3013, SY3014 and ED3053
Credit Points: 10  Contact Hours: 3 per week

**ED3038 EMPOWERING TEACHERS FOR SCHOOL-BASED CHANGE**

Theoretical and practical study of the various contexts in which school-based change occurs; the role of research. Teachers as researchers and developers to engage in school-based change and development of school programs; reflective practitioners in a decision-making partnership with students, parents, community members and administrators.

Prerequisites: SY3013, SY3014 and ED3053
Credit Points: 10  Contact Hours: 3 per week

**ED3040 GENDER & CURRICULUM**

The impact of Federal, State and local curriculum policy on girls and women; implications of current curriculum theory for future policy development; implementation of programs modelling principles of gender equity and personal empowerment.

Prerequisites: SY3013 and SY3014
Credit Points: 10  Contact Hours: 3 per week

**ED3041 TEACHERS, CAREER & GENDER**

The historical development of the perception of teaching as women’s work; the concept of reproduction among others and its application to the sexual division of labour in teaching; women’s career paths, and the concept of career. Careers, cultures and strategies; are ‘career changes’ structurally imposed or individually chosen? The tasks, skills and qualities of coordinators are investigated as a process of ‘situational adjustment’. Performance appraisals, sponsors and school micropolitics are critically examined in an attempt to raise consciousness and empower women. Women’s own views and experiences are highlighted.

Prerequisites: SY3013 and SY3014
Credit Points: 10  Contact Hours: 3 per week

**ED3042 RADICAL EDUCATION**

Examination of educational modernists like Dewey and Montessori and their influence on conventional schooling; beginnings of the libertarian tradition (Tolstoy) and the development of the free school (Nell, Dora Russell); the emergence of an organic form of teaching and learning (Sylvia Ashton-Warner) and the subsequent development of critical pedagogy; the work of the deschoolers (Ivan Illich) and early liberal learning theory (Freire); examination of contemporary critical pedagogy (Giroux, Shor) and its application in working class schooling in Australia and the USA.

Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective
Credit Points: 10  Contact Hours: 3 per week

**ED3043 TACKLING EDUCATIONAL PROBLEMS: INTERNATIONAL PERSPECTIVE**

Uses of comparative studies in education; how selected countries in capitalist and socialist, developed and developing economic systems experience and perceive the connection between education, socio-economic problems and national development. Area studies may be selected from the following groups: England, Australia and Canada; France, West Germany and the German Democratic Republic; the U.S.A. and the Soviet Union; Cuba, Jamaica, Papua New Guinea and Singapore; China and India; South Africa and Tanzania or Zimbabwe.

Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective
Credit Points: 10  Contact Hours: 3 per week

**ED3044 EDUCATORS & THE LAW**

Legal institutions in Australia, basic legal terminology as it applies to teachers; legislation and decided cases in common law particularly as they relate to negligence issues; links to practical teaching; appropriate management and teaching strategies consequent upon statute and common law.

Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective
Credit Points: 10  Contact Hours: 3 per week

**ED3045 SCHOOL-COMMUNITY RELATIONSHIPS**

The issue of community empowerment and individual empowerment; developments in community involvement in Queensland and elsewhere in Australia; school-community issues: school-based budgeting, the role of school advisory councils, the Education Act; regionalisation and devolution; the role of the Principal and of teachers; community relations skills.

Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective
Credit Points: 10  Contact Hours: 3 per week

**ED3046 PERSONAL PHILOSOPHY OF EDUCATION**

The modes and methods of philosophy as these relate to the philosophy of education; traditional and modern concepts of education in their social and cultural context; challenges students to critically examine the assumptions underlying their current approach to...
teaching; development of a personal philosophy of education.

**Prerequisites:** SY3013, SY3014, ED3053 and any 3rd year education elective

**Credit Points:** 10  **Contact Hours:** 3 per week

- **ED3047 TEACHERS AS LEADERS**
  Approaches to leadership which are based on perspectives of cultural analysis and critical theory; examination of practices involving consultation and cooperation; practical applications of approaches.
  **Prerequisites:** SY3013, SY3014, ED3053 and any 3rd year education elective
  **Credit Points:** 10  **Contact Hours:** 3 per week

- **ED3048 POWERFUL TEACHING 2**
  The notion of the professional empowerment of the secondary school teacher through the use of analytical tools that draw on critical pedagogy; examination of practical classroom problems such as discipline, assessment, equity, literacy; teaching role in raising consciousness of social contexts and possibilities; empowerment through collaborative learning and social awareness.
  **Prerequisites:** SY3013, SY3014, ED3053 and any 3rd year education elective
  **Credit Points:** 10  **Contact Hours:** 3 per week

- **ED3049 TEACHERS & STUDENTS: FROM ALIENATION TO EMPOWERMENT**
  The philosophical and sociological background to the state of 'learned helplessness' and consequent sense of alienation apparent in areas of the student population, 'educational' structures and processes which generate such alienation in students; alternative models which empower rather than disempower.
  **Prerequisites:** SY3013, SY3014, ED3053 and any 3rd year education elective
  **Credit Points:** 10  **Contact Hours:** 3 per week

- **ED3050 TECHNOLOGY & EDUCATION FUTURES**
  The phenomenon of under-education; post-industrial economies and modern educational needs; implications of satellite technology in distance education; exploration of alternative education futures creatively utilising computer and media technologies in achieving aims of peace, social justice and balanced progress in the humanities, sciences and art.
  **Prerequisites:** SY3013, SY3014, ED3053 and any 3rd year education elective
  **Credit Points:** 10  **Contact Hours:** 3 per week

- **ED3053 EDUCATION & SOCIETY**
  The social context of education; the role of education in society; 'making sense' of the world.
  **Prerequisites:** SY3013 and SY3014
  **Credit Points:** 10  **Contact Hours:** 3 per week

- **ED3054 EDUCATION FOR TRANSFORMATION**
  The concept of holism; holistic teaching as a transformative model; the holistic alternative.
  **Prerequisites:** SY3013, SY3014 and ED3053
  **Credit Points:** 10  **Contact Hours:** 3 per week

- **ED3055 TEACHERS AS MEDIATORS OF CHANGE**
  The teacher as an agent of change in the classroom; learning experiences which meet the needs of a changing world.
  **Prerequisites:** SY3013, SY3014 and ED3053
  **Credit Points:** 10  **Contact Hours:** 3 per week

- **ED3056 POWERFUL TEACHING 1**
  Integration of socially critical educational theory with professional practice; distinguishing between authoritative and authoritarian teacher behaviour in the classroom; power relations in the school and the classroom.
  **Prerequisites:** SY3013, SY3014 and ED3053
  **Credit Points:** 10  **Contact Hours:** 3 per week

- **ED3057 APPROACHES TO TEACHING**
  Preparation of students for their first extended period of school teaching experience; consideration of the variety of approaches to teaching.
  **Prerequisites:** SY3013, SY3014 and ED3053
  **Credit Points:** 10  **Contact Hours:** 3 per week

- **ED3058 DEVELOPMENTS IN AUSTRALIAN EDUCATION**
  The development of Australian education particularly from the time of European settlement; the conflict between church and State; the rise of free and compulsory elementary education; the movement of the State into secondary schooling and eventually the establishment of universal junior secondary education.
  **Prerequisites:** SY3013, SY3014, ED3053 and any 3rd year education elective
  **Credit Points:** 10  **Contact Hours:** 3 per week

- **ED3059 WHO'S INTELLIGENT: HOW SCHOOLING DECIDES**
  The origins of the ideology of intelligence; its development in the public mind; and its manifestation through schooling practices.
  **Prerequisites:** SY3013, SY3014, ED3053 and any 3rd year education elective
  **Credit Points:** 10  **Contact Hours:** 3 per week

- **ED3060 ASSESSMENT THEORY & PRACTICE**
  Analysis of assumptions underlying norm-referenced and criterion-referenced assessment; the purposes for which assessment may be used; tertiary entrance; modern developments in assessment and implications for teaching; disadvantages and pitfalls of various assessment techniques.
  **Prerequisites:** SY3013, SY3014, ED3053 and any 3rd year education elective
  **Credit Points:** 10  **Contact Hours:** 3 per week

- **ED3303 CONTEMPORARY ISSUES IN EDUCATION**
  Society, schools and teaching in an age of change studied from the perspectives of educational psychology, philosophy of education and sociology of education; critical evaluation of educational policy; application of principles of social justice to participation and equity; pluralism and social cohesion including education for a multicultural Australia and the education of exceptional children; evaluation of changing roles and responsibilities of teachers.
  **Credit Points:** 12  **Contact Hours:** 3 per week

- **ED3304 STUDENTS, TEACHERS & KNOWLEDGE**
  Contemporary theories of knowledge (empiricism, rationalism, intuition, indoctrination, logic, reason, deduction, commonsense, scientific method); knowledge, ideology and schooling; schooling and its outcomes.
  **Co/Prerequisite:** ED3303 or equivalent
  **Credit Points:** 12  **Contact Hours:** 3 per week
ED3305 SECONDARY EDUCATION TODAY
Consequences of universal secondary schooling; school and work; transition initiatives, career education, link courses, work experience programs. Alternatives in secondary schooling; recent developments in secondary school discipline areas.
Credit Points: 12  Contact Hours: 3 per week

ED3705 SCHOOL ORGANISATION & DEVELOPMENT
Overview of educational administration; educational leadership; organisational development; organisational communication; issues and problems for educational administrators.
Credit Points: 12  Contact Hours: 3 per week

ED3706 THE COMMUNITY & SCHOOL ADMINISTRATION
The context of the community and the school; the practice of community education at various educational levels; community education, strategies for teachers (content analysis, public relations, delphi, force-field analysis etc.).
Credit Points: 12  Contact Hours: 3 per week

ED3707 EDUCATIONAL RESEARCH & PRACTICE
Introduction to educational research and practice; preparing for research; data collection techniques applicable to either quantitative or qualitative research methodologies; analysis and interpretation of evidence; reporting.
Prerequisite: Studies in applied curriculum
Credit Points: 12  Contact Hours: 3 per week

ED3809 COMPARATIVE EDUCATION
The relationship between development and education in developing countries; case studies, for example, of Singapore, P.N.G., China; comparisons with and implications for Australia.
Credit Points: 12  Contact Hours: 3 per week

ED3810 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.
Prerequisite: Relevant studies at Diploma of Teaching level
Credit Points: 12  Contact Hours: 3 per week

ED3811 INTERNATIONAL EDUCATION FIELD STUDY
Purposes and uses of comparative studies; comparative method; education and social development; observation of the cultural factors which influence the kind of education which another society has evolved; analysis and interpretation of observations; comparison with the Australian situation. (Overseas field study of two weeks duration during June or September vacation.)
Credit Points: 12  Contact Hours: 3 per week

ED3812 EDUCATION FOR A MULTICULTURAL SOCIETY
Theoretical issues (pluralism, ethnicity); majority and minority cultures in Australia; immigration; social attitudes and educational policies; evaluation of effects of discrimination, prejudice and ethnocentrism in schools; schools and multiculturalism; the role of the teacher in multicultural education.
Credit Points: 12  Contact Hours: 3 per week

ED3813 ISSUES IN ABORIGINAL EDUCATION
Factors influencing the position of Aborigines in Australian society; government policies; Aboriginal culture and education; current initiatives in Aboriginal education; participation of Aborigines in policies and programs.
Credit Points: 12  Contact Hours: 3 per week

ED4080 CLASS PROGRAM DEVELOPMENT
Curriculum design and models; curriculum concepts (the primary curriculum, curriculum components); curriculum development; school and classroom curriculum processes.
Credit Points: 4  Contact Hours: 1 per week

ED4096 CURRICULUM FOR YOUTH WITH SPECIAL NEEDS
Introduction to curriculum development and situational/self analysis; innovative program approaches; changing ourselves and school environments; evaluation of curriculum development; resource teacher support for school-based curriculum development, student assessment, participation and equity programs; communicating information about improved programs.
Credit Points: 10  Contact Hours: 3 per week

ED4097 SOCIO-CULTURAL ISSUES IN EDUCATION
Examination of structural and organisational aspects of the school arising in the hidden curriculum; impact of the local community on school/college life, including multiculturalism, community relations, responses to family crises; innovation and change arising in schools in response to the above factors.
Credit Points: 10  Contact Hours: 3 per week

ED4310 HUMAN DEVELOPMENT & LEARNING
Theoretical orientation to contemporary educational issues and concepts: the basic assumptions underlying educational practices and theories; the relationship between the educational system and the broader society, the future directions that education may take, and the psychological and sociological aspects of child development.
Credit Points: 8  Contact Hours: 3 per week

ED4311 CONTEMPORARY EDUCATIONAL ISSUES & PRACTICES
Teaching programs and resources: teachers and the instructional program; the teacher and resources (computers, teaching kits, learning centres, community participation). The teacher and pupils (pre-primary, primary and early adolescence): the normal pupil; the exceptional pupil. Community and the professional dimensions of teaching; the teacher and the community; the teacher as a professional.
Credit Points: 8  Contact Hours: 2 per week

ED4312 INTRODUCING MOVEMENT EDUCATION
The content of physical education in primary schools; identification of approaches to physical education; consideration of structural models and syllabuses in use; the relationship of movement education to total curriculum program planning.
Credit Points: 4  Contact Hours: 1 per week
ED4600 ANALYSIS OF TEACHING & LEARNING
The teaching process (planning, implementation and evaluation); models of communication (verbal and non-verbal behaviour); decisions in the teaching/learning process; skills involved in the teaching/learning process.
Credit Points: 8 Contact Hours: 3 per week

ED4601 DEVELOPING CHILDREN'S POTENTIAL
Development of individualised programs to foster the abilities of each child and develop parental participation in education: learning style and learning performance, socio-emotional problems influencing learning and their management, interpersonal communication, parent-teacher partnership and the professional team.
Credit Points: 12 Contact Hours: 4 per week

ED4602 CONTEXTS FOR TEACHING & LEARNING
The concept of teaching; learning groups; teaching styles; the open classroom; the autonomous learner; print and non-print resources; selection, production and utilisation of resources.
Credit Points: 8 Contact Hours: 2 per week

ED4604 ANALYSIS OF TEACHING & LEARNING
Personal theories of teaching; the teaching-learning process; basic teaching skills; educational software, lesson preparation and lesson plans; professional attitudes.
Credit Points: 8 Contact Hours: 2 per week

ED5006 STUDY DESIGN
Introduction to the design of advanced educational studies and investigations; examination of those research and/or study paradigms appropriate to their specialised interest area; development of rationale that will lead to the development of their practicum program.
Prerequisites: ED5019 and ED5020
Credit Points: 12 Contact Hours: 3 per week

ED5007 STUDY METHODOLOGY
Definition of a study model from the rationale developed in ED5006; further reading related to the implementation of the study; development of a comprehensive methodology that will enable them to move directly into the practicum subjects.
Prerequisite: ED5006
Credit Points: 12 Contact Hours: 3 per week

ED5008 PREPARATION FOR APPLIED STUDY
Building upon the relevant study design and methodology to establish the materials for the applied study; the appropriate refinement of the indepth study so that it is ready for use in the most suitable educational setting; may include a pilot study that will involve the initial development and trial of the strategy, materials, instrument or activity to be implemented in the indepth study.
Prerequisite: ED5007
Credit Points: 12 Contact Hours: 3 per week

ED5009 APPLIED STUDY
The refinement and implementation of the developed strategy/instrument/activity/materials for promoting change in some aspect of education.
Prerequisite: ED5008
Credit Points: 12 Contact Hours: 3 per week

ED5010 SUMMARY OF APPLIED STUDY
A comprehensive evaluation report of the applied study; a synthesis of the work carried out in the individualised specialisation studies of the course as they relate specifically to the indepth study; a demonstration of the basis for the indepth study, an analysis of its implementation and its potential for promoting change in education.
Prerequisite: ED5009
Credit Points: 48 Contact Hours: 12 per week

ED5015 THE SOCIO-CULTURAL CONTEXT OF EDUCATION
Historic, philosophical and socio-cultural perspectives to understand the context in which education occurs in contemporary Australia; interrelationships of individuals to society, with particular regard to class, race, ethnicity and gender, and to the cultural processes through which social inequalities are reproduced and transformed; the political, ideological and economic context of relevant policy development, implementation and evaluation.
Credit Points: 12 Contact Hours: 3 per week

ED5016 LEARNING & LEADERSHIP
Understanding of learning: the factors which influence learning and individual behaviour; dynamics of human interaction in learning environments; cognition and learning across the lifespan.
Credit Points: 12 Contact Hours: 3 per week

ED5017 LEADERS IN CHANGING CONTEXTS
Understanding of leadership in the 1990s; the differing approaches to the study of leadership, at the present time, e.g., organisation theory, cultural analysis, critical theory; the dilemma from an increasing concern with democratic, participative and facilitative styles, the political and economic environment is progressively more market-oriented, with a stress on tighter funding, privatisation, accountability and its challenging of long accepted notions of public sector security.
Credit Points: 12 Contact Hours: 3 per week

ED5018 APPLIED RESEARCH METHODS IN EDUCATION
Development of an awareness and understanding of the research process from an historical, socio-cultural, 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 critical to particular fields of interest.
Credit Points: 12 Contact Hours: 3 per week

ED5019 READING 1
A general survey of the chosen area of study to identify major educational trends; identifying the broad parameters within which the individual specialised study will develop; identifying and analysing trends in the literature related to a selected area of study, isolating specific aspects worthy of more detailed investigation.
Prerequisite: At least one Stage 1 subject
Credit Points: 24 Contact Hours: 6 per week
ED5020 READING SUBJECT 2
Focused reading in specific aspects, identified in ED5019 as being worthy of more detailed investigation; summary of current thinking within the selected area of study, in order to identify an area for potential investigation in the remaining subjects of the specialisation.
Prerequisite: ED5019
Credit Points: 24 Contact Hours: 6 per week

ED5021 STAGE 1: PREPARATION
Preparation of a brief preliminary outline for the research in consultation with the supervisory team; acquisition of knowledge of a range of appropriate research methods; commencement of a comprehensive literature search.
Credit Points: 48

ED5022 STAGE 2: PROPOSAL
Adoption of an appropriate research design for the proposed research; preparation of a comprehensive proposal for the research including a draft review of the literature; presentation and justification of the proposal to a seminar or seminars of other students in the strand and appropriate academic staff; trial research procedures.
Credit Points: 48

ED5023 STAGE 3: IMPLEMENTATION
Implementation of the research for the thesis; completion of the literature review; provision of a progress report.
Credit Points: 48

ED5024 STAGE 4: SUBMISSION
Completion and presentation of a thesis or alternative to supervisory team for approval; production of thesis in a suitable form for examination.
Credit Points: 48

EE2053 INTRODUCTION TO CURRICULUM
The concept of curriculum as a framework for teacher decision making; past and present approaches to early childhood curriculum development; the role of teachers in curriculum decision making; the role and relation of various persons involved in the curriculum process.
Credit Points: 10 Contact Hours: 3 per week

EE2054 CURRICULUM FOR EARLY LEARNING: 0-5 YEARS
The significance of early learning in the home and group care; the role of the early childhood teacher in relating curriculum to the learner, cultural values and society; applying knowledge of development and learning to curriculum for the young child on a formal and informal basis.
Credit Points: 10 Contact Hours: 3 per week

EE2055 THE CHILD AS INVESTIGATOR
Integrated with EE2056 and EE2057; study of curriculum decision making and teaching strategies which are responsive to patterns in development as children investigate their world, acquiring knowledge, skills and dispositions foundational to mathematics, the physical sciences and the social sciences.
Prerequisite: EE2054
Credit Points: 10 Contact Hours: 3 per week

EE2056 CHILDREN COMMUNICATING
Integrated with EE2055 and EE2057; study of curriculum decision making and teaching strategies which are responsive to patterns in development as children acquire the dispositions and competencies necessary for understanding their social world, expressing self and communicating effectively.
Prerequisites: EE2054
Credit Points: 10 Contact Hours: 3 per week

EE2057 THE CHILD AS CREATOR
Integrated with EE2055 and EE2056; study of curriculum decision making and teaching strategies which are responsive to patterns in development as children respond creatively through visual, aural and bodily-kinesthetic means.
Prerequisites: EE2054
Credit Points: 10 Contact Hours: 3 per week

EE2058 ENVIRONMENTS DEVELOPING COMMUNICATION
Integrated with EE2059 and EE2060; designing and working in learning environments which enable the development of self-esteem, language use and culture understandings, foundational and effective communication in settings familiar to the child under eight years of age.
Prerequisites: EE2055 and EE2056
Credit Points: 10 Contact Hours: 3 per week

EE2059 ENVIRONMENTS PROMOTING THE SCIENCES
Integrated with EE2058 and EE2060; designing and working in learning environments which enable optimum development of dispositions and competencies foundational to mathematics, the physical sciences and the social sciences.
Prerequisites: EE2055 and EE2056
Credit Points: 10 Contact Hours: 3 per week

EE2060 ENVIRONMENTS FOSTERING ARTISTRY
Integrated with EE2058 and EE2059; designing and working in learning environments which enable optimum development of the young child’s artistic, creative and expressive abilities.
Prerequisites: EE2055 and EE2056
Credit Points: 10 Contact Hours: 3 per week

EE2064 INTRODUCTION TO CURRICULUM 1
Basic elements in curriculum design; environmental factors affecting curriculum; processes of curriculum development.
Credit Points: 5 Contact Hours: 2 per week

EE2065 INTRODUCTION TO CURRICULUM 2
Contemporary issues affecting curriculum; analysis of curriculum models; the teacher and decision making in the curriculum process.
Prerequisite: EE2064
Credit Points: 5 Contact Hours: 2 per week

EE2066 EXCEPTIONALITY & YOUNG CHILDREN
Forms and ranges of exceptionality, intellectual and orthopaedic handicaps, impairment of sight and hearing, learning disabilities and giftedness; initial screening and identification procedures; early intervention programs; integration in regular classrooms; support and referral services.
Credit Points: 10 Contact Hours: 3 per week

EE2068 LITERACY & NUMERACY: THE EARLY YEARS
Identification of contemporary issues in literacy and numeracy; analysis of approaches to literacy and numeracy in terms of young children; diagnostic and
assessments for children, including those with special needs; examination of learning environments and materials appropriate to literacy and numeracy teaching.
Credit Points: 10  Contact Hours: 3 per week

**EE2069 CHILD CARE**
Social and program issues relating to child care; provision of child care in Australia and overseas; examination of research on group care for young children.
Credit Points: 10  Contact Hours: 3 per week

**EE2070 RESEARCH IN EARLY CHILDHOOD EDUCATION**
Introduction to research techniques; identification of emerging issues in early childhood education; review of current literature; perceptions of community and professional organisations and seminars/conference topics; evaluation of provisions for postgraduate professional development.
Credit Points: 10  Contact Hours: 3 per week

**EE2071 PROGRAMS FOR CHILDREN UNDER THREE**
Examination of social and historical factors relating to the provision of care and education for very young children; analysis of the characteristics and effects, as demonstrated in research studies, of a variety of family/women, early intervention and day care programs for under threes, both in Australia and overseas.
Credit Points: 10  Contact Hours: 3 per week

**EE2074 SPECIAL PROGRAMS FOR YOUNG CHILDREN**
Meeting particular needs of young children through special programs; procedures for setting up, obtaining funding, formulating objectives, devising programs, and evaluating outcomes; programs for those with special needs; socially disadvantaged children and culturally different children.
Credit Points: 10  Contact Hours: 3 per week

**EE2075 CHILDREN'S LITERATURE (0-8 YEARS)**
The significance of children's literature as it increasingly influences the content of literacy and language programs; origins and antecedents of stories as they reflect society; critical evaluation of books being produced nationally and internationally and the acquisition of skills of selection; planning quality long-term literature programs.
Credit Points: 10  Contact Hours: 3 per week

**EE2077 DRAMA WITH SPECIAL CHILDREN**
Drama as a method of facilitating learning through available resource materials; observing, planning for and teaching children with special needs; matching activities to positive abilities; evaluation of outcomes.
Credit Points: 10  Contact Hours: 3 per week

**EE2078 SPECIAL PHYSICAL EDUCATION**
Disability: cause, etiology, and intellectual limitations. Evaluating procedures: use of existing test batteries; designing test batteries for specific purposes. Teaching strategies and skills: designing and implementing programs; using appropriate techniques for specific disability groups.
Credit Points: 10  Contact Hours: 3 per week

**EE2080 INTRODUCTION TO CURRICULUM**
Settings and frameworks for curriculum decision making; establishing curriculum policies and effective evaluation strategies; establishing environments for learning; issues in curriculum decision making; implications for various home-based and centre-based care settings.
Credit Points: 10  Contact Hours: 3 per week

**EE2081 TEACHING & CARING STRATEGIES I**
Exploration of planning, implementing and evaluating developmentally appropriate programs for children from birth to twelve years of age; health, safety and nutrition aspects of such programs for children; strategies necessary for providing quality education and care for individual children's development.
Credit Points: 5  Contact Hours: 3 per week

**EE2082 INTERPERSONAL RELATIONSHIPS**
Fundamentals of interpersonal communication, the self in interpersonal communication; verbal and non-verbal behaviour; listening and feedback in interpersonal communication; interpersonal relationships with particular reference to children, families and occupational settings.
Credit Points: 10  Contact Hours: 3 per week

**EE2083 PHYSICAL, PERCEPTUAL & MOTOR DEVELOPMENT & LEARNING**
Physical and motor development, growth patterns and changes in body systems, effects of maturation, phylogenetic and ontogenetic aspects and individual differences; development and capacities in sensory processing in infancy and childhood; introduction to and application of observational techniques to the study of infants and young children's physical, perceptual and motor development.
Prerequisite: EE2300
Credit Points: 10  Contact Hours: 3 per week

**EE2084 CURRICULUM FOR EXPLORATION & PROBLEM SOLVING I**
Theory and practice in designing home-based and centre-based care environments; child-care interactions within the environment with emphasis on under-three-year-old children's exploratory and problem-solving behaviours; investigation of the planning, evaluation framework; curriculum decision making and identification of policies and evaluation strategies for various early childhood settings.
Credit Points: 10  Contact Hours: 3 per week

**EE2085 TEACHING & CARING STRATEGIES II**
Introduction to the practical aspects of designing, implementing and evaluating developmentally appropriate programs for children under three years of age in a range of child care and education settings; physical care and education; safety and nutrition.
Credit Points: 5  Contact Hours: 3 per week

**EE2086 GROUP PROCESSES**
Group processes; roles and functions in groups; leadership styles and characteristics; group task achievement, communication skills in groups.
Credit Points: 10  Contact Hours: 3 per week

**EE2087 LANGUAGE & COGNITIVE DEVELOPMENT & LEARNING**
Theories of language and cognitive development; relationship between language and thought; early syn-
tax and the development of speech and morphology; functions of children's language and communication; facilitation of children's language and literacy skills; teachers' and parents' roles.

Prerequisite: EE2300
Credit Points: 10  Contact Hours: 3 per week

EE2086 CURRICULUM FOR COMMUNICATION 1
Curriculum for self-expression and communication; exploration of planning implications for a variety of childhood care and education contexts; the contribution of varied interaction opportunities to the development of children's communication skills; learning environments which accept and support children under three years of age.
Credit Points: 10  Contact Hours: 4 per week

EE2089 CURRICULUM FOR EXPLORATION & PROBLEM SOLVING 2
The child as an active learner utilising cognitive and motor skills in exploration and problem solving; the child-centred curriculum and its role in the development of children's social competencies and cognitive skills; design of developmentally appropriate curriculum for investigating, socialising and problem solving, focusing on children under three years old.
Prerequisite: EE2084
Credit Points: 10  Contact Hours: 3 per week

EE2090 TEACHING & CARING STRATEGIES 3
Effective strategies for teaching/caring for children in small group and larger group contexts; designing, implementing and evaluating programs with particular emphasis on the birth to three year age range; promoting communication creativity and self-expression in child care and education programs.
Credit Points: 5  Contact Hours: 3 per week

EE2091 CONTEMPORARY AUSTRALIA
Utilisation of historical and social perspectives to examine the development of contemporary Australian society, with particular emphasis on attitudes and values, class, race, ethnicity and gender.
Credit Points: 10  Contact Hours: 3 per week

EE2092 SOCIAL & EMOTIONAL DEVELOPMENT & LEARNING
Theories of social-emotional development and learning; individuality and self-knowledge; socialisation processes in the family, the centre and the wider cultural contexts; development of pro-social behaviours and social competencies.
Prerequisite: EE2300
Credit Points: 10  Contact Hours: 3 per week

EE2093 CURRICULUM FOR COMMUNICATION 2
Theory and practice in designing developmentally appropriate curriculum for communication for three-to-six-year-olds; exploration of the socio-cultural contexts of communication; children's literature; the child and the media; the role of communication processes in children's learning emphasising the links between oral and written language learning in the home and early childhood group care settings.
Prerequisite: EE2088
Credit Points: 10  Contact Hours: 4 per week

EE2094 CURRICULUM FOR SELF-EXPRESSION & CREATIVITY
Children's development of self-expression and creativity and the factors which may contribute to this development; curriculum approaches which foster a positive self-concept, creativity and artistic growth in individual children, focusing on three-to-six-year-old children.
Credit Points: 10  Contact Hours: 4 per week

EE2095 TEACHING & CARING STRATEGIES 4
The teacher's caring and educating roles in home-based and centre-based early childhood care settings; designing, implementing and evaluating programs for three-to-six-year-olds.
Credit Points: 5  Contact Hours: 3 per week

EE2097 LEARNING & TEACHING
Models of memory, knowledge and information processing; perspectives on and implications of theoretical explanations of thought; current theories and measurement of intelligence; the teacher's role and environmental management techniques in facilitating learning in children.
Prerequisite: EE2300 (not applicable to students in the Upgrading Program)
Credit Points: 10  Contact Hours: 3 per week

EE2098 ADMINISTRATION & PROGRAM PLANNING FOR E.C.
The range of, and relationships between, child care and education services; management theory and practice; leadership styles and approaches; administration of child care services; examination of historic and current influences on Australian care and education services; exploration of the international perspective; decision making in relation to interpersonal relationships, building and outdoor design, budgeting, government funding and regulations, planning comprehensive programs reflecting specific community needs; parent and community education.
Credit Points: 20

EE2099 FAMILY & COMMUNITY PROCESS, POLICIES & SOCIAL NETWORKING
Trends and patterns in the contemporary family, with particular reference to women's changing role, family diversity; family stress; the ideological context of family and welfare policy in Australia with particular reference to education, health and welfare policies; application and implications of policy decisions for child care and education services, community services and resources; social systems and networks in service delivery; roles and expertise of professionals including child care and education personnel within and across systems.
Credit Points: 20

EE2100 PROGRAM PLANNING
Decision making in relation to such factors as interpersonal relationships, building and outdoor design, budgeting, government funding and regulations; planning comprehensive programs in response to developmental and special multicultural, social and economic needs of children, families and community; parent and community education.
Credit Points: 10  Contact Hours: 3 per week

EE2101 SOCIAL NETWORKING
Characteristics and functions of social systems and social networks; analysis of social, support systems and implications for children and families; social systems and networks in service delivery; roles and expertise of professionals including child care and education personnel within and across systems.
Credit Points: 10  Contact Hours: 3 per week
EE2102 CHILD DEVELOPMENT & LEARNING
Theoretical perspectives on development and learning of children 0-12 years; investigation of aspects of development, developmental sequences and patterns; factors influencing development and learning; observation measurement and research methods in development and learning.
Credit Points: 20

EE2103 CURRICULUM, THEORY & DESIGN FOR CHILD CARE
Frameworks for curriculum decision making; establishing curriculum policies and evaluation strategies; characteristics of learning environments which foster communicative competence, creativity and problem solving; levels of decision making, federal and state governments, employing authorities, particular child care and education services.
Credit Points: 10

EE2104 TEACHING & CARING STRATEGIES
The teaching/caring role in the facilitation of learning; supportive and stimulating environments for learning; strategies for planning, providing and evaluating learning experiences for children 0-12 years.
Credit Points: 10

EE2105 CONTEMPORARY AUSTRALIAN FAMILY & COMMUNITY
Review and analysis of current literature; formulation, implementation and analysis of a community project to examine a selected issue.
Credit Points: 20

EE2106 STUDY SKILLS & COMMUNICATION 1
Enhancement of students’ reading, writing, note-taking and organisational skills.
Credit Points: 30

EE2107 STUDY SKILLS & COMMUNICATION 2
Enhancement of students’ reading, writing, note-taking and organisational skills.
Credit Points: 15

EE2108 STUDY SKILLS & COMMUNICATION 3
Enhancement of students’ reading, writing, note-taking and organisational skills.
Credit Points: 10

EE2109 ADMINISTRATION OF EARLY CHILDHOOD CARE SERVICES
The range of, and relationships between, child care and education services; management theory and practice; leadership styles and approaches; administration of child care services; examination of historic and current influences on Australian care and education services; exploration of the international perspective.
Credit Points: 10 Contact Hours: 4 per week

EE2110 FAMILY & COMMUNITY PROCESS & POLICIES
Trends and patterns in the contemporary family, with particular reference to women’s changing role, family diversity; family stress; the ideological context of family and welfare policy in Australia with particular reference to education, health and welfare policies; application and implications of policy decisions for child care and education services, community services and resources.
Credit Points: 10 Contact Hours: 3 per week

EE2111 CULTURAL INCLUSIVITY IN AN E.C. CONTEXT
The development of cultural exclusion; cultural and societal influences which determine the diversity of patterns of cultural development and learning; the role of education as it applies to cultural transmission and the influences of curricula and resources.
Credit Points: 10 Contact Hours: 3 per week

EE2300 DEVELOPMENT & LEARNING: LIFE SPAN
Continuity and change in development and learning from conception to death; multidisciplinary overview of life cycle; theoretical perspectives; major features of physical, cognitive and socio-emotional development and learning over the life span.
Credit Points: 10 Contact Hours: 3 per week

EE2301 PHYSICAL, PERCEPTUAL & MOTOR DEVELOPMENT & LEARNING
Physical and motor development, growth patterns and changes in body systems, effects of maturation, phylogenetic and ontogenetic aspects and individual differences; perceptual capacities of infants and young children; implications for programming and instruction; the techniques of observation, recording and analysis of children’s physical, perceptual and motor development.
Prerequisite: EE2300
Credit Points: 10 Contact Hours: 3 per week

EE2302 LANGUAGE & COGNITIVE DEVELOPMENT & LEARNING
Theories of language and cognitive development; study of relationship between language and thought; emergence and socialisation of the symbolic function; early syntax and the development of speech and morphology; functions of children’s language and communication; facilitation of children’s self-expression, communication and creative skills; cognitive processing in academic tasks.
Prerequisite: EE2301
Credit Points: 10 Contact Hours: 3 per week

EE2303 SOCIAL, EMOTIONAL & CREATIVE DEVELOPMENT & LEARNING
Theoretical perspectives on social, emotional and creative development; temperament and personality dimensions; continuity and change; socialisation within the family, peer and classroom contexts; components of social competence; affective development; creativity and self-expression.
Prerequisite: EE2302
Credit Points: 10 Contact Hours: 3 per week

EE2307 DEVELOPMENT & LEARNING: LIFE SPAN 1
Development and learning as a life-long process; a multi-disciplinary overview with particular emphasis on the effect of different cultural and social environments on the cognitive, social and physical development of young children; techniques of observation, recording and analysis of child behaviour.
Credit Points: 5 Contact Hours: 2 per week

EE2308 DEVELOPMENT & LEARNING: LIFE SPAN 2
Significance of theoretical frameworks in understanding human development and learning throughout the life span; assessment of own stage in the developmental process; continuity and change in human development and learning from conception to
EE2600 TEACHING STRATEGIES 1
Understanding and practising effective interpersonal communication skills in practical situations; the application of knowledge and skills acquired to the teaching situation in early childhood settings; acquisition of skills of observation and recording ongoing behaviour in practical situations.
Credit Points: 5  Contact Hours: 2 per week

EE2601 TEACHING STRATEGIES 2
Relating to children 0-5 years, parents and caregivers in family and community settings; using media effectively in the pre-school setting; using play as a teaching strategy; acquiring the art of storytelling; developing basic competencies in planning learning experiences and organising the learning environment in kindergarten/pre-school settings.
Credit Points: 5  Contact Hours: 3 per week

EE2604 THE EARLY CHILDHOOD TEACHER 1
The early childhood teacher; analysis of the role of the early childhood teacher with particular emphasis on the lower primary setting; development of an integrated curriculum plan relevant for children in contemporary society; professional behaviour and ethics; formulation of a personal philosophy of teaching for early childhood education.
Credit Points: 10  Contact Hours: 3 per week

EE2605 THE EARLY CHILDHOOD TEACHER 2
The early childhood teacher; further analysis of the role of the early childhood teacher with particular emphasis on the pre-school setting; development of an integrated curriculum for pre-school children; administrative, organisational and coordinating responsibilities of the early childhood teacher; working with parents; current issues in child welfare.
Credit Points: 10  Contact Hours: 3 per week

EE2606 MICROCOMPUTERS IN EARLY EDUCATION
Computer consciousness; programming and languages, particularly LOGO; relevance and significance of computers in education; techniques for using computers with young children.
Credit Points: 10  Contact Hours: 3 per week

EE2607 MEDIA FOR EARLY CHILDHOOD TEACHERS
Examination of considerations relevant to media selection, use and evaluation; integration of learning through media; planning and production in areas of graphics, audio, projected and photographic media, and television; development of media for early childhood teaching situations.
Credit Points: 10  Contact Hours: 3 per week

EE2608 WORKING WITH PARENTS
Practical demonstration of understanding parental role in early childhood education; devising and implementing a variety of innovative programs.
Credit Points: 10  Contact Hours: 3 per week

EE2609 TEACHING ENGLISH AS A SECOND LANGUAGE
The nature and functions of language; the grammar of English from a teaching/learning perspective, particularly in relation to English learners; fundamental principles and procedures underlying a communicative approach to teaching English as a second language; teaching specific language skills; evaluation and assessment.
Credit Points: 10  Contact Hours: 3 per week

EE3033 EARLY EDUCATION: CURRICULUM DEVELOPMENT
Perspectives on the undifferentiated curriculum; early educational curriculum design and implementation; analysis of representative models of early education; curriculum evaluation and innovation in early education.
Prerequisite: CU3040 or equivalent
Credit Points: 12  Contact Hours: 3 per week

EE3034 EARLY EDUCATION: READING
Reading as a natural language-learning and communicative process; the complementary roles of parents and teachers in literacy development 0-8 years; implications for the planning and implementation of pre-school and infant school literacy programs; implications for selecting instructional materials; organisation and management of a set of cohesive and developmental literacy experiences.
Prerequisite: CU3040 or equivalent
Credit Points: 12  Contact Hours: 3 per week

EE3035 MATHEMATICS: EARLY CHILDHOOD
Theoretical background and research; logical sequence of mathematics and children's cognitive development; mathematics content and learning experiences for early childhood; integration and application of mathematics in early childhood settings.
Prerequisite: CU3040 or equivalent
Credit Points: 12  Contact Hours: 3 per week

EE3702 WORKING WITH PARENTS & 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.
Prerequisite: Relevant studies at Diploma of Teaching level
Credit Points: 12  Contact Hours: 3 per week

EE3703 EARLY EDUCATION DEVELOPMENT & LEARNING
Ecological orientation of child development; forces shaping the development of children 0-8 years; ecological analysis of the psychosocial and cultural perspectives of infant and early childhood learning; ecological analysis of the major early childhood settings; social policy.
Prerequisite: Studies in human development at Diploma of Teaching level
Credit Points: 12  Contact Hours: 3 per week

EE4029 SOCIAL, EMOTIONAL & PHYSICAL DEVELOPMENT (0-9 Years)
Introduction to the major theories, processes and features of development and learning of children 0-9 years in the physical, perceptual, motor and social-emotional domains; application of this knowledge to planning for children's needs, interests and abilities.
Credit Points: 8  Contact Hours: 3 per week
EE4030 COGNITION & LANGUAGE (0-9 Years)
Review and analysis of current knowledge of the processes and features of cognitive and language development and learning of children 0-9 years: analysis of observational data on children's behaviours in terms of current theoretical understanding and using such analyses for planning to meet children's needs, interests and abilities.
Credit Points: 8
Contact Hours: 3 per week

EE4031 CREATIVITY & LANGUAGE 1
Developmental processes in the expressive and language arts; principles of learning; the development of personal identity in children; creative and expressive processes; teaching-learning approaches and strategies.
Credit Points: 8
Contact Hours: 3 per week

EE4032 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.
Credit Points: 8
Contact Hours: 3 per week

EE4033 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 individual progress.
Credit Points: 8
Contact Hours: 3 per week

EE4034 THINKING & PROBLEM SOLVING 2
The child as explorer, problem solver and meaning maker; organising for active learning, inquiry and problem solving; linking home and school environments.
Credit Points: 8
Contact Hours: 3 per week

EE4035 PROGRAM PLANNING STRATEGIES & MICRO-SKILLS 1
Overview of the role of the early childhood teacher; the human communication process in relation to teaching in different early childhood settings; decision making; guidelines for short-term planning to meet individual and group needs; teaching and learning styles and strategies; theories of motivation, management and guidance relating to the physical, intellectual and socio-emotional aspects of the development of young children; effective use of time, space and resources.
Credit Points: 8
Contact Hours: 3 per week

EE4036 PROGRAM PLANNING STRATEGIES & MICRO-SKILLS 2
Continuation of EE4035.
Prerequisite: EE4035
Credit Points: 8
Contact Hours: 3 per week

EE4040 DEVELOPMENT & LEARNING (3-8 YEARS)
Examination of techniques for observing and analysing child behaviour; overview of major theories of development and learning; cognitive, social/emotional, language and physical development and learning in children 2-9 years.
Credit Points: 9
Contact Hours: 2.5 per week

EE4041 RESEARCH IN DEVELOPMENT & LEARNING
Examination of the research literature in development and learning; research techniques in early childhood; application of research techniques in early childhood; application of research techniques to research proposals; experimental research in one aspect of development and learning of children aged 3-8 years; contributions to early childhood research from other fields.
Prerequisite: EE4040
Credit Points: 9
Contact Hours: 2.5 per week

EE4042 CURRICULUM & TEACHING STRATEGIES 1
Examination of the development of problem solving, explanation, investigation, self-expression, originality, divergent thinking, and risk-taking in young children in relation to communication, movement and the expressive arts; analysis of teaching strategies.
Credit Points: 9
Contact Hours: 2.5 per week

EE4043 CURRICULUM & TEACHING STRATEGIES 2
Examination of teaching strategies, incorporating problem solving through exploration and investigation, for studying mathematics, science, social studies and health curriculum. The emphasis will be on approaches and suitable materials for these curriculum areas within various early childhood settings.
Credit Points: 9
Contact Hours: 2.5 per week

EE4044 CURRICULUM & TEACHING STRATEGIES 3
Critical evaluation of 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.
Credit Points: 9
Contact Hours: 2.5 per week

EE4045 PROGRAM PLANNING
Planning and evaluating early childhood programs for children 3 to 8 years; organisation and administration of programs for young children; examination of approaches to teaching; early intervention programs; inter-disciplinary teamwork and support services; strategies for working with parents and community agencies; professional behaviour and ethics.
Credit Points: 9
Contact Hours: 2.5 per week

EE4309 SOCIO-CULTURAL CONTEXTS OF EDUCATION
The social context of education; social interrelationships which define this context; the impact of diversity in family structures; child rearing patterns; alterations to family roles; educational practices which respond to socio-cultural contexts.
Credit Points: 8
Contact Hours: 3 per week

EE4310 TEACHING IN CONTEMPORARY SOCIETY
The implications of social change for early childhood programs; historical, philosophical and sociological perspectives on change in contemporary society; technological developments; demographic changes in urban and rural settings; ethical and legal issues affecting teachers.
Credit Points: 8
Contact Hours: 3 per week

EE4311 THE CONTEXT OF EARLY CHILDHOOD EDUCATION
Examination of the bases and scope of education in early childhood, the role of psychological theories,
curriculum models, policies and programs; case studies of early childhood programs.
Credit Points: 9 Contact Hours: 2.5 per week

EN2044 CONTRASTS IN AUSTRALIAN LITERATURE
Consideration of a variety of literature dealing with significant aspects of the Australian ethos/character: anti-authoritarianism, aggression and violence, female oppression, aggressive nationalism, racism; ways in which writers have viewed and used aspects of the Australian landscape; the literature of protest; the Vietnam war, feminism, civil rights, Aboriginal land rights; the new Australian drama.
Credit Points: 10 Contact Hours: 4 per week

EN2050 FANTASY & SCIENCE FICTION
Nature, scope and function of science fiction. Fantasy: struggle between good and evil, horror and frisson, traditional and 'art' fairytales, children's and adult fantasy; utopian literature and alternative worlds; allegorical fantasy; traditional wisdom and fantasy. Science fiction: history of the genre, beginnings of modern science fiction, nature of today's science fiction and criteria for evaluating it, differentiation and expansion of the sciences now appearing in science fiction, effects of scientific and technological discovery.
Credit Points: 5 Contact Hours: 2 per week

EN2058 THE MASS MEDIA IN AUSTRALIA
The mass media in Australia; advertising and the media; critical examination of television programs; the mass media in the classroom.
Credit Points: 5 Contact Hours: 2 per week

EN2071 COMMUNICATION: FOCUS ON LITERACY
Oral language as the beginning of a set to literacy; the emergent reader/writer; beyond initial literacy; environmental literacy.
Prerequisites: LA2042 and SS2053
Credit Points: 8 Contact Hours: 3 per week

EN2072 COMMUNICATION: FOCUS ON INTEGRATION
Principles underlying communication program development; resource identification, selection and development; strategies for fostering language/communication development; communication program development; critical issues in communication.
Credit Points: 8 Contact Hours: 3 per week

EN2081 INTERPERSONAL COMMUNICATION
The nature of interpersonal communication; the communication process; the process of personal change; considerations of the Johari model as a theoretical framework for developing skills of disclosure and feedback; the development and maintenance of trust; communication skills (listening, attending, encouraging, paraphrasing, clarifying, perception checking, reflecting, summarising).
Credit Points: 8 Contact Hours: 3 per week

EN2082 COMMUNICATION IN GROUPS
Experiential work in group skills such as communication, decision making, problem solving, use of power, resolving conflicts, formulating group goals, developing norms, adapting leadership to process; consideration of group behaviour in the light of group development models (Bennis, Beon, Bradford, Cohen and Smith, Miles, Rogers and Schutz); consideration of own behaviour in group settings with respect to communication style.
Prerequisite: EN2081
Credit Points: 8 Contact Hours: 3 per week

EN2083 LANGUAGE & COMMUNICATION
The nature and functions of language and communication; characteristics of the English language; language variation and English; the role of language in social control and persuasion; communication in a multicultural society; discourse analysis.
Credit Points: 5 Contact Hours: 3 per week

EN3026 COMMUNICATION
The nature of communication; non-verbal communication; interpersonal communication; written communication in organisations; aspects of information technology.
Credit Points: 9 Contact Hours: 3 per week

EN3031 ENGLISH LANGUAGE CURRICULUM ISSUES
Concepts of the English/language arts curriculum; concepts of oracy and literacy; recent research findings; emerging issues in English/language arts teaching; evaluation of language growth in students; issues and innovations in primary school language areas; issues and innovations in the secondary English curriculum.
Prerequisite: CU3040 or equivalent plus relevant teaching experience and studies at Diploma of Teaching level
Credit Points: 12 Contact Hours: 3 per week
EN3035 APPROACHES TO CULTURAL STUDIES
Critical evaluation of traditional approaches to literary texts; understanding of major terms and concepts of semiotics, structuralism, post-structuralism; application of concepts in analysis of texts; knowledge of significant writings and cultural theorists.
Credit Points: 10  Contact Hours: 3 per week

EN3036 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.
Credit Points: 10  Contact Hours: 3 per week

EN3037 THE MEDIA & SOCIETY
The importance of history, organisational control, forms, functions, and audiences of the mass media; role of the mass media in recording and shaping 'reality'; identification of the effects mass media can have on society.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 4 per week

EN3038 AUSTRALIAN LITERARY STUDIES
Critical appreciation of various texts from Australia's literary tradition; impact of social values, political and artistic movements upon literature, production and genres; dichotomy of mainstream and marginalised writing in various groups and periods of Australia's cultural traditions.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 3 per week

EN3039 LITERATURE IN TEACHING
How new areas of knowledge are affecting the selection of literary texts for teaching at various developmental stages and the processes of readers' responses to those texts; how to relate such information to the context of teaching literature in schools; the influence of such factors as systems of evaluation, the operation of school libraries, the policies of book publishers in relation to resources for teaching literature, State syllabuses and school programs on the design of English curriculum.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 3 per week

EN3040 MODERN BRITISH LITERATURE
The novel, poetry and drama from the time of Hardy to the present day; the development of modernism; the influence of T.S. Eliot; changes in the nature of drama with the birth of realism and the conflict created by the anti-novel in any traditional view of a body of literature.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 3 per week

EN3041 NINETEENTH CENTURY LITERATURE
The importance of context to critical appreciation of the literature of any age; the varying kinds of relationship that exist between writers and their society in a time of profound social, economic and political change.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 3 per week

EN3042 AMERICAN LITERATURE
The literature of America in the twentieth century within its cultural context; significant developments in American literature since the 1920s, with reference to major preoccupations and issues; changes and influences in literary style; the impact of socio-political changes on American writing.
Credit Points: 10  Contact Hours: 3 per week

EN3043 YOUNG ADULT FICTION
The scope and nature of young adult literature; strategies for evaluation and selection; recent research into adolescents' reading needs, interests and responses; methods for promoting and using young adult books in the curriculum.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 3 per week

EN3044 SHAKESPEARE IN THE ELIZABETHAN WORLD
The literary and intellectual culture of Elizabethan England as a backdrop for the special study of a selection of the dramatic and poetic works of William Shakespeare and, more briefly, the work of some of his contemporaries.
Credit Points: 10  Contact Hours: 3 per week

EN3045 WOMEN IN LITERATURE & THE MEDIA
Literary texts and films written by women; relevant aspects of their socio-cultural experience; marginalisation from 'mainstream' culture.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 3 per week

EN3046 AUSTRALIAN CULTURE & TELEVISION
How the Australian culture is being constructed on television particularly in the mini-series; key myths and legends; how these myths and legends are handled; the Anzac myth; 'The Australian way of life'; Australian nationalism and the USA, British and Japanese connections.
Credit Points: 10  Contact Hours: 3 per week

EN3047 CHILDREN'S LITERATURE
Children's literature in the literacy development of children and young adults and the importance of children's literature in shaping the child's view of the world.
Prerequisite: EN3036
Credit Points: 10  Contact Hours: 3 per week

EN3048 ABORIGINAL WRITING
The contribution of Aboriginal writing to the field of Australian literature; the major issues and themes that concern Aboriginal authors; the peculiar problems confronting Aboriginal writers in relation to both their socio-political context and the established conventions of literary criticism.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 3 per week

EN3049 CLASSICAL & MEDIAEVAL LITERATURE
Great works from ancient Greece with reference to Greek art, architecture, religion and philosophy; the development of Latin literature from Ennius to the Silver Age in its historical context; the authorised version of the Bible; Anglo-Saxon literature, old French literature, Dante, Petrarch, Boecaccio, Chaucer, Malory and the Arthurian tradition.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 3 per week
EN3050 TEACHING ENGLISH AS A SECOND LANGUAGE
The history of migration to Australia, considering the needs of the bilingual learners in our schools and examining curriculum documents from a multicultural perspective.
Prerequisite: EN3036
Credit Points: 10  Contact Hours: 3 per week

EN3051 STORYTELLING
Story structure; selection of suitable stories to tell which match needs and interests of the audience; integration of storytelling across the curriculum.
Prerequisite: EN3036
Credit Points: 10  Contact Hours: 3 per week

EN3052 CONTEMPORARY APPROACHES TO LITERACY
The issue of literacy within the wider community cultural context and in the specific immediate context of the tertiary institution; conceptions of what represents literacy in the culture; the cognitive and linguistic aspects of what constitutes literacy; the surface features of language in use; the strategies by which meaning is made and communicated.
Prerequisite: EN3036
Credit Points: 10  Contact Hours: 3 per week

EN3053 MODERNISM & POST-MODERNISM
The concepts of modernism and post-modernism and how they are related to social, technological and philosophical developments in this century; the movement away from the commitment of modernism to post-modernism abandonment of the transcendental values.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 3 per week

EN3054 WRITING WORKSHOP
This subject is based on contemporary understanding of writing. The student, as writer, uses all the language modes in social contexts (either genuine or simulated) to lead to writing in a range of situations. Engagement in these writing situations is designed to bring about personal understanding of the following: the nature of the writing process; the influence of audience and purpose on the final written product; the range of genres (or forms) that fall within the activity of writing. The act of writing is also examined for the contribution it makes to learning and critical thinking, both in the content areas across the curriculum and in the development of creativity and understanding about oneself as an individual.
Prerequisite: EN3036
Credit Points: 10  Contact Hours: 3 per week

EN3701 THE TEACHER & THE WRITING PROCESS
The writing workshop; the writing process and language growth; writing in the school; the sociology of writing; helping the writer; evaluation and assessment of writing.
Prerequisite: English/language arts curriculum studies at Diploma of Teaching level
Credit Points: 12  Contact Hours: 3 per week

EN4009 COMMUNICATION: FOCUS ON LITERACY
A set towards literacy: oral language, appropriate environments for the development of a set, a concept of print. The emergent reader/writer: the reading and writing processes, children's behaviour at the emergent literacy stage, monitoring reading and writing development, resources and strategies for developing reading and writing, program development for the lower primary school; beyond initial literacy.
Credit Points: 8  Contact Hours: 2 per week

EN4012 COMMUNICATION: FOCUS ON LANGUAGE
Principles underlying language program development; resource identification, selection and development; strategies for fostering language development; language arts; program development.
Credit Points: 4  Contact Hours: 2 per week

ER3002 DYNAMIC EARTH
The nature of our planet and its dynamic systems; materials of the earth; the ocean's structure; dynamic nature of the earth; the earth through time; field studies.
Co-requisite: ER3003
Credit Points: 10  Contact Hours: 4 per week

ER3003 EXPLORATION OF THE UNIVERSE
The nature of stars; planetary systems and galaxies; the theories of the origin and nature of the solar systems; the role and function of satellites and spacecraft; planetary atmospheres; the greenhouse effect and its causes; practical activities and field observation.
Co-requisite: ER3002
Credit Points: 10  Contact Hours: 4 per week

ER3004 AUSTRALIAN GEOLOGY
Igneous and metamorphic associations, fold mountain belts, sedimentary basins, and major ore deposits within the context of the plate tectonics model and especially with regard to the Australian setting; comparisons with older geosynclinal theories; study of rocks and minerals in thin section; field studies, with representative locations chosen for the examination and illustration of at least some of the following: (i) a significant sedimentary basin, (ii) a major fold belt, (iii) a major ore deposit, (iv) a calc-alkaline volcanic-plutonic association.
Prerequisite: ER3002
Credit Points: 10  Contact Hours: 4 per week

ER3005 GEOLOGICAL ENVIRONMENTS
The geological evolution of Queensland; ancient organisms and their environments as based on fossil evidence; modern Queensland environments and environmental issues: climate and geology; soils and land erosion; groundwater use and management; geological hazards; engineering applications; mining and the environment; the influence of human developments and movement on Queensland's landscape, shoreline, and continental shelf; the role of geology in recreational pursuits on National Parks, the Great Barrier Reef, geological monuments, local geology.
Prerequisite: ER3002
Credit Points: 10  Contact Hours: 4 per week

ER3701 EARTH SCIENCE
Mineralogy; petrology; economic geology; the solar system and space exploration; stellar evolution and cosmology; diastrophism; geomorphology. Incompatible with tertiary studies in earth science, or earth science as major in Diploma of Teaching.
Prerequisite: Science studies at Diploma of Teaching level
Credit Points: 10  Contact Hours: 3 per week

FD3025 FOOD STUDIES
The behaviour of foods; nature, properties and behaviour of major nutrients in food; interaction
between major ingredients in certain foods; individual research.
Prerequisite: CH3025
Credit Points: 10  Contact Hours: 6 per week

FD3026 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.
Prerequisite: MB3025
Credit Points: 10  Contact Hours: 4 per week

FD3030 FOOD & NUTRITION 1
Issues related to choosing a diet which will promote health; nutritional needs for humans; translating these to food selection and preparation.
Prerequisite: SC3015
Credit Points: 10  Contact Hours: 6 per week

FD3031 FOOD & NUTRITION 2
Nutrition, food science and technology; food studies and food preparation; the nature, properties and behaviour of the major nutrients in food and their nutritional and dietary roles; food composition tables; analysis of experimental work; choosing appropriate practical applications for use in schools.
Prerequisite: FD3030
Credit Points: 10  Contact Hours: 6 per week

FD3032 FOOD SCIENCE & TECHNOLOGY
The role of the food industry in relation to lifestyles in modern societies; the scientific principles and operations involved in the preservation and manufacture of foods; the composition, the ingredients, the labelling and marketing methods of a representative range of commercial foods; current consumer issues such as the safety of food additives, food irradiation, consumer protection, new product development, food regulations and future trends in our food supply.
Prerequisite: Any Level 1 Science subject
Credit Points: 10  Contact Hours: 4 per week

FD3033 FOOD PREPARATION & PRESENTATION
Mastery of advanced techniques and more complex skills in food preparation and presentation with concomitant integration of sound nutrition principles, management, consumerism and skills of communication.
Prerequisites: FD3030, HS3015 and SC3015
Credit Points: 10  Contact Hours: 6 per week

FD3034 FOOD MANAGEMENT FOR FAMILIES
Food habits and attitudes; social and cultural influences; role of the family in developing food habits; nutritional requirements of different age groups; principles of meal management and meal planning; adaptation of meals to special groups.
Prerequisites: FD3025 and NU3025
Credit Points: 8  Contact Hours: 5 per week

FD3035 FOOD PRODUCTION & PRESENTATION
Advanced techniques and complex skills of food production and presentation; commercial production and presentation of food; production and presentation of food for photography or display purposes; food demonstrations; special occasion cookery.
Prerequisites: FD3025 and NU3025
Credit Points: 8  Contact Hours: 6 per week

FI2802 VIDEO PRODUCTION & ANALYSIS
Visual language; use of basic video cameras; shooting and editing on video; documentary and fiction production techniques; use of lighting, camera angle and movement; framing and sound recording; analysis of television programs.
Credit Points: 10  Contact Hours: 3 per week

FI3000 FILM LANGUAGE
How film communicates; development of visual literacy through examination of the nature and function of film language; awareness of form in narrative and non-narrative film; different film structures; basic ideas and terminology of semiotics and structuralism and application to film texts.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 4 per week

FI3001 FILM, SOCIETY & CULTURE
Examination of a number of popular American films made between the 1930s and the 1980s and the significant political and social movements which they reflect; the films include King Kong, Meet Me in St Louis, On the Waterfront, Rebel Without a Cause, Bonnie and Clyde, and Norma Rae.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 3 per week

FI3002 AUSTRALIAN FILM
The products of the revival of the Australian film industry in the 1970s and 1980s; how films have attempted to define a national identity; the relationship between films, the film industry and the wider social context; major discourses in Australian culture such as gender representation, nationalism, class, the family, contemporary adolescent culture, race and ethnicity, corruption, urban development and unemployment; the debate between popular and high culture in the Australian film industry.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 3 per week

FI3003 ASIAN CINEMA
Recent readings of Asian films, exploring the problems set up by their evaluation within Western critical discourse; study of two of the following national cinemas: China, Japan, India.
Prerequisite: EN3035
Credit Points: 10  Contact Hours: 3 per week

FI3004 EUROPEAN CINEMA
How European cinemas have responded to social and technological change. Students concentrate on the cinema of two of the following countries: Italy, Germany, France.
Prerequisite: Any first year subject in Foreign Languages, Film and Media or English
Credit Points: 10  Contact Hours: 3 per week

FI3005 MEDIA PRAXIS 1
Operation of 35 mm single lens reflex cameras and use of appropriate lenses, film stocks and exposure settings; production of photographic prints in a photographic darkroom; operation of basic audio mixing equipment; planning and production of a short audiovisual program using photographic slides and audio cassette tape; operation of basic video recording and editing equipment; planning and production of a short audiovisual program using VHS video equipment; application of visual and audiovisual production codes to the construction of visual and audiovisual texts.
Credit Points: 10  Contact Hours: 4 per week
<table>
<thead>
<tr>
<th>Course Code</th>
<th>Course Title</th>
<th>Description</th>
<th>Prerequisite</th>
<th>Contact Hours</th>
<th>Credit Points</th>
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<tbody>
<tr>
<td>FI3005</td>
<td>MEDIA PRAXIS 2</td>
<td>Extension of FI3005.</td>
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<td>4 per week</td>
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<tr>
<td>FI3006</td>
<td>DOCUMENTARY FILM</td>
<td>The history and development of the documentary film from the pioneering efforts of Flaherty and Grierson to the work of contemporary film makers such as Berger and Bradbury; how the film makers construct a reality and how the great social issues of the day are reflected in their work.</td>
<td>EN3035</td>
<td>3 per week</td>
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<tr>
<td>FI3007</td>
<td>FILM GENRES</td>
<td>The notion of genre in films; specification of the conventions and iconography of particular genres; the connection between genre and history/ideology and between genre and industry; the challenge of genre criticism to the notion of personal authorship.</td>
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<td>3 per week</td>
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<tr>
<td>FI3008</td>
<td>EXPERIMENTATION WITH A GREATER VARIETY OF PRODUCTION CODES IN THREE AREAS: STILL PHOTOGRAPHY, VIDEO PRODUCTION AND FILM PRODUCTION.</td>
<td>Experimentation with a greater variety of production codes in three areas: still photography, video production and film production.</td>
<td>FI3006</td>
<td>4 per week</td>
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<tr>
<td>FI3009</td>
<td>MEDIA PRAXIS 3</td>
<td>The production and distribution of media texts within mass media institutions; evolution of consensus definitions of what the media are and can do, and how alternative definitions are marginalised; issues of the relationship between language, knowledge and power; media policies; how the industry works; production and distribution networks; media ownership and control; the political economy of media institutions in Australia and overseas; the impact of social change and new technologies on media institutions; the media and education.</td>
<td>EN3035</td>
<td>3 per week</td>
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<tr>
<td>FI3010</td>
<td>MEDIA INSTITUTIONS</td>
<td>The development of the Hollywood continuity style; the Russian montage style; German expressionism and its influence on film noir; modernism; Italian neo-realism and allied movements; 'new waves' in France, Brazil and elsewhere; the influence of new technologies on contemporary film styles.</td>
<td>EN3035</td>
<td>3 per week</td>
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<tr>
<td>FI3011</td>
<td>FILM HISTORY</td>
<td>The development of the Hollywood continuity style; the Russian montage style; German expressionism and its influence on film noir; modernism; Italian neo-realism and allied movements; 'new waves' in France, Brazil and elsewhere; the influence of new technologies on contemporary film styles.</td>
<td>EN3035</td>
<td>4 per week</td>
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<tr>
<td>GE2014</td>
<td>LIVING IN CITIES</td>
<td>The cultural basis of human settlement and the factors that contribute to the nature of modern cities (human perception, economic and political processes, the natural environment); the problems caused by overcrowding, urban decay and the unjust distribution of urban services and facilities in Australian, other Western and Third World cities; principles of town planning; field study.</td>
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<td>3 per week</td>
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<tr>
<td>GE2080</td>
<td>LIVING BETTER WITH LESS</td>
<td>The 'lucky country' debate focusing on the problems caused by environmental exploitation; contemporary and alternative views on the use of physical and human resources in Australia; the ecology and economics of agriculture in Australia; the energy problems living better with less.</td>
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<td>3 per week</td>
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<tr>
<td>GE2801</td>
<td>THE BUILT ENVIRONMENT</td>
<td>The architectural heritage of the street-scenes of Queensland country towns; the architectural form of residential buildings in Queensland towns and cities; the process of change in the central areas of large cities; the planning consequences of demographic and social changes in urban areas.</td>
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<td>2 per week</td>
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<tr>
<td>GE2805</td>
<td>THEMES IN HUMAN GEOGRAPHY</td>
<td>Demographic aspects of world population; origins of agriculture; the effects of the urban revolution on people; distribution of wealth and difference in living standards; the nature and methods of medical geography; warfare; culture; recreation.</td>
<td></td>
<td>3 per week</td>
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<tr>
<td>GE3005</td>
<td>INTRODUCTION TO CULTURAL GEOGRAPHY</td>
<td>The spatial organisation of world societies, their demographic characteristics, their means of livelihood and interactions with each other; geography viewpoint; cultural diversity; cultural universals; social well-being; perception; diffusion; contemporary affairs.</td>
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<td>2 per week</td>
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<tr>
<td>GE3006</td>
<td>PEOPLE &amp; THE NATURAL ENVIRONMENT 1</td>
<td>The geomorphological systems which are creating the surface of the earth and with which human systems interact; the probable effects of the interaction of human and physical systems.</td>
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<td>3 per week</td>
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<tr>
<td>GE3008</td>
<td>PEOPLE &amp; THE NATURAL ENVIRONMENT 2</td>
<td>Global systems; regional patterns of climate, soils, flora and fauna; human influences on global systems; potential effects and mitigation strategies.</td>
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<td>3 per week</td>
<td>10</td>
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<tr>
<td>GE3009</td>
<td>AUSTRALIAN GEOGRAPHICAL STUDIES</td>
<td>Consumer versus conserver values; resources development in Australia; distribution and structure of the Australian population; prospects for sustainable agriculture; energy resources, user patterns, future scenarios; industrialisation in Australia, the benefits and costs of technological changes on resources development.</td>
<td></td>
<td>3 per week</td>
<td>10</td>
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<tr>
<td>GE3010</td>
<td>LIVING IN CITIES</td>
<td>The cultural basis of human settlement and the factors that contribute to the nature of modern cities (human perception, economic and political processes, the natural environment); the problems caused by overcrowding, urban decay and the unjust distribution of urban services and facilities in Australian, other...</td>
<td></td>
<td>3 per week</td>
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</tbody>
</table>
Western and Third World cities; principles of town planning; field study.
Credit Points: 10  Contact Hours: 3 per week

■ GE3001 ADVANCED GEOGRAPHICAL TECHNIQUES
User-oriented mapping; geographical information systems and the structuring of geographical information; computer-assisted mapping; uses of remote sensing; advanced aerial photography; field skills in geography.
Credit Points: 10  Contact Hours: 3 per week

■ GE3011 ENVIRONMENTAL HAZARDS
The nature of hazard, risk and disaster; origins of hazards; nature of disaster; influences on the perception of risk; disaster prediction, preparation, response and recovery strategies.
Credit Points: 10  Contact Hours: 3 per week

■ GE3012 ASIAN GEOGRAPHICAL STUDIES
Physical and cultural aspects of Asia; transition from traditional societies; the effect of colonialism; the independence movements; alternative approaches to development; traditional and modern agriculture; trends in manufacturing; tourism; urbanisation; cultural conflict and economic power; alternative approaches to development; trade cooperation and dependency.
Credit Points: 10  Contact Hours: 3 per week

■ GE3013 RESOURCES PLANNING & DEVELOPMENT
The social, economic and political implications of the distribution, management and consumption of resources; evaluation of the impact of resources development on social and economic well-being and environmental quality; clarification of the concept of a just society in terms of resources development.
Credit Points: 10  Contact Hours: 3 per week

■ GE3015 ADVANCED URBAN GEOGRAPHY
Analysis of socio-political and philosophical perspectives of the urban environment; social stratification; residential differentiation; housing supply and demand; spatial organisation and demand in urban areas; social interaction; environmental planning; power and status; demographic and technological change.
Credit Points: 10  Contact Hours: 3 per week

■ GR3001 STUDIES IN GRAPHIC PRINTMAKING
Exploration of the three areas of printmaking: relief, intaglio and planographic; practice and research relative to the aesthetic, technical and design values of printmaking.
Prerequisite: Studies in graphics at Diploma of Teaching level
Credit Points: 12  Contact Hours: 3 per week

■ HE2101 PERSONAL HEALTH
Health and optimal well-being; essential components of good health: emotional, spiritual, physical and socio-cultural well-being; life-cycle concerns.
Credit Points: 8  Contact Hours: 3 per week

■ HE2102 CHILD HEALTH
Genetic and environmental factors which affect the health of the child; physical growth and development; vision; hearing; postural patterns of a growing child; development and care of teeth; importance of sound nutrition; communicable diseases of childhood; children with non-communicable diseases; trauma in childhood; emotional disorders; health services for children.
Credit Points: 8  Contact Hours: 3 per week

■ HE2900 COMMUNITY STUDIES: FIRST AID
Principles and practice of first aid; cardio-respiratory system; resuscitation; nervous system; haemorrhage and burns; strains, sprains and fractures; poisons, bites and stings; function and care of eyes and ears.
Credit Points: 2  Contact Hours: 1 per week

■ HE3031 HEALTH EDUCATION CURRICULUM PLANNING
The nature of curriculum; philosophical orientations to health and health education curriculum planning; the school’s responsibility in health education; models of curriculum design in health education; case studies in curriculum design; developing and implementing the health education curriculum; curriculum evaluation.
Prerequisite: CU3040 and health studies at Diploma of Teaching level
Credit Points: 12  Contact Hours: 3 per week

■ HE4007 EPIDEMIOLOGY & ENVIRONMENTAL HEALTH
The interrelationships between disease patterns and the environment; geography, climate, transmission and the susceptible population; distribution of disease in Queensland; factors affecting such distribution.
Prerequisite: HE4010
Credit Points: 10  Contact Hours: 3 per week

■ HE4010 HEALTH & LIFESTYLE IN AUSTRALIA
Explanation of a broad range of factors which together define the parameters of the health educator’s role in the maintenance of healthy lifestyles in a rapidly changing world; discussion and analysis of health public policy.
Credit Points: 10  Contact Hours: 3 per week
HE4011 COMMUNICATION THEORY & SKILLS
Analysis and practical experience in the development of communication skills and techniques applicable to individual, small group, community and societal levels in health education.
Prerequisite: HE4010
Credit Points: 10  Contact Hours: 3 per week

HE4012 RESEARCH & EVALUATION
Introduction to the role of research and evaluation in health education; health promotion; evaluation of health education programs; development of research skills to interpret and analyse current literature in the field; basic statistical methods.
Prerequisite: HE4007
Credit Points: 10  Contact Hours: 3 per week

HE4013 HEALTH EDUCATION & THE CHANGE PROCESS
Analysis of the process of change as it relates to individual, group and organisational contexts; the role of the health educator as a change agent; the nature of change; how change can be achieved and factors that undermine or negate change.
Prerequisites: HE4010 and HE4011
Credit Points: 10  Contact Hours: 3 per week

HE4014 SCHOOL HEALTH EDUCATION
Introduction to the field of health education and the roles, functions and areas of responsibility of the health educator; specific focus on nature, scope and place of health education in the total school environment.
Credit Points: 10  Contact Hours: 3 per week

HE4015 SCHOOL HEALTH PROGRAM PLANNING
Planning, implementation and evaluation of school health programs. Analysis of a range of planning models in health education and health promotion.
Prerequisite: HE4014
Credit Points: 10  Contact Hours: 3 per week

HE4016 COMMUNITY HEALTH EDUCATION
Introduction to the field of health education with a specific focus on the nature of community health education; environmental, social, political and educational elements supporting and encouraging behaviours conducive to health.
Credit Points: 10  Contact Hours: 3 per week

HE4017 COMMUNITY HEALTH PROGRAM PLANNING
Planning and implementation of intervention strategies in community health; culminating subject requiring application of knowledge and skills developed over preceding terms of course. Analysis of a range of planning models in health education and health promotion.
Prerequisite: HE4016
Credit Points: 10  Contact Hours: 3 per week

HE4018 CURRICULUM DESIGN
Theory of curriculum design, development and evaluation; concepts, principles and processes in health curricula design.
Prerequisite: HE4014
Credit Points: 5  Contact Hours: 3 per week

HE4019 HEALTH BEHAVIOUR CHANGE
Analysis of health-related behaviours which can be modified and identification of the range of behavioural programs; development and implementation of behaviour change programs for selected health-related behaviours.
Credit Points: 5  Contact Hours: 3 per week

HE4020 EDUCATION TECHNIQUES FOR HEALTH PROMOTION
Selection and implementation of appropriate educational approaches for health education and health promotion programs.
Prerequisite: HE4016
Credit Points: 5  Contact Hours: 3 per week

HE4021 HEALTH SERVICES
Community health resources and their operation and service; response of health services to changing community needs.
Credit Points: 5  Contact Hours: 3 per week

HE4022 COMMUNITY NUTRITION
Analysis of balanced nutrient intake; food consumption in Australia; dietary factors contributing to diseases of affluence; promotion and prevention techniques.
Credit Points: 5  Contact Hours: 3 per week

HE4023 DRUGS & ALCOHOL
Substance use and abuse; physical, social, emotional and environmental effects; models of drug education; the Australian context; international comparisons.
Credit Points: 5  Contact Hours: 3 per week

HE4024 HUMAN SEXUALITY
Perspectives on human sexuality; human sexuality throughout the lifespan; laws, ethics and decision making in human sexuality.
Credit Points: 5  Contact Hours: 3 per week

HE4025 INDEPENDENT STUDIES 1
Work in an area of particular interest relating to specific concerns in health education or health promotion.
Credit Points: 5

HE4026 INDEPENDENT STUDIES 2
Work in an area of particular interest relating to specific concerns in health education or health promotion.
Credit Points: 5

HE4027 INDEPENDENT STUDY
Work in an area of particular interest relating to school or community health education or health promotion.
Credit Points: 10

HZ2800 THE AUSTRALIAN SOCIAL CHARACTER
Contribution of migrants, large landowners, bush workers, the trade unions, radicals, women, the armed forces to the development of Australian society; the new Australian; urban Australia; the arts in Australia; sport.
Credit Points: 5  Contact Hours: 2 per week

HZ2801 WOMEN IN HISTORY
The nature of history as a series of tentative interpretations; the 'forgotten people' of history of which women are one group; how to redress the imbalance and develop women's history; women's history as part of the predominant historical paradigm; women's history as social history; developing women's history.
Credit Points: 5  Contact Hours: 2 per week

HZ3010 UNDERSTANDING HISTORY
The nature of history as a discipline; the work of historians; consideration of a specific historical work, using it as a focus for examining more general problems of historical writing and perceptions of history.
Credit Points: 10  Contact Hours: 3 per week
<table>
<thead>
<tr>
<th>Code</th>
<th>Title</th>
<th>Description</th>
<th>Credit Points</th>
<th>Contact Hours: 3 per week</th>
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<tbody>
<tr>
<td>HI3011</td>
<td>MODERN POLITICAL IDEOLOGIES</td>
<td>Introduction to political values and the political spectrum; the problem with models; right wing ideologies: Nazism, fascism, conservatism; centrist ideologies: liberalism, social democracy; socialism; left wing ideologies: Marxist socialism, anarchism; emerging ideologies: feminism, environmentalism; residual ideologies: racism, imperialism.</td>
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<tr>
<td>HI3012</td>
<td>AUSTRALIAN STUDIES</td>
<td>Developments in nineteenth and twentieth century Australia; the Australian legend; Australian nationalism; race relations; federation; foreign policy; Australia's position in the world; the Australian political system.</td>
<td>10</td>
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<tr>
<td>HI3013</td>
<td>THE EMERGENCE OF CIVILISATION</td>
<td>The rediscovery of the ancient past; the growth of archeology; selected case studies of Egypt, Sumer, early Indian and Chinese civilisations.</td>
<td>10</td>
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<tr>
<td>HI3014</td>
<td>THE CLASSICAL WORLD</td>
<td>Greek society: Greece after the dark age; the emergence of city states; the spread of Greek peoples across the eastern Mediterranean; the development of Athenian democracy; the Peloponnesian War and the decline of the Greek world; the cultural contribution of the Greek world; Roman society; the beginnings of Rome; the early republican government; the struggle for Italy and the western Mediterranean; the breakdown of the republic and the growth of the principate; Rome as master of the Mediterranean; the spread of Christianity; the decline of the empire.</td>
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</tr>
<tr>
<td>HI3015</td>
<td>MODERN CHINA &amp; JAPAN</td>
<td>Historical developments in China and Japan during the nineteenth and twentieth centuries; use of historical evidence to examine commonly held stereotypes of Chinese and Japanese society and to evaluate a variety of explanations relating to the recent history of the area.</td>
<td>10</td>
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<tr>
<td>HI3016</td>
<td>MODERN INDIA &amp; SOUTH EAST ASIA</td>
<td>Inquiry-based study of the struggles for independence in India and Vietnam; ways in which historians bring different analytical frameworks to bear on historical questions.</td>
<td>10</td>
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<tr>
<td>HI3017</td>
<td>EUROPEAN STUDIES 1</td>
<td>European history: developments and relevance; sixteenth century Europe; the renaissance and Martin Luther; England in the sixteenth and seventeenth centuries; the English Reformation and the English revolution; the French revolution; Napoleon and the Napoleonic legend; nationalism in the nineteenth century; Italian and German unification; the Third Republic of France and the Dreyfus affair; Bismarckian Germany; Europe in 1900.</td>
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<tr>
<td>HI3018</td>
<td>EUROPEAN STUDIES 2</td>
<td>Europe before 1912; the origins of World War I; Europe between the wars—the rise of Fascism; Russia and the USSR—the Revolution of 1917 and its consequences to 1921; World War II—a people's war; the origins of the Cold War; Western Europe—the European Economic Community; Eastern Europe—the USSR—Stalin, Khruschev, Brezhnev, Gorbachev—Glasnost and Perestroika; Europe in 1992.</td>
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<tr>
<td>HI3019</td>
<td>AMERICAN STUDIES</td>
<td>The formative decades; the emergence of the United States and the revolutions of Central and South America; the Monroe Doctrine; expansion across the continent—Canadian and American experiences; the emergence of the United States as a world power; gunboat and dollar diplomacy; American economic imperialism and reactions north and south; the limits to American power.</td>
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<tr>
<td>HI3020</td>
<td>WOMEN IN AUSTRALIAN HISTORY</td>
<td>Justification for the teaching and study of history; theories of history; the extent to which history contributes to the acquisition of societal values, beliefs and attitudes; new emphases in the writing of history and their implications for history teaching.</td>
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</tr>
<tr>
<td>HI3021</td>
<td>HISTORY SEMINAR 1</td>
<td>The following are examples of topics which could form the study focus of this subject: the impact of war on Athenian society; comparisons of the French and Russian revolutions; the west in American history; the impact of colonialism in Asia; nationalism and leadership in modern Indian history.</td>
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<tr>
<td>HI3022</td>
<td>HISTORY SEMINAR 2</td>
<td>The following are examples of topics which could form the study focus of this subject: the impact of war on Athenian society; comparisons of the French and Russian revolutions; the west in American history; the impact of colonialism in Asia; nationalism and leadership in modern Indian history.</td>
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<td>HI3702</td>
<td>THE STUDY OF HISTORY</td>
<td>Cultural frameworks of China and Japan; religion, stratification and social modernisation in India; landscapes of Japan and Hong Kong; perceptions of contemporary China; continuity/discontinuity in Japan's social patterns; implications for modern industrial Japan; Asian models of economic development.</td>
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<tr>
<td>HI3703</td>
<td>ASIAN STUDIES</td>
<td>Prerequisite: Relevant studies at Diploma of Teaching level or equivalent.</td>
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<tr>
<td>HI3704</td>
<td>AUSTRALIAN STUDIES</td>
<td>The background to settlement; attitudes and beliefs of early settlers and the extent to which these influenced the development of colonial society; European civilisation and the Aborigine; the origins of an Australian stereotype and development of an ethos;</td>
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nationalism and federation, Australia between the wars; Australia since World War II; urbanisation and the rights of the individual.
Credit Points: 12 Contact Hours: 3 per week

**HS3004 AUSTRALIA'S NEAR NEIGHBOUR INDONESIA**
Influence of the physical environment on population densities and land use systems; ethnic groups; historical survey from pre-European times to Independence; agricultural systems; religion; mining and manufacturing; politics since Independence; problems for the future; the nature and structure of the Indonesian language.
Credit Points: 12 Contact Hours: 3 per week

**HS3014 HOUSING STUDIES**
The critical aspects of shelter as a fulfilment of people's basic needs; design, technology and relevant legislation linked to decisions affecting provision of shelter for the differing needs of individuals and families.
Prerequisite: HS3015
Credit Points: 10 Contact Hours: 4 per week

**HS3011 SHELTER DESIGN**
The linking of human physical and psycho-social needs, environmental and technological issues and design aspects to the effective provision of shelter, with emphasis being placed on the development of advanced skills and knowledge; environmental and technological aspects which have implications on shelter design for the well-being of the individual and families; effective design to accommodate changing family structures; legislative updates.
Prerequisite: HO3010
Credit Points: 10 Contact Hours: 4 per week

**HS3012 HOUSING STUDIES**
Housing tenure; advantages and disadvantages of ownership/tenancy; housing finance; housing for special groups; special needs in housing; interior environment; housing heritage.
Credit Points: 9 Contact Hours: 4 per week

**HS3015 HOME ECONOMICS: CONCEPTUAL FOUNDATIONS**
The researching of social issues and of the effects of social issues on individuals in their specific near environment; evaluation of the impact of social issues on physical and psycho-social needs; application of design processes to achieve optimum circumstances within the context of everyday life; the promotion of effective personal living.
Credit Points: 10 Contact Hours: 4 per week

**HS3033 PRACTICUM 1**
Experience in working in industry, commerce or government; placement at two different organisations each for two weeks.
Credit Points: 3

**HS3034 PRACTICUM 2**
Experience in working in industry, commerce or government; placement in one organisation for six weeks.
Prerequisite: HS3033
Credit Points: 4

**HS3035 RESEARCH METHODS**
Introduction to research; research in home economics; theoretical elements of research; research types or settings; sampling and measurement; methods of data collection; analysis and interpretation of data; planning and design of a major research project.
Credit Points: 9 Contact Hours: 3 per week

**HS3036 THE HOME ECONOMIST AS COUNSELLOR**
The counselling process; major approaches to counselling; models of helping and the helping relationship; communication skills; the home economist as counsellor; moral, ethical and legal responsibility of the home economist as a helping professional.
Prerequisites: PY3048 and SS3025
Credit Points: 8 Contact Hours: 3 per week

**HS3037 INDEPENDENT STUDY 1**
Self-initiated and self-directed academic study in an area of interest consistent with the overall aims of the course.
Credit Points: 8 Contact Hours: 1 per week

**HS3038 INDEPENDENT STUDY 2**
Self-initiated and self-directed academic study in an area of interest consistent with the overall aims of the course.
Credit Points: 8 Contact Hours: 1 per week

**HS3039 RESEARCH PROJECT A**
An indepth investigation of a particular topic of relevance to home economics; field-based research in conjunction with business or community organisations.
Credit Points: 6 Contact Hours: 1 per week

**HS3040 RESEARCH PROJECT B**
Continuation of HS3039.
Credit Points: 6 Contact Hours: 1 per week

**HS3042 HOME ECONOMICS APPLIED CURRICULUM**
Issues and problems relating to home economics education; bases for curriculum decision making; nature and structure of home economics; syllabus implementation; student needs; innovation; assessment procedures.
Prerequisite: CU3040 or equivalent and curriculum implementation studies at Diploma of Teaching level
Credit Points: 12 Contact Hours: 3 per week

**HW3000 STUDIES IN AUSTRALIAN SOCIETY 1**
Introduction to sociology; analysis of selected sociological concepts; development of a sociological framework; describing Australian society using a variety of social, economic and demographic data; critical review of the influence of common beliefs on the social and economic development of Australian society; experiences of different segments of the population; application of sociological concepts to Australian social structure and institutions.
Credit Points: 10 Contact Hours: 3 per week

**HW3001 HUMAN DEVELOPMENT 1**
Life events and transitions encountered from birth to the late teen years; theories of human development; theories of childhood and adolescence; childhood and adolescent lifestyles; values clarification regarding children and adolescents; disturbances in childhood and adolescence.
Credit Points: 10 Contact Hours: 3 per week

**HW3002 HUMAN SERVICE PRINCIPLES 1**
The concepts of social justice, equity and human rights; service consumers and service values; examination of the following principles: Principle 1: consumer rights, Principle 2: individualism, Principle
HW3003 STUDIES IN AUSTRALIAN SOCIETY 2
Concepts of social structure and social institution; the development and current status of the major social structures and institutions in Australian society; the concept of ideology in sociology; the perspectives of disadvantage.
Prerequisite: HW3000
Credit Points: 10  Contact Hours: 4 per week

HW3004 HUMAN DEVELOPMENT 2
Adult life and transitions; theories of adulthood; models of ageing services; human empowerment.
Prerequisite: HW3001
Credit Points: 10  Contact Hours: 3 per week

HW3005 HUMAN SERVICE PRINCIPLES 2
Perceptions and definition of need; methods of determining need; levels of intervention; distinction between direct and indirect methods of intervention; human service roles and the ideologies of helping.
Prerequisite: HW3002
Credit Points: 10  Contact Hours: 4 per week

HW3006 GROUP WORK
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; leadership and member behaviours; planning, implementing and evaluating group methods; establishing groups and planning group approaches; the group as a therapeutic community; evaluating group work; ethical issues.
Prerequisite: PY3016 and PY3017
Credit Points: 10  Contact Hours: 3 per week

HW3007 ORGANISATIONAL SKILLS 1
Organisational paradigms; organisational culture and norms; worker socialisation; qualities and attributes of effective workers; self-management skills; interpersonal skills; effective interpersonal relationships.
Prerequisites: PY3016 and PY3017
Credit Points: 10  Contact Hours: 3 per week

HW3008 PROFESSIONAL RESOURCES 1
The family as a resource; networks as resources; non-government systems; government systems; specific Commonwealth resources; issues of access to resources; evaluation of resource systems.
Credit Points: 10  Contact Hours: 3 per week

HW3009 FIELDWORK PRACTICE 1
A twelve-week (360-hour) supervised vocational experience comprising observation of and participation in human service practice.
Prerequisite: HW3002 and HW3005
Credit Points: 30

HW3010 STUDIES IN AUSTRALIAN SOCIETY 3
The Federal and State government frameworks; essential features of the legal and judicial systems; the structure and decision-making processes of Australia’s major political parties; the relationship between ideology and policy; the structures and function of Federal and State bureaucracies; structures and values inherent in Australia’s capitalist free enterprise system; the application of a structural analysis employing the dimensions of class, status, power, race and gender to these frameworks.
Prerequisite: HW3003
Credit Points: 10  Contact Hours: 3 per week

HW3011 THE AUSTRALIAN WELFARE STATE
The definition of the ‘welfare state’; moral principles underpinning the ‘welfare state’; the development of the ‘welfare state’ in Australia since colonialism up until the present time; impact of major public policies on the ‘welfare state’; achievements and/or failures of the ‘welfare state’.
Prerequisite: HW3003
Credit Points: 10  Contact Hours: 3 per week

HW3012 COMMUNITY WORK
Community work defined; community work in Australia; statutory/non-statutory perspectives; community work models; individual preferences; the skills and techniques of (i) entering a community, (ii) building community involvement, (iii) community action.
Prerequisite: HW3006
Credit Points: 10  Contact Hours: 3 per week

HW3013 HUMAN SERVICE PRINCIPLES 3
Intervention principles; interventions at the (i) individual, (ii) small group, (iii) family, (iv) community and (v) organisational level are explored.
Prerequisite: HW3009
Credit Points: 5  Contact Hours: 2 per week

HW3014 CONTEMPORARY SOCIAL POLICIES
Major contemporary social policies within Australian society; policy formation and implementation process; interaction of the political, administrative, economic and legal systems in determining policy outcomes; role of electronic and print media.
Prerequisite: HW3011
Credit Points: 10  Contact Hours: 3 per week

HW3015 PROFESSIONAL RESOURCES 2
Basic statistical methodology; demographic statistics; social statistics; economic statistics; electronic data dissemination methods; statistics and service planning.
Prerequisite: HW3008
Credit Points: 10  Contact Hours: 3 per week

HW3016 FIELDWORK PRACTICE 2
A ten-week (300-hour) supervised vocational experience comprising participation in and increasing responsibility for human service practice.
Prerequisite: HW3009
Credit Points: 20

HW3017 SOCIAL POLICY & SOCIAL CHANGE
Theories of social change; models of social change; social change in Australia; applying models of change; evaluating social change.
Prerequisite: HW3014
Credit Points: 10  Contact Hours: 3 per week

HW3018 ORGANISATIONAL SKILLS 2
Tasks and functions of managers; managerial paradigms; managerial styles; teamwork in human service organisations; meetings; managing differences and conflicts, innovation and change.
Prerequisite: HW3007
Credit Points: 10  Contact Hours: 3 per week
HW3019 HUMAN SERVICES PRINCIPLES 4
The practitioner's demands and expectations of human service work; legal requirements; the evaluation of practice; the personal demands of practice and the place of supervision.
Prerequisite: HW3016
Credit Points: 5  Contact Hours: 2 per week

HW3020 CHILD & FAMILY SERVICES 1
The family in Australia; developmental stages encountered in a family's progression from initiation to dispersal; family dynamics; the definition of dysfunction; development of child and family services; service specific issues.
Credit Points: 10  Contact Hours: 3 per week

HW3021 DISABILITY SERVICES 1
The structure and function of the human body; attitudes towards disability; the effects of disability on consumers and families; human rights and disability; service provision principles; administrative and legislative structures; individual program planning.
Credit Points: 10  Contact Hours: 3 per week

HW3022 CORRECTIVE SERVICES 1
Conception of crime; incidence of crime; causal explanations of crime; contemporary theories of crime; offender characteristics; correctional history, purpose and goals; the impact of imprisonment; the victim of crime.
Credit Points: 10  Contact Hours: 3 per week

HW3023 AGED SERVICES 1
Common modes of adaption to ageing; retirement as continuity or change; assessing capacities for change and innovation in the aged; counselling approaches with the aged; ageing and community support.
Credit Points: 10  Contact Hours: 3 per week

HW3024 ETHNIC SERVICES 1
The history of immigration to Australia since 1788; attitudes towards immigration and ethnic minorities; the meanings and interpretations of the concepts of multiculturalism, culture, ethnicity, race; Australian government policies of multiculturalism, access and equity; current demographic patterns; theories of racism, assimilation, acculturation, adaptation and integration.
Credit Points: 10  Contact Hours: 3 per week

HW3025 CHILD & FAMILY SERVICES 2
The service framework and the nature of family and youth work; professional self-management strategies; investigation and assessment; short- and long-term intervention strategies; approaches to and issues involved in the provision of services to homeless youth and juvenile offenders; refining interpersonal skills necessary to promote effective client-worker relationships.
Credit Points: 10  Contact Hours: 3 per week

HW3026 DISABILITY SERVICES 2
Introduction to the major forms of disabilities: intellectual disability; physical disability; chronic medical conditions, sensory impairment and disorder of thinking, feeling and behaving; direct and indirect forms of assistance.
Credit Points: 10  Contact Hours: 3 per week

HW3027 CORRECTIVE SERVICES 2
The corrective system; staff-inmate relationships; ethics and conduct; methods and approaches to maintaining discipline in a non-threatening manner; inmate views of staff; mob psychology and control.
Credit Points: 10  Contact Hours: 3 per week

HW3028 AGED SERVICES 2
Home-based and family support systems; community-based support systems; planning and developing needs-based services; patterns of ageing specific to migrants, Aborigines, and the elderly poor.
Credit Points: 10  Contact Hours: 3 per week

HW3029 ETHNIC SERVICES 2
Characteristics and circumstances of Australia's ethnic minorities including history, culture, familial patterns and religious traditions; cross-cultural application of intervention techniques; culturally specific intervention skills.
Credit Points: 10  Contact Hours: 3 per week

HW3030 CHILD & FAMILY SERVICES 3
The Commonwealth and State legislation underpinning family and youth services in Queensland; contemporary service philosophies and principles; the organisational types and administrative structures of the major service providers; interface between legislative power and facilitative helping; review, refinement and application of group skills to situations likely to be encountered in family and youth work.
Prerequisites: HW3020 and HW3025
Credit Points: 10  Contact Hours: 3 per week

HW3031 DISABILITY SERVICES 3
Need for advocacy for various consumer groups; forms of advocacy; self-help and self-advocacy; orientations and approaches to enable clients to become self-determining; design of intervention and support programs; case load management.
Prerequisites: HW3021 and HW3026
Credit Points: 10  Contact Hours: 3 per week

HW3032 CORRECTIVE SERVICES 3
The Queensland corrective services system; the social and political influences and the development of policy and services for corrective organisations within Queensland; trends and prospects; stratification within correctional service organisations; issues of communication and organisational change.
Prerequisites: HW3022 and HW3027
Credit Points: 10  Contact Hours: 3 per week

HW3033 AGED SERVICES 3
Assessment skills, client-centred assessment and individual planning; major rationales and philosophy underlying specific aged care systems; administration and the creation of a humane environment; program design; the involvement of the consumer in planning; integration of aged service system and support networks in the wider environment of community welfare.
Prerequisites: HW3023 and HW3028
Credit Points: 10  Contact Hours: 3 per week

HW3034 ETHNIC SERVICES 3
Analysis of the principles of access, equity, cultural sensitivity; consultation and participation; the concepts of racism and discrimination and their expressions in Australian social institutions.
Prerequisites: HW3024 and HW3029
Credit Points: 10  Contact Hours: 3 per week

HW3035 CHILD & FAMILY SERVICES 4
Innovations in service delivery models; comparison of international and national trends with service delivery within Queensland; literature review; independent study-program design.
Prerequisite: HW3030
Credit Points: 15  Contact Hours: 3 per week
HW3036 DISABILITY SERVICES 4
National and international trends in the provision of disability services; disability service system and programs in Australia; application of organisational change strategies to disability service systems; independent study.
Prerequisite: HW3031
Credit Points: 15 Contact Hours: 3 per week

HW3037 CORRECTIVE SERVICES 4
Punishment vs rehabilitation; correctional options; traditional treatment programs; experimental treatment programs; traditional prison management; modern prison management; contemporary community issues; independent study.
Prerequisite: HW3032
Credit Points: 15 Contact Hours: 3 per week

HW3038 AGED SERVICES 4
National and international trends and innovations in services for aged persons; evaluation and appraisal of service and support systems; elementary accounting skills and budget control; independent study.
Prerequisite: HW3033
Credit Points: 15 Contact Hours: 3 per week

HW3039 ETHNIC SERVICES 4
Specific service provision systems targeted towards ethnic minorities; ethnic specific programs within general service provision systems; evaluation and appraisal of service delivery systems; application of organisational change strategies to ethnic related services.
Prerequisite: HW3034
Credit Points: 15 Contact Hours: 3 per week

HW3040 YOUTH SERVICES 1
The development and character of youth services in Australia; practical skills necessary for face to face youth work; minimum standards; professional ethics.
Credit Points: 10 Contact Hours: 3 per week

HW3041 YOUTH SERVICES 2
A cultural perspective on the experience of young people in Australia; subculture and gender differences in the experience of young people; implications for practice and policy.
Credit Points: 10 Contact Hours: 3 per week

HW3042 YOUTH SERVICES 3
Statutory and non-statutory areas of youth work, including supported accommodation, juvenile justice, labour market, living skills, health, community work and outdoor education. Development of service delivery and referral skills.
Credit Points: 10 Contact Hours: 3 per week

HW3043 YOUTH SERVICES 4
Management and policy issues facing youth workers and agencies.
Credit Points: 15 Contact Hours: 3 per week

HW4000 PERSONAL & INTERPERSONAL SKILLS
An overview of the social context in which human services organisations operate; clarification of the essential qualities and skills of workers; an exploration of the influence of organisations on workers; skill development, including communication, assertive behaviour, personal organisation and time management, career development and job getting, coping with stress, relating to co-workers and managers, and the consultative role.
Credit Points: 10 Contact Hours: 3 per week

HW4001 MANAGEMENT PRACTICES 1
An exploration of organisational and managerial paradigms, leadership styles, power and authority, organisational structure and design; identification of factors affecting management practice including industrial relations, changing attitudes to authority, trends in legislation, equal rights and financial constraints; development of personal managerial philosophy and style.
Prerequisites: HW4000 and HW4004
Credit Points: 15 Contact Hours: 5 per week

HW4002 MANAGEMENT PRACTICES 2
Development of knowledge and skills in regard to essential management tasks consistent with principles of participative management including: recruitment and selection of workers; induction of staff training, developing, supporting, appraising and disciplining workers; written and verbal communication; teamwork; meetings, decision making; resolving differences and managing conflict; managing worker absence; recruiting, selecting and deploying volunteers.
Prerequisites: HW4000, HW4001, HW4004 and HW4005
Credit Points: 15 Contact Hours: 5 per week

HW4003 INNOVATION & CHANGE
Identification of the need for change in human service organisations as a result of new service principles and methods of service delivery; models of change; approaches to the introduction of change; effective change strategies; resistance to change; exploration of successful and unsuccessful change programs in human service organisations.
Prerequisites: HW4000, HW4001, HW4002, HW4004 and HW4005
Credit Points: 10 Contact Hours: 3 per week

HW4004 SERVICE POLICIES & PRINCIPLES
Introduction to the principles which underpin service delivery in human services organisations such as accessibility, equity, legitimacy, accountability, responsibility, participation, efficiency, effectiveness, productivity. Introduction to the notion of framework to several human services organisations. Development of students' capacity to apply framework to selected organisations.
Credit Points: 10 Contact Hours: 3 per week

HW4005 PROGRAM PLANNING & EVALUATION
The purpose of planning; the various contexts in which program planning may apply similarities and uniqueness; who does the planning? Consistency with organisational philosophy and goals. Collaboration in planning. Program planning steps. The need for accountability; purposes for evaluation. Process evaluation - standards of performance, adequacy, provision of facilities, resources, funds. Impact evaluation - changes in knowledge, attitudes, behaviours. Outcome evaluation - macro changes, eg, health data, Social Security benefits. Designs for evaluation - record keeping to controlled experiment. Analysing and reporting results. How to make use of evaluation.
Prerequisites: HW4000 and HW4004
Credit Points: 10 Contact Hours: 3 per week

HW4006 MANAGEMENT IN THE COMMUNITY SECTOR
An overview of community management as an alternative method of delivering human services. An analysis of the community sector - positive and nega-
1111 IR1021 INDUSTRIAL RELATIONS

Local responsibilities.

Prerequisite: IR1021

Credit Points: 10

Contact Hours: 3 per week

■ HW4007 INDEPENDENT STUDY 1

An indepth study of an organisational issue which has practical value for the organisation in which the student is employed or for another organisation, e.g., the development of a staff appraisal system, review of client records.

Prerequisite: HW4000, HW4001, HW4004 and HW4005

Credit Points: 10

Contact Hours: 1 per week

■ HW4008 INDEPENDENT STUDY 2

An indepth study of an organisational issue which has practical value for the organisation in which the student is employed or for another organisation, e.g., the development of a staff appraisal system, review of client records.

Prerequisite: HW4000, HW4001, HW4002, HW4004 and HW4005

Credit Points: 10

Contact Hours: 1 per week

■ IA3801 TECHNOLOGY & CULTURE

Social and psychological aspects of culture; historical perspectives; the age of mechanics; the electronic revolution; political and social aspects of technology; industrialisation and the Third World; educational implications of technical change.

Credit Points: 12

Contact Hours: 3 per week

■ IR1017 INDUSTRIAL RELATIONS INSTITUTIONS

An introductory analysis of the theory and practice of industrial relations in which major emphasis is placed upon the role of the parties and the bargaining context in Australia.

Credit Points: 12

Contact Hours: 4 per week

■ IR1018 SOCIOLOGY OF WORK

Examination of major theories in the sociology of work; the relationship between the world of work and society; detailed examination of occupations; the labour process and alienation; Australian social structure.

Credit Points: 12

Contact Hours: 4 per week

■ IR1019 WORKPLACE ISSUES

Analysis of policies dealing with current industrial relations issues in the workforce. Australian and overseas initiatives.

Credit Points: 12

Contact Hours: 4 per week

■ IR1020 INDUSTRIAL RELATIONS SKILLS 2

Vocational skills associated with industrial relations practice; industrial information sources; collection, collation and utilisation of source material; handling industrial situations; meeting law and procedure.

Prerequisite: IR1024

Credit Points: 12

Contact Hours: 4 per week

■ IR1021 INDUSTRIAL RELATIONS SKILLS 3

Negotiation processes in industrial relations; duties, responsibilities and skills of negotiators; handling grievances at the workplace; award interpretation; local responsibilities.

Prerequisite: IR1020

Credit Points: 12

Contact Hours: 4 per week

■ IR1022 INDUSTRIAL RELATIONS SKILLS 4

Formal advocacy and negotiation; operations within the conciliation and arbitration tribunals; collective bargaining and common law agreements; award creation and variation.

Prerequisite: IR1021

Credit Points: 12

Contact Hours: 4 per week

■ IR1023 INDUSTRIAL RELATIONS & MANAGEMENT

Professionalism in industrial relations; pre-emptive bargaining; enterprise bargaining; alternative strategies; functional specialisations and the division of professional labour.

Credit Points: 12

Contact Hours: 4 per week

■ IR1024 INDUSTRIAL RELATIONS SKILLS 1

Introduction to industrial relations research; written and oral skills necessary for industrial relations practitioners; research writing and presentation of industrial relations reports.

Credit Points: 12

Contact Hours: 4 per week

■ IR1025 AUSTRALIAN DEVELOPMENT

An overview of Australia's industrial development; the development of the arbitration system; the growth of the trade union movement; Australia's changing industrial structure; changing employment trends, new technology, the nature of unemployment, social welfare, and the future of work.

Credit Points: 12

Contact Hours: 4 per week

■ IR1026 AUSTRALIAN EMPLOYMENT LAW

Australian legal systems; the Constitution and Federal powers; State legal institutions; the contract of employment; hiring practices and the law; law relating to dismissal and discipline; workers compensation and occupational health and safety laws.

Credit Points: 12

Contact Hours: 4 per week

■ IR1027 AUSTRALIAN INDUSTRIAL LAW

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

Credit Points: 12

Contact Hours: 4 per week

■ IR4017 INDUSTRIAL RELATIONS THEORY

Major theoretical approaches to resolution and regulation of conflict in work and employment; theories of collective organisation; bipartite and tripartite schema of labour market regulation and workplace processes.

Credit Points: 12

Contact Hours: 4 per week

■ IR4018 COMPARATIVE INDUSTRIAL RELATIONS

Approaches to comparative study; range of legal and institutional forms of industrial regulation, cross-national comparisons of industrial democracy and productivity; detailed study of national models of industrial relations especially Sweden, Japan and Britain.

Credit Points: 12

Contact Hours: 4 per week

■ IR4019 EMPLOYMENT LAW

Understanding of institutions, doctrines and methodology of general and industrial law. Analysis of employment relationship; common law contract of employment; worker's compensation; legal liability
for industrial action. Detailed study of the structure of Federal and Queensland industrial relations laws.

Credit Points: 12  Contact Hours: 4 per week

**IR4020 INDUSTRIAL RELATIONS PRACTICES**

Current industrial relations practices and policies; research techniques for industrial relations issues, case research, preparation and presentation; institutional framework of industrial relations practices in Australia.

Credit Points: 12  Contact Hours: 4 per week

**IR4021 INDUSTRIAL RELATIONS STRUCTURES**

The economic and political context pertinent to Australian industrial relations; development of Australian economy, industry structure, labour markets, wage fixation, current economic strategies and policies.

Credit Points: 12  Contact Hours: 4 per week

**IR4022 INDUSTRIAL LAW**

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

Credit Points: 12  Contact Hours: 4 per week

**IR4023 INDUSTRIAL RELATIONS POLICIES**

Examination of policy formation in industrial relations at national and local levels in industries including wage policies, job security, job design, bargaining structure and union matters.

Credit Points: 12  Contact Hours: 4 per week

**IR4024 INDUSTRIAL RELATIONS PROCESSES**

Negotiation practices in industrial relations; negotiation and arbitration processes; analysis of structure and performance of institutions of arbitration; development of relevant skills including documentation, preparation of submissions and exhibits, examining witnesses.

Prerequisite: IR4020

Credit Points: 12  Contact Hours: 4 per week

**IR5004 INDUSTRIAL RELATIONS METHODOLOGY**

Basic computer skills; data bases and sources of information; a bibliographical exercise; design of a research program; introductory fieldwork.

Credit Points: 12  Contact Hours: 4 per week

**IR5005 ADVANCED THEORY & COMPARATIVISM**

Theoretical basis of industrial relations; international industrial relations and Australian comparisons; a theoretical and comparative issue or problem, eg, union or employer organisation, strikes, health and safety.

Prerequisites: Comparative and Theory subjects in GDIR or equivalent

Credit Points: 12  Contact Hours: 4 per week

**IR5006 INDUSTRIAL RELATIONS PLANNING**

The formal planning and framework of industrial relations policies and strategies; the content of industrial relations planning, eg, technology, training, superannuation; the relationship of planning to the political and economic environment, including industrial restructuring, capital formation and investment, employment and productivity.

Credit Points: 12  Contact Hours: 4 per week

**IR5007 ADVANCED INDUSTRIAL LAW**

Analysis of the legal aspects of a particular industrial relations problem from an Australian perspective; sociological approaches to law; the legislative context of the problem or issue in one or more countries; the international context eg, ILO conventions, EEC directives, European Court decisions from a legal viewpoint.

Prerequisites: GDIR or equivalent Industrial Law subjects or equivalent

Credit Points: 12  Contact Hours: 4 per week

**IR5011 THESIS**

Synthesis and application of studies undertaken in the course. Topic may be taken from any aspect of industrial relations. Formulation of thesis undertaken in conjunction with supervisor and other academic staff.

Credit Points: 120-168

**LA2042 LANGUAGE PROCESSES & PROGRAMS**

Approaches to language; the classroom environment; planning and implementing programs in language arts; oral language processes; drama in the classroom; reading processes; writing processes; learning about language; resources.

Prerequisite: SS2053

Credit Points: 6  Contact Hours: 3 per week

**LA2810 LOTE (INDONESIAN/JAPANESE/GERMAN) 1**

Acquisition of a Language Other Than English (LOTE): Students choose to specialise in one of the following: Indonesian, Japanese or German.

Credit Points: 8  Contact Hours: 3 per week

**LA2811 LOTE (INDONESIAN/JAPANESE/GERMAN) 2**

Continuation of LA2810. Further study and acquisition of a Language Other Than English (LOTE).

Credit Points: 8  Contact Hours: 3 per week

**LA3001 JAPANESE LANGUAGE 1**

Developing a proficiency and confidence in communicating in the macro skills of listening and speaking in standard Japanese; a critical understanding of some of the special characteristics of Japanese culture and society.

Prerequisite: AS3004

Credit Points: 12  Contact Hours: 4 per week

**LA3002 JAPANESE LANGUAGE 2**

Listening and speaking skills at a more advanced level; read and write Japanese nature scripts (Hiragana and Katakana).

Prerequisite: LA3001

Credit Points: 12  Contact Hours: 4 per week

**LA3003 JAPANESE LANGUAGE 3**

The development of the four skills of listening, speaking, reading and writing concurrently.

Prerequisite: LA3002

Credit Points: 12  Contact Hours: 4 per week

**LA3004 JAPANESE LANGUAGE 4**

An extension of the four macro skills in a business environment.

Prerequisite: LA3003

Credit Points: 12  Contact Hours: 4 per week

**LA3005 MANDARIN LANGUAGE 1**

Development of oral and grammatical skills for speaking and writing in Mandarin language; simple speaking and writing exercises.

Prerequisite: AS3004

Credit Points: 12  Contact Hours: 4 per week
LA3006 MANDARIN LANGUAGE 2
Development of oral and grammatical skills at a more advanced level; expansion of Mandarin characters.
Prerequisite: LA3005
Credit Points: 12 Contact Hours: 4 per week

LA3007 MANDARIN LANGUAGE 3
Development of speaking, reading and writing skills based on real life situations in China.
Prerequisite: LA3006
Credit Points: 12 Contact Hours: 4 per week

LA3008 MANDARIN LANGUAGE 4
Development of speaking, reading and writing skills based on business situations.
Prerequisite: LA3007
Credit Points: 12 Contact Hours: 4 per week

LA3032 RECENT DEVELOPMENTS IN LANGUAGE/READING
The nature of language; functions of language; dialects, sociolects and languages in contact; language development; oracy and literacy and their interrelationships; planning and implementation of a language arts subject or program.
Credit Points: 12 Contact Hours: 3 per week

LA4010 LANGUAGE IN USE
Formal systems of language at the level of the sentence, including phonology, morphology, syntax and semantics; formal systems of language beyond the sentence, including discourse, cohesive, pragmatic and paralinguistic. Language in social-cultural contexts; standard and non-standard varieties of language, including dialects, sociolinguistic and languages in contact.
Credit Points: 10 Contact Hours: 3 per week

LA4011 LANGUAGE TEACHING IN PRACTICE
Strategies for observation of second language lessons; analysis of the linguistic content of a variety of lessons; application of these principles.
Co-requisite: LA4010
Credit Points: 10 Contact Hours: 3 per week

LA4012 THE NATURE OF LANGUAGE LEARNING
Behaviouristic, cognitive and psychosocial explanations of second language acquisition/learning; the effect of age on second language acquisition/learning; interlanguage and fossilisation; errors and error analysis; personal factors, cultural differences and environmental factors and language acquisition/learning; language proficiency: its nature and assessment.
Credit Points: 10 Contact Hours: 3 per week

LA4018 CURRICULUM DEVELOPMENT
Implementation of a communicative syllabus response to the objective and subjective needs of particular learners; principles for the evaluation, selection and production of suitable teaching materials.
Credit Points: 10 Contact Hours: 3 per week

LB4008 BIBLIOGRAPHIC ORGANISATION
The purpose and principles of bibliographic control in organising all types of library materials, including the development of an effective catalogue, descriptive cataloguing, subject cataloguing, filing and computer applications.
Credit Points: 9 Contact Hours: 3 per week

LB4009 SCHOOL EXPERIENCE
Participants are provided with opportunities to observe and practice the skills of teacher-librarians in ways which complement their theoretical studies. University staff, in close cooperation with supervising teacher-librarians, plan an appropriate range of activities and compile a report on participants' performance.
Credit Points: 3

LB4010 THE SCHOOL LIBRARY IN MODERN EDUCATION
Recent developments in Australian education and their implications for the school library; child development and principles of human relationships; the nature, planning and standards of organised resource services at the school level; the role of the teacher-librarian; resource management.
Credit Points: 9 Contact Hours: 3 per week

LB4011 BOOKS & PUBLISHING
The artistic and historical evolution of the book; judgement of book format through an understanding of modern processes; the complexities of the publishing business, past and present.
Credit Points: 9

LB4012 DIRECTED STUDY SUBJECT 2
An individually tailored subject which allows participants, under the supervision of a staff member, to increase their knowledge in a particular area of interest.
Prerequisite: All Part A subjects; consult the Course Coordinator before enrolment
Credit Points: 9

LB4013 SPECIAL SEMINAR
Study of a specific aspect of teacher-librarianship, the subject to be determined by the University according to special need and/or the availability of special expertise.
Credit Points: 9

LI2800 CREATIVE WRITING 1
Using our senses; keeping a journal; expression and communication; playing with words; free and formal verse; description; narration; plotting and characterisation.
Credit Points: 8 Contact Hours: 3 per week

LI2801 CREATIVE WRITING 2
Use of resources (journals, libraries, newspapers, television, radio, one’s self); considering the audience to which the writing is directed; parameters of various genres; editing and publishing.
Prerequisite: LI2800
Credit Points: 8 Contact Hours: 3 per week

LI2802 CONTEMPORARY LITERATURE
Growing up in society; literature for children as a literary form and as a means of exploring the world of children; women in society; unemployment; misunderstood people; relations with South-East Asia.
Credit Points: 8 Contact Hours: 3 per week
L12808 LITERATURE & DRAMA 1
Extension of the skills of oral interpretation and audience reading fluency introduced in SS2033; selection and adaptation of literary material suitable for audience reading; the development of expressive and communicative interpretation of literature to various listening groups; encouragement of self analysis and analysis of oral reading interpretation via video playback techniques.
Credit Points: 8  Contact Hours: 3 per week

L12809 LITERATURE & DRAMA 2
This is an extension of L12808; techniques and skills of oral interpretation, advanced level; personal development through audience reading and performance literature; cultural enrichment through a broad literary spectrum; original selection, adaptation and orchestration of scripted material; literary performance within an appropriate multi-media setting.
Prerequisite: L12808
Credit Points: 8  Contact Hours: 3 per week

L12810 LITERATURE & WRITING
Explanation of a range of models of writing; the range of writing from picture books to adolescent fiction through different genres, eg, realistic/historical fiction, fantasy, science fiction. Detailed study in a choice of either children's literature or writing for children.
Credit Points: 8  Contact Hours: 3 per week

L12811 LITERATURE
A study of one of the following: recent fiction: contemporary novels, plays, poetry; the issues they explore, eg, multiculturalism, the environment; or fantasy and science fiction: a range of publications with emphasis on twentieth century science fiction/fantasy or women writers.
Credit Points: 8  Contact Hours: 3 per week

L12812 WRITING
Ranges of models for writing for adults; workshops on writing for adults.
Credit Points: 8  Contact Hours: 3 per week

L13004 COMPARATIVE EUROPEAN LITERATURE
Major works of European writers in translation; cross-cultural influences; the growth of Romanticism in Europe; Goethe, the French Romantic poets, Leopardi relative to developments in English literature; other periods in literary history; the nineteenth century novel.
Credit Points: 10  Contact Hours: 3 per week

L13701 CHILDREN'S LITERATURE
Evaluative criteria in children's literature; the range of genre in children's literature; bases for planning a children's literature program; teaching strategies.
Prerequisite: Language arts and literature studies at Diploma of Teaching level
Credit Points: 12  Contact Hours: 3 per week

L13702 TUTORING PARENTS AS LITERACY TUTORS
Increasing parent involvement in all areas of decision making in schools; developing communication and listening skills to deal with parents of all educational and socio-economic backgrounds; use of parents as literacy tutors of their children in the home and classroom situation.
Credit Points: 10  Contact Hours: 3 per week

L13806 THE APPEAL OF LITERATURE
An individual, personal view of the cultural and social context of literature; the reader and the reading process; the nature of literature; analysis of selected texts: contemporary popular fiction, science fiction, contemporary women writers, contemporary drama and verse.
Credit Points: 12  Contact Hours: 3 per week

L12800 STUDIES IN AUSTRALIAN CULTURE
Australian culture; organising processes applied to Australian culture; origins of Australian culture; the search for identity in Australian culture; confronting the future.
Credit Points: 8  Contact Hours: 3 per week

LW1002 THE LEGAL PROCESS
Law making process; judicial process; content of criminal, industrial and commercial law in the Australian Commonwealth and States; the Constitution and Federal laws; sale of goods.
Credit Points: 12  Contact Hours: 4 per week

LW3012 LEGAL STUDIES 1
Australian legal and constitutional system; sources of law, including doctrines and methodology of the law; statutory interpretation; introduction to the Law of Torts with emphasis on the tort of negligence; aspects of consumer protection.
Credit Points: 12  Contact Hours: 4 per week

LW3013 LEGAL STUDIES 2
Those aspects of law relevant to commercial transactions, with emphasis on the Law of Contract, and including aspects of sale of goods, hire purchase and the relationships of principal and agent; introduction to the Law of Bankruptcy.
Prerequisite: LW3012
Credit Points: 12  Contact Hours: 4 per week

LW3014 COMPANY LAW
Consideration of the law relating to companies with special emphasis on the requirements of companies.
Prerequisite: LW3012
Credit Points: 12  Contact Hours: 4 per week

LW3015 TAXATION PRACTICE
Law relating to income taxation covering the provisions of the Australian legislation as it applies to accounting practice; the non-statutory body of law; economic aspects of taxation.
Prerequisite: LW3012
Credit Points: 12  Contact Hours: 4 per week

LW3016 ADMINISTRATIVE LAW
Institutions and methodology involved in government decision making; constitutional issues affecting the structure of government in Australia; doctrine of separation of powers; Westminster style of government; mechanisms for judicial and non-judicial review of government decisions; Federal initiatives such as Administrative Appeals Tribunal and Freedom of Information Act.
Prerequisite: LW3012
Credit Points: 12  Contact Hours: 4 per week

LW3017 CORPORATE LAW
Legal and mandatory requirements relating to company officers; duties and responsibilities of company secretaries.
Prerequisite: LW3014
Credit Points: 12  Contact Hours: 4 per week

LW3018 BUSINESS LAW
Aspects of the law relating to meetings; trade practices; insurance; finance and other related commercial transactions.
Prerequisite: LW3012
Credit Points: 12  Contact Hours: 4 per week
I LW3019 LOCAL GOVERNMENT
Local government administration, politics, and systems; analysis of laws, by-laws and regulations pertaining to local governments. (This subject prepares the student for a career as a local government clerk in Queensland.)
Prerequisite: LW3012
Credit Points: 12  Contact Hours: 4 per week

II LW3020 THE LAW & LEGAL INSTITUTIONS
Queensland and Federal legal institutions; appreciation of legal procedures; development of law and its evolution in the Australian context; law enforcement agencies and procedures; basic legal research in case and statute law; examination and critique of strengths and weaknesses of our legal system; active citizenship.
Credit Points: 10  Contact Hours: 3 per week

III LW3021 LAW OF CONTRACT
The development of the law of contract; law governing the formation of contracts; application of the principles of contract law; matters affecting the validity of contracts; remedies for breach of contract; role of equity in modifying common law rules of contract; rational and objective methods in analysis of social issues in contracts.
Credit Points: 10  Contact Hours: 3 per week

IV LW3022 LAW OF TORTS
The theoretical bases of Law of Tort in Australia; different types of tort and remedies; application of Law of Tort to case studies; examination of principles through specific decisions in Tort; Tortion remedies available within the social context.
Credit Points: 10  Contact Hours: 3 per week

V LW3023 CRIMINAL LAW & PROCEDURE
The theoretical basis of Criminal Law in Queensland; application of the law to case studies; use of rational and objective methods when examining legal issues; how criminal law operates in practice within a legal and social context; analysis of the balance between the rights of citizens and police powers.
Prerequisite: LW3020
Credit Points: 10  Contact Hours: 3 per week

VI LW3024 INDIVIDUAL LEGAL RESPONSIBILITIES
The major statute law affecting an individual's legal responsibilities that are acquired when a person attains the age of 18; current legislation affecting family relationships; the renting and/or buying of a house; relationships between employer and employee.
Prerequisites: LW3020
Credit Points: 10  Contact Hours: 3 per week

VII LW3025 LEGAL ENVIRONMENT OF BUSINESS
The major statute law affecting both consumers and business people in the market place; current State and Federal legislation affecting sale of goods, trade practices, advertising, labelling and the general setting up of a business.
Co/Prerequisites: LW3021 and LW3022
Credit Points: 10  Contact Hours: 3 per week

VIII LW3026 COMMERCIAL LAW
Major topics in commercial law: agency, bailment guarantees, cheques and other negotiable instruments, insurance and banking; aspects of partnerships and company law.
Prerequisite: LW3025
Credit Points: 10  Contact Hours: 3 per week

IX LW3027 EDUCATORS & THE LAW
Significant legal issues relevant to the various participants such as educators, teachers, parents and children within the Australian education system.
Prerequisites: LW3020 and LW3022
Credit Points: 10  Contact Hours: 3 per week

X LW3028 INTRODUCTION TO LAW & SOCIAL JUSTICE
The tradition of law as it has evolved in a variety of socio-historical settings as well as the evolution of the specific British/Australian tradition of law; how different concepts of law have evolved; the impact of different views of human nature, political values, and philosophical values on the role of justice and society.
Prerequisites: LW3020 and LW3022
Credit Points: 10  Contact Hours: 3 per week

XI LW3029 INTERNATIONAL BUSINESS LAW
Nature of international business; international business contracts; foreign investment in Australia; taxation; dispute settlement; international transport of goods; the effects of international conflict.
Prerequisite: LW3012
Credit Points: 12  Contact Hours: 4 per week

XII LW3031 EDUCATORS & THE LAW
Law and its place in contemporary Australian society; sources of 'education law'; rights and educators; student law and schools; parents, law and education; educators' rights and obligations; educators and accidents; educational administration and law.
Credit Points: 12  Contact Hours: 3 per week

XIII MA2089 STUDIES IN MATHEMATICS & SCIENCE
The nature of science and mathematics; mathematics and science in the primary school; curriculum planning; pre-number ideas; early number; the number system; concepts of operation; strategies for basic facts; development of algorithms; safety; the Queensland Primary Science Syllabus; life, earth and space.
Credit Points: 12  Contact Hours: 6 per week

XIV MA2090 MATHEMATICS EDUCATION
The development of space; investigations in space; formalising spatial ideas; fraction concepts and operations; problem solving with fractions; visual representation of information; developing mathematics curricula.
Prerequisite: MA2089
Credit Points: 6  Contact Hours: 3 per week

XV MA2091 MATHEMATICS & TECHNOLOGY
Measurement and the young learner; the measurement sequence; the role of technology in measurement; problem solving and the learner; teaching problem solving; applications; technology; curriculum planning.
Credit Points: 8  Contact Hours: 3 per week

XVI MA2803 EXCURSIONS IN NUMBER
Principles of numeration (ancient methods, Hindu-Arabic system, decimals, bases other than ten); number patterns; divisibility (divisibility tests, Euclid's theorem, Fundamental Theorem of Arithmetic); linear and polynomial congruence (Fermat's and Euler's theorems, Law of Quadratic); reciprocity (Wilson's and Lagrange's theorems); diophantine problems.
Credit Points: 8  Contact Hours: 3 per week
**MA2809 FOUNDATIONS OF MATHEMATICS**
Discovery of little things which surprise and entertain; mathematical talking, thinking and playing; mathematics today.
Credit Points: 5  Contact Hours: 3 per week

**MA2811 NUMBERS FOR ALL AGES**
Discovery and study of number patterns; classical puzzles from number theory; use of electronic calculators.
Credit Points: 5  Contact Hours: 3 per week

**MA2812 RECREATIONAL MATHEMATICS FOR ALL**
Examination, analysis and solution, from a mathematical point of view, of games, paradoxes and fallacies which are of a mathematical nature; mathematics associated with certain manipulatives; patterns that originate from arithmetical, algebraic, geometric and environmental aspects of the discipline.
Credit Points: 5  Contact Hours: 2 per week

**MA2815 MATHEMATICAL FOUNDATIONS**
The structures and processes of mathematics used by people of all ages; patterns; relationships; systems.
Credit Points: 8  Contact Hours: 3 per week

**MA2816 BUILDING MATHEMATICAL MODELS**
Applications of mathematics to solving real world problems using modelling; graphs including Euler and Hamiltonian paths; probability; statistics.
Credit Points: 8  Contact Hours: 3 per week

**MA2817 THINKING MATHEMATICALLY**
The nature of child and adult thinking and learning in the mathematical domain; developing thinking and learning programs through mathematics; applications in the classroom; self-evaluation of thinking and learning in mathematics.
Credit Points: 8  Contact Hours: 3 per week

**MA3010 MATHEMATICAL METHODS 1**
Solution models; construction of a model function to describe a given real-world data function; identification of axiomatic system components; application of deductive proof methodologies; identification of 'faulty reasoning'; identification, definition and performance of basic operations with rational, irrational and complex numbers.
Credit Points: 10  Contact Hours: 3 per week

**MA3011 MATHEMATICAL METHODS 2**
The generality of mathematics and its relevance to everyday life; identification and simplification of a range of real world problems using graph theory or linear programming; construction of appropriate models in the solution of problems; interpretation and evaluation of models; application of appropriate computer software to aid problem solving.
Credit Points: 10  Contact Hours: 3 per week

**MA3012 CALCULUS 1**
Identification and simplification of problems, either mathematical or capable of solution using calculus; determination of appropriate methods using differential or integral calculus for the solution of problems; use of technology in problem solution; interpretation and evaluation of solutions in terms of the original problem.
Credit Points: 10  Contact Hours: 3 per week

**MA3013 PROBABILITY & STATISTICS 1**
Fundamental principles of probability theory; application of principles; collection, presentation and interpretation of data; calculation of parameters to infer characteristics; selection, description and employment of appropriate inferential statistical procedures in problem solving.
Credit Points: 10  Contact Hours: 3 per week

**MA3014 APPLIED MATHEMATICS 1**
The nature of mathematical modelling; construction of mathematical models for specific physical situations; solution of problems associated with mathematical modelling; interpretation of and remodification of mathematical models.
Prerequisite: MA3012
Credit Points: 10  Contact Hours: 3 per week

**MA3015 NUMERICAL ANALYSIS**
Categorisation of mathematical problems; description of computational algorithms for numerical solution of problems; understanding of the mathematical development of numerical algorithms; errors in numerical algorithms and different types; effective use of calculators and computers in executing algorithms.
Prerequisite: MA3012
Credit Points: 10  Contact Hours: 3 per week

**MA3016 OPERATIONS RESEARCH**
The rationale and concepts of operation research; analysis of real world problems in terms of given concepts; selection of appropriate concepts and related techniques, based on analysis; formulation of adequate models of problems for solution analysis.
Credit Points: 10  Contact Hours: 3 per week

**MA3017 MODERN ALGEBRA**
The process and power of abstraction in mathematics; number systems, relations and equivalence classes; groups, rings and fields; applications of the major topics and theorems presented.
Prerequisite: 3 Level I subjects
Credit Points: 10  Contact Hours: 3 per week

**MA3018 LINEAR ALGEBRA**
The fundamental concepts of linear algebra and their use in a variety of disciplines; mathematical development and structure; matrices and vectors and their central role in solving systems of linear equations and linear transformations; vector spaces; eigenvalues and eigenvectors; and applications.
Prerequisite: MA3012
Credit Points: 10  Contact Hours: 3 per week

**MA3019 CALCULUS 2**
Sequences and series; convergence, divergence; absolute convergence and conditional convergence; approximation of functions using Taylor's theorem; Polar coordinates in describing conic section; application of derivatives and multiple integrals.
Prerequisite: MA3012
Credit Points: 10  Contact Hours: 3 per week

**MA3020 PROBABILITY & STATISTICS 2**
Extension of MA3013; Baye's Theorem, moment generating functions, multiple regression, analysis of variance and non-parametric statistics.
Prerequisites: MA3012 and MA3013
Credit Points: 10  Contact Hours: 3 per week

**MA3021 APPLIED MATHEMATICS 2**
Natural phenomena including motion in three dimensions, vibrating strings, unsteady heat conduction,
electromagnetism, electrostatics and magnetostatics; modelling of such phenomena mathematically; solution of problems using mathematical ideas including generalised coordinates and Lagrange's equations, generalised functions, scalar and vector fields and vector analysis.

**Prerequisite:** MA3013 and MA3020

**Credit Points:** 10

**Contact Hours:** 3 per week

**MA3028 ADVANCED APPLIED MATHEMATICS**

Vector and tensor analysis; conservation equations and continuum mechanics; Navier-Stokes equations of viscous flow; finite deformations; the polar decomposition theorem; finite strain tensors; equations for isotropic linear elasticity.

**Prerequisites:** MA3019 and MA3021

**Credit Points:** 10

**Contact Hours:** 3 per week

**MA3032 CURRICULUM DEVELOPMENT IN MATHEMATICS**

Influential factors on the development and content of mathematical curricula; how children and youths learn mathematical concepts; identification of efficient teaching strategies for classroom mathematics; research into an area of mathematics of personal interest to the student.

**Prerequisite:** CU3040 or equivalent

**Credit Points:** 12

**Contact Hours:** 3 per week

**MA3035 ADVANCED NUMERICAL ANALYSIS**

Numerical methods available for solving systems of linear equations; finding eigenvalues and eigenvectors of a matrix and solving partial differential equations.

**Prerequisite:** MA3015

**Credit Points:** 10

**Contact Hours:** 3 per week

**MA3036 ADVANCED OPERATIONS RESEARCH**

Linear programming and integer programming; unconstrained and constrained nonlinear programming; multiple objective decision making and heuristic problem solving; application of each technique; computer applications.

**Prerequisites:** MA3012, MA3016 and MA3018

**Credit Points:** 10

**Contact Hours:** 3 per week

**MA3037 HISTORY OF MATHEMATICS**

The nature of mathematics; numbers, geometry, logic and paradox; modern mathematical concepts such as undecidability, graph theory and catastrophe theory.

**Prerequisite:** 4 Level I subjects in Mathematics

**Credit Points:** 10

**Contact Hours:** 3 per week

**MA3704 CORRECTIVE MATHEMATICS**

Learning difficulties in mathematics; organising mathematical learning; formal and informal techniques for diagnosing learning difficulties; overview of the learning process and identification of areas of difficulty; identification of difficulties in problem solving; identifying and remediating specific error patterns; identifying and evaluating resources in the remedial program. Study school for external students strongly recommended.

**Prerequisites:** Studies in mathematics method at Diploma of Teaching level or equivalent experience

**Credit Points:** 12

**Contact Hours:** 3 per week
MA5065 Teaching Problem Solving in Mathematics
Definition and importance of problem solving; measures of problem-solving performance; problem-solving strategies; relevant research evidence; suggestions for teaching problem solving.
Prerequisite: Studies in mathematics curriculum or methodology at Diploma of Teaching level and relevant experience.
Credit Points: 12  Contact Hours: 3 per week

MA5066 Research & Evaluation Techniques
Overview of research and evaluation (e.g., observation, protocol methods, tests, and surveys); theoretical and epistemological frameworks for research and evaluation; types of research; qualitative and quantitative methods (e.g., case studies, clinical interviews, action research, teaching experiments, correlational studies, historical studies, and experimental designs); literature searches and surveys.
Credit Points: 12  Contact Hours: 3 per week

MA5067 Research & Evaluation Design
Designing research and evaluation studies (applying theoretical aspects of research and evaluation to practical situations); basic experimental design and statistical analysis; evaluating research designs; scholarly writing of proposals and reports.
Prerequisite: MA5066
Credit Points: 12  Contact Hours: 3 per week

MA5068 Research in Mathematics Education
Research techniques appropriate to mathematics education; key areas of research investigations in mathematics; interpreting planning and critically assessing mathematics education research.
Prerequisites: MA5065 and MA5067
Credit Points: 12  Contact Hours: 3 per week

MA5069 Curriculum Specialisation in Mathematics
Opportunity for indepth study of a curriculum topic or year level of own choice; planning, constructing, implementing and evaluating mathematics curricula and instructional programs.
Credit Points: 12  Contact Hours: 3 per week

MA5070 Diagnosis & Assessment in Mathematics
Techniques for diagnosing and remediating difficulties in mathematics; assessment models and their interrelationship with instruction; designing assessment instruments; modern developments in classroom evaluation; practical work with clients.
Credit Points: 12  Contact Hours: 3 per week
MA5071 TECHNOLOGY IN MATHEMATICS EDUCATION
The role of technology, particularly microcomputers, in teaching mathematics; programming; integrating technology into the mathematics curriculum; spreadsheets and other software; artificial intelligence and expert systems.
Credit Points: 12 Contact Hours: 3 per week

MA5072 SOCIAL CONTEXTS IN MATHEMATICS EDUCATION
The social context of the mathematics classroom; the effect of gender, social class and cultural background on mathematics learning; power and politics in mathematics and schooling; student-teacher interactions and mathematical knowledge; mathematicalisation, the global village and the future of mathematics.
Credit Points: 12 Contact Hours: 3 per week

MA5073 LEADERSHIP IN MATHEMATICS EDUCATION
Elements of supervision, including policy formulation, decision making, implementation and evaluation as they relate to curriculum development; inservice education, and liaison with professional and community bodies; historical and current approaches in mathematics teacher education; contemporary recommendations regarding teaching and teacher education; examining and evaluating promising emerging models in mathematics teacher education.
Credit Points: 12 Contact Hours: 3 per week

MA5074 INDEPENDENT STUDY
Opportunity to study an aspect of mathematics of particular interest; working on an individual basis with a lecturer.
Credit Points: 12

MA5075 ADVANCED SEMINARS
Opportunity to participate in a special subject organised around a particular interest, or a visiting expert.
Credit Points: 12

MA5076 NUMBER THEORY
Divisibility, Euclid’s theorem, fundamental theorem of arithmetic, and distribution of primes; congruence theory; linear and non-linear diophantine problems and Pythagorean triples; continued fractions; convergence approximation for irrational numbers and Pell’s equation; number theoretic functions and quadratic reciprocity; the mathematics of Euler, Fermat, Wilson, Lagrange, Pascal, Fibonacci, Lucas and Parey; algebraic number fields.
Credit Points: 12 Contact Hours: 3 per week

MA5077 DISCRETE MATHEMATICS & APPLICATIONS
Markov chain models including regular, ergodic and absorbing chains; the theory of linear optimisation models; geometric and computational aspects of linear optimisation; models involving chance, choice and competition including zero-sum games and non zero games; growth models for epidemics, rumours and queues.
Credit Points: 12 Contact Hours: 3 per week

MA5078 COMPUTING & STATISTICAL METHODS
Numerical methods for the solution of non-linear equations and systems of linear equations; interpolation and extrapolation; curve fitting; fundamental principles of the architecture and operation of digital computer systems; data structuring and abstraction, knowledge representation and programming as problem solving; statistical concepts, procedures and computer applications.
Credit Points: 12 Contact Hours: 3 per week

MA5079 HISTORY & PHILOSOPHY OF MATHEMATICS
The background of the natural origins of aspects of mathematics relevant for teaching in schools; philosophical aspects of the development of mathematics; analysis of the history of mathematics with special focus on issues in calculus, algebra and geometry; relationships of these to the teaching of mathematics in secondary schools.
Credit Points: 12 Contact Hours: 3 per week

MA5080 FUNDAMENTAL STRUCTURES IN MATHEMATICS
Basic structures of mathematics (eg, groups, fields, ideals, and equivalence and order relations); fundamental theorems and their application as recurring themes in school mathematics.
Credit Points: 12 Contact Hours: 3 per week

MB3025 MICROBIOLOGY
Scope of microbiology; characteristics of major microbial types; microbial metabolism; water; food and micro-organisms; principles of food presentation; spoilage of food; food-borne disease; food hygiene; microbial fermentation of foods; environmental and industrial microbiology.
Prerequisites: BI3025 and CH3025
Credit Points: 10 Contact Hours: 5 per week

ME2800 UNDERSTANDING TELEVISION
Introduction to visual analysis: tele-litercy; analysis of title sequences; narrative sequences; film shots; introductory genre; situation comedy; soap opera; crime shows; news.
Credit Points: 5 Contact Hours: 2 per week

ME3001 FOUNDATION MEDIA STUDIES 2
Development of a visual dialogue through a series of projects within and outside the studio with a view to understanding relationships between the theoretical and practical aspects of art and developing a philosophical basis for professional attitudes and original thinking; research into the knowledge and resources available; development of the ability to evaluate aesthetic qualities in the student’s own work.
Prerequisite: ME3012
Credit Points: 30 Contact Hours: 10 per week

ME3002 ADVANCED MEDIA STUDIES 1
Students are expected to research into their own personal directions, formulate and develop self-generated enquiry and demonstrate the acquisition of working methods, skills and knowledge required for the successful realisation of their concepts. Students present a program to the Course Coordinator which will indicate specific studies in the two-dimensional or three-dimensional areas or combination of these.
Prerequisite: ME3001
Credit Points: 30 Contact Hours: 10 per week

ME3003 ADVANCED MEDIA STUDIES 2
Students prepare and present a plan of studies based on their own specific interest; rigorous questioning of concept and artefact will be required with the level of realisation and the ways in which media are used reflecting a high level of achievement. Further
workshops in areas where the acquisition of skills is essential.
Prerequisite: ME3002
Credit Points: 20  Contact Hours: 8 per week

**ME3004 ADVANCED MEDIA STUDIES 3**

Students are expected to work independently demonstrating sound habits of research and sustained studio practice; skills developed in ME3001 and ME3002 should enable concepts to be expressed with confidence; intensive studio work to draw together the students' interest in the visual arts in general and their specific study in particular.
Prerequisite: ME3003
Credit Points: 20  Contact Hours: 8 per week

**ME3005 ADVANCED MEDIA STUDIES 4**

Independent work in preparation for an exhibition.
Prerequisite: ME3004
Credit Points: 20  Contact Hours: 8 per week

**ME3006 EXTENDED MEDIA STUDY 1**

Students are required to prepare and present a plan of studies based on their own particular interests and participate in workshops where the acquisition of skills is essential to the solution of problems and achievement of high levels of performance.
Credit Points: 20  Contact Hours: 6 per week

**ME3007 EXTENDED MEDIA STUDY 2**

See ME3006
Credit Points: 10  Contact Hours: 3 per week

**ME3008 EXTENDED MEDIA STUDY 3**

Students are expected to be able to work independently and demonstrate sound habits of research and sustained studio practice. The studio will be regarded as the area on which to draw together the students’ interests in the visual arts in general and their specific study in particular.
Credit Points: 20  Contact Hours: 6 per week

**ME3009 EXTENDED MEDIA STUDY 4**

See ME3008.
Credit Points: 10  Contact Hours: 3 per week

**ME3012 FOUNDATION MEDIA STUDIES 1**

Familiarisation with resources available within and outside the University (exhibition spaces, working environments, institutions, the materials and tools of art-making facilities, printed and visual resources); individual and group projects introducing a variety of visual art problems.
Credit Points: 30  Contact Hours: 18 per week

**ME4007 MEDIA PRODUCTION & USE**

The micro-computer and production; learning centres and bulletin boards; uses for the overhead projector; design of visual images; selection, operation and maintenance of audio equipment, 16mm projectors, video; slide-tape production; the operation of a 35mm camera and development of black-and-white photographs.
Credit Points: 9  Contact Hours: 3 per week

**ME4008 MEDIA, SCHOOL & SOCIETY**

Mass media communication processes; influences of media formats; media control and ownership, techniques of advertising; educational applications of mass media.
Prerequisites: All Part A subjects
Credit Points: 9

**ME3025 INTRODUCTION TO MANAGEMENT**

The role of management; evolution of management theory; fundamentals of planning; decision making in organisations; fundamental organisation; group dynamics and informal organisations; human resources management; motivation; leadership; principles of communication; the management of change.
Credit Points: 10  Contact Hours: 3 per week

**MG3026 RESOURCE MANAGEMENT**

The family as a social system; resources and constraints related to the life cycle; management in the family context; the family in Australia; managing finance.
Prerequisite: MG3025
Credit Points: 10  Contact Hours: 3 per week

**MG3027 BUSINESS ORGANISATION**

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.
Prerequisite: MG3025
Credit Points: 10  Contact Hours: 3 per week

**MK3013 CONSUMER BEHAVIOUR**

Consumer motivation; consumer personality and attitudes; consumer decision processes; group influences in marketing.
Prerequisite: MK3019
Credit Points: 12  Contact Hours: 4 per week

**MK3014 BUSINESS FORECASTING**

Forecasting problems; forecasting methods including Delphi, time series analysis and causal models.
Credit Points: 12  Contact Hours: 4 per week

**MK3015 MARKET RESEARCH**

Problem definition; research planning; analysis, interpretation and utilisation of research data; quantitative techniques.
Prerequisite: MK3013
Credit Points: 12  Contact Hours: 4 per week

**MK3016 LOGISTICS**

Business logistics management deals with the coordination, planning, organisation and control of all move-store activities that facilitate product flow from the point of raw material acquisition to the point of final consumption, and in this process involves provision of the attendant research and information flows for the purpose of providing the requisite level of customer service.
Prerequisite: MK3020
Credit Points: 12  Contact Hours: 4 per week

**MK3017 COMPUTER APPLICATIONS IN MARKETING**

Application of computer packages, including SPSS and various statistical/marketing packages.
Prerequisites: MK3014 and MK3020
Credit Points: 12  Contact Hours: 4 per week

**MK3018 APPLIED MARKET RESEARCH**

The capstone application of theoretical concepts studied in the areas of: marketing, market research, communication, management, data analysis and report writing; a market research project for industry.
Prerequisites: MK3015 and MK3020
Credit Points: 12  Contact Hours: 4 per week
MK3019  INTRODUCTORY  MARKETING
Assessment of market opportunities; organisation of the firm for marketing; planning the marketing program; measurement of market performance.
Credit Points: 12  Contact Hours: 4 per week

MK3020  STRATEGIC MARKETING
Product planning including development of product mix and product life cycle; pricing, distribution, advertising and promotion decisions.
Prerequisite: MK3019
Credit Points: 12  Contact Hours: 4 per week

MK3021  INTERNATIONAL MARKETING
The foreign exchange market; fixed and floating exchange rates, buying and selling overseas; the export decision; export promotion.
Prerequisites: EC3029 and MK3020
Credit Points: 12  Contact Hours: 4 per week

MK3022  BUSINESS QUANTITATIVE METHODS 1
Linear functions; systems of linear equations; matrix algebra; linear programming; quadratic functions; exponential and logarithmic functions; differential calculus; partial differentiation.
Credit Points: 12  Contact Hours: 4 per week

MK3023  BUSINESS QUANTITATIVE METHODS 2
Descriptive statistics; probability; probability distributions; discrete distributions - binomial and hypergeometric, continuous distribution - normal; sampling distributions; statistical inference - estimation and hypothesis testing; non-parametric tests – chi-square tests of goodness of fit and independence; simple linear regression and correlation.
Prerequisite: MK3022
Credit Points: 12  Contact Hours: 4 per week

MK3024  INTRODUCTORY ECONOMETRICS
Linear programming; simplex method; duality; sensitivity analysis; multiple linear regression; general linear model in matrix form; heteroscedasticity; multicollinearity and autocorrelation; decision theory.
Prerequisite: MK3023
Credit Points: 12  Contact Hours: 4 per week

MK3026  PRODUCT DEVELOPMENT
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.
Credit Points: 8  Contact Hours: 3 per week

MK3028  MARKET SIMULATION
Managerial and behavioural theories of the firm; pricing under monopoly and oligopoly; average cost pricing, unit pricing; structure, conduct and performance in industry; public policy and its effect on behaviour of the firm.
Credit Points: 12  Contact Hours: 4 per week

MK4005  QUANTITATIVE METHODS FOR BUSINESS
Descriptive statistics; statistical inference; simple linear correlations, regressions and analysis; time series; forecasting; index numbers; computer packages.
Credit Points: 12  Contact Hours: 4 per week

MK4006  ENTREPRENEURSHIP
Introduction to the Business Plan; entrepreneurial management; organisational strategy; legal and contractual aspects; marketing function; marketing research; market strategies; venture financing; cash flow forecasting; writing a Business Plan.
Prerequisite: Completion of 40 credit points towards GradDipBus - Administration
Credit Points: 12  Contact Hours: 4 per week

MK4007  MARKETING FOR MANAGERS
Principles and applications of marketing; consumer behaviour; strategic marketing; pricing policies; market research; market planning and implementation.
Credit Points: 12  Contact Hours: 4 per week

MK5004  ADVANCED QUANTITATIVE RESEARCH METHODS
Conceptual foundations of research design; research methodologies; data sources; methods of observation and data collection; data analysis; evaluation.
Prerequisite: MK3024 or equivalent. A high level of performance in subjects in statistics and applied statistics at undergraduate level is assumed. Knowledge of computing and use of computer packages is highly desirable.
Credit Points: 12  Contact Hours: 4 per week

MK5005  BUSINESS FORECASTING TECHNIQUES
Exponential and moving average techniques; decomposition models; seasonal regression models; stochastic models; stationary and non-stationary models; model identification and estimation; diagnostic checking; transfer functions.
Prerequisite: MK3014 or equivalent
Credit Points: 12  Contact Hours: 4 per week

MK5006  BUSINESS LOGISTICS
The integrated physical distribution management concept; customer service; inventory policy, analysis and decision making; selection of distribution channels, channel design and strategy; transport systems and model choice; modelling the facility location, optimising size, siting and network; logistics and pricing; organisational implementation of the marketing logistics concepts.
Prerequisite: MK3014, MK3024 or equivalent
Credit Points: 12  Contact Hours: 4 per week

MK5007  ADVANCED MARKETING SIMULATION
The economics of risk and uncertainty; quantitative estimation of demand and costs; market structures and pricing practices; multi-product pricing; transfer pricing; capital budgeting.
Prerequisite: Economics to Bachelor's degree level
Credit Points: 12  Contact Hours: 4 per week

MK5011  THESIS
Synthesis and application of studies undertaken in the course. Topic may be taken from any aspect of marketing science. Formulation of thesis undertaken in conjunction with supervisor and other academic staff.
Credit Points: 120-168

ML3005  FRENCH LANGUAGE I
Development of the four language skills: listening, speaking, reading and writing; acquisition of knowledge and skills to perform various language functions in a variety of settings.
Credit Points: 10  Contact Hours: 5 per week

ML3006  FRENCH LANGUAGE II
Extension of ML3005.
Prerequisite: ML3005
Credit Points: 10  Contact Hours: 5 per week
ML3007 FRENCH LANGUAGE & LITERATURE 1
Development of the four language skills; literary texts where the prevailing ideas are seen to be revolutionary in some way, whether individually, socially, or philosophically; (Voltaire, Rousseau, Sartre, Rimbaud, Robbe-Grillet) where language and genre are at issue.
Prerequisite: ML3006
Credit: Points: 10  Contact Hours: 3 per week

ML3008 FRENCH LANGUAGE & LITERATURE 2
Continuing development of the four language skills; studies in conflict in French literature.
Prerequisite: ML3006
Credit: Points: 10  Contact Hours: 3 per week

ML3009 FRENCH LANGUAGE & LITERATURE 3
Continuing development of the four language skills; studies in relationships between men and women in French literature.
Prerequisite: ML3006
Credit: Points: 10  Contact Hours: 3 per week

ML3010 FRENCH LANGUAGE & LITERATURE 4
Continuing development of the four language skills; study of a variety of French texts where there is the possibility of analysing different aspects of the concept of hero or heroine.
Prerequisite: ML3006
Credit: Points: 10  Contact Hours: 3 per week

ML3017 ITALIAN LANGUAGE 1
Functional development of the four language skills; systematic study of Italian grammar to consolidate language structures.
Credit: Points: 10  Contact Hours: 4 per week

ML3018 ITALIAN LANGUAGE 2
Extension of ML3017.
Prerequisite: ML3017
Credit: Points: 10  Contact Hours: 4 per week

ML3019 ITALIAN LANGUAGE & LITERATURE 1
Italian grammar; writing, listening and speaking skills; reading of prose and poetry; reading and performance of a play.
Prerequisite: ML3018
Credit: Points: 10  Contact Hours: 3 per week

ML3020 ITALIAN LANGUAGE & LITERATURE 2
Difficult aspects of Italian grammar; systematic study of the literature of the Middle Ages.
Prerequisite: ML3019
Credit: Points: 10  Contact Hours: 3 per week

ML3021 ITALIAN LANGUAGE & LITERATURE 3
Further development of language skills; literature from the Renaissance to the nineteenth century; development of the Italian language; dialect; Italian spoken by migrants in Australia.
Prerequisite: ML3020
Credit: Points: 10  Contact Hours: 3 per week

MU2102 MUSIC EDUCATION
The role of the music educator; development of personal musical skills; concept development; rhythmic notation, form, harmony, texture and timbre, dynamics; music learning experiences.
Credit: Points: 6  Contact Hours: 2 per week

MU2700 CONTEXTS FOR TEACHING & LEARNING
Music curriculum models; the needs of learners from varied cultural backgrounds; stages of musical development; program development and teaching strategies.
Credit Points: 8  Contact Hours: 3 per week

MU2701 APPROACHES TO MUSIC EDUCATION
Philosophy, objectives and content of four music programs; implementation of some aspects of these programs; improvement of teaching techniques.
Credit Points: 8  Contact Hours: 3 per week

MU2702 CLASS PROGRAM DEVELOPMENT IN MUSIC EDUCATION
The music curriculum; the nature of curricula in the arts; current research in children's musical development; linkages between musical development and overall growth; interpersonal relationships in the context of class, school, bands/choir, theatre and the community.
Credit Points: 8  Contact Hours: 3 per week

MU2703 VOCAL STUDIES
Breathing for singing; voice production; sight singing; repertoire selection; ensemble singing; conducting; conducting and analysis.
Credit Points: 8  Contact Hours: 3 per week

MU2704 INSTRUMENTAL STUDIES
Performance skills in solo performance with ensemble backing; score reading and analysing arrangements; tuning and conducting techniques; practical work styles of contemporary composers.
Credit Points: 8  Contact Hours: 3 per week

MU2705 PRACTICAL MUSICIANSHIP
Literature suitable for school use and its performance; score reading and interpretation; conducting; music writing.
Credit Points: 8  Contact Hours: 3 per week

MU2708 ALTERNATIVE APPROACHES TO MUSIC EDUCATION
Introduction to philosophy and techniques of the different approaches of Orff, Dalcroze, Suzuki; comparison between these approaches and the Queensland programs.
Credit Points: 8  Contact Hours: 3 per week

MU2710 PERFORMANCE PRACTICE
Continuation of conducting and rehearsal techniques; instrumental and vocal instruction; rehearsals of small ensembles as both leaders and performers; researching the repertoire of suitable ensemble music; solo or ensemble performance at a public recital.
Prerequisite: Advanced skills in playing chosen instrument
Credit Points: 8  Contact Hours: 3 per week

MU2713 MUSIC IN MULTICULTURALISM
Scope and purpose of ethnomusicology; the role of music in culture; the multicultural nature of Australian society; the role of music in a multicultural society; the use of ethnic music in the classroom; songs and dances of various ethnic communities; seminars on fieldwork.
Credit Points: 8  Contact Hours: 3 per week
MU2806 GUITAR WORKSHOP
Development of skill in playing basic guitar chords, strumming suitable rhythmic patterns and leading of group singing with guitar.
Prerequisite: Available only to beginners or those with little recent experience on guitar
Credit Points: 5
Contact Hours: 2 per week

MU2802 PIANO FOR BEGINNERS
Introduction to the piano as a practical instrument for use in both recreational and classroom situations; sight reading; harmonisation.
Prerequisite: Available only to those with no previous experience on piano
Credit Points: 5
Contact Hours: 2 per week

MU2803 PIANO WORKSHOP I
Development of keyboard skills relevant to both recreational and classroom situations; sight reading; accompaniment; performance of pieces.
Co/Prerequisite: MU2802 or equivalent
Credit Points: 5
Contact Hours: 2 per week

MU2809 VOCAL STUDIES 1
Breathing for singing (muscular control, use of lungs and diaphragm, control in inhaling and exhaling); voice production (sound mechanisms, vowel and consonant shaping, attacking and releasing notes, articulation); sight singing; ensemble singing; conducting.
Credit Points: 8
Contact Hours: 3 per week

MU2814 EXPLORING MUSIC
Use of recorder, percussion instruments, voice, autoharp, movement and speech to develop a familiarity with music; building a vocabulary for understanding the language of music and movement.
Credit Points: 5
Contact Hours: 3 per week

MU2816 MUSICIANSHIP
Aural training; movement as an aid to musical understanding; appreciation of music from primitive times to the twentieth century including knowledge of composers, styles etc.; harmonisation explored through singing rounds and part songs, and by providing instrumental accompaniments in various styles; development of instrumental skills.
Credit Points: 10
Contact Hours: 3 per week

MU2817 GROUP INSTRUMENTAL
Participation in group instrumental performance using a variety of instruments; playing instruments for use in ensemble work; ensemble techniques in singing; part-writing; performing in ensemble.
Prerequisite: MU2814 or equivalent
Credit Points: 10
Contact Hours: 4 per week

MU2824 VOCAL STUDIES 2
Development of vocal range and tone colour; stylistic singing; improvisation; repertoire selection; conducting and analysis.
Prerequisite: MU2809
Credit Points: 8
Contact Hours: 3 per week

MU2827 INSTRUMENTAL MUSIC 1
Performance skills on selected instruments; development of musicianship; simple composition for ensemble with group performance of student compositions.
Credit Points: 8
Contact Hours: 3 per week

MU2828 INSTRUMENTAL MUSIC 2
Performance and accompaniment skills; more advanced musicianship, composition and arrangements and performance for ensembles in four or five parts.
Prerequisite: MU2827
Credit Points: 8
Contact Hours: 3 per week

MU2829 CREATIVE MUSIC WORKSHOP
Musical improvisation and composition; exploration of sound; discrimination and organisation of sound; musical communication; integration with other artistic forms; media and technology; workshop performance; style and technique.
Credit Points: 5
Contact Hours: 2 per week

MU3035 AURAL MUSICIANSHIP 1
Aural perception skills; development of vocal sight reading and performance skills; training the musical memory; solfege; dictation; aural analysis.
Credit Points: 10
Contact Hours: 3 per week

MU3036 AURAL MUSICIANSHIP 2
Continuation from work begun in MU3035; performance of music in parts; harmonic analysis; transcription of melodies by ear.
Prerequisite: MU3035
Credit Points: 10
Contact Hours: 2 per week

MU3037 AURAL MUSICIANSHIP 3
Advanced aural perception for students who wish to extend further their expertise in this field; continuation from MU3036.
Prerequisite: A grade of 5 or above in MU3036
Credit Points: 5
Contact Hours: 2 per week

MU3040 SYSTEMS OF PART WRITING 1
Writing of modal and tonal melodies; two part techniques; functional harmony and voice leading techniques; diatonic harmony.
Prerequisite: Literacy in notation, key, rhythm. Knowledge of basic chord structures and progressions
Credit Points: 10
Contact Hours: 2 per week

MU3041 SYSTEMS OF PART WRITING 2
Chromatic harmony; nineteenth and twentieth century writing techniques.
Prerequisite: MU3040
Credit Points: 10
Contact Hours: 2 per week

MU3044 MUSIC PRACTICUM
Skills, interests and aptitudes gained through experience in the course to date are directed towards a college or community activity in music. Students are provided with an opportunity to practise their art within a specific community - artistic, public or institutional.
Credit Points: 10

MU3046 HISTORY, LITERATURE & ANALYSIS 1
Late Renaissance and Baroque music; development of research and analysis skills; special emphasis on Fugue, Binary and Ritoronello forms as found in keyboard, instrumental and vocal music of the period.
Credit Points: 10
Contact Hours: 3 per week

MU3047 HISTORY, LITERATURE & ANALYSIS 2
Music in the classical era; development of research and analytical skills; the classical sonata principle as found in the symphony, sonata, concerto and opera genres of the period.
Prerequisite: MU3046
Credit Points: 10
Contact Hours: 3 per week

MU3048 HISTORY, LITERATURE & ANALYSIS 3
Romantic and impressionist music; development of research and analytical skills; forms studied will include the lied, symphony, orchestral music, instrumental and keyboard music, and music drama.
Prerequisite: MU3047
Credit Points: 10
Contact Hours: 3 per week

MU3049 LITERATURE, LITERATURE & ANALYSIS 4
Musical improvisation and composition; exploration of sound; discrimination and organisation of sound; musical communication; integration with other artistic forms; media and technology; workshop performance; style and technique.
MU3053 COMPOSITION & TECHNOLOGY 1
Principles of composition; motivic development; popular song forms; introduction to midi and computer music; sequences.  
Prerequisite: Consent of lecturer  
Credit Points: 10  
Contact Hours: 3 per week

MU3054 COMPOSITION & TECHNOLOGY 2
Introduction to contrapuntal techniques, including imitation, canon, sequence; studio techniques including sound mixing, microphone techniques, sampling, editing.  
Prerequisite: MU3053  
Credit Points: 10  
Contact Hours: 3 per week

MU3055 COMPOSITION & TECHNOLOGY 3
The development of fully formed short compositions using the resources of the sound studio. Music in the popular media.  
Prerequisite: MU3054  
Credit Points: 10  
Contact Hours: 3 per week

MU3056 COMPOSITION & TECHNOLOGY 4
Personal composition project involving selection from a wide range of sound resources both in the studio and available from the wider community.  
Prerequisite: MU3055  
Credit Points: 10  
Contact Hours: 3 per week

MU3057 MUSIC IN THE TWENTIETH CENTURY
Overview of the major styles of twentieth century music including jazz and popular music; writing techniques; individual and group generated compositions. Analysis of selected representative compositions.  
Credit Points: 10  
Contact Hours: 3 per week

MU3058 MUSIC IN CONTEMPORARY SOCIETY
A survey of the range of musical activity within society today; principles of program design; the role of the community musician; funding and grant implications for music projects in Australia today.  
Credit Points: 5  
Contact Hours: 2 per week

MU3059 KEYBOARD MUSICIANSHIP
Selected keyboard majors; practical classes in accompanying. Other students: keyboard technique; sight reading in a variety of keyboard styles; basic improvisation skills, including harmonisation of melodies.  
Credit Points: 10  
Contact Hours: 2 per week

MU3060 IMPROVISATION
Aural analysis of harmonic progressions; acquisition of a repertoire of jazz/pop standards for improvisation purposes; improvisation on chief instrument and in the ensemble situation.  
Prerequisite: MU3055  
Credit Points: 10  
Contact Hours: 3 per week

MU3061 SOCIOLOGY OF POPULAR MUSIC
Understanding popular culture; relationship between popular culture and art forms; roles of the media; critical study of popular music genres.  
Prerequisite: AR3003  
Credit Points: 10  
Contact Hours: 3 per week

MU3062 COMMUNITY MUSIC
Understanding the roles of the musician in the community; identification of the sources and practice of music in the wider community; field work. Composition and performance for the layperson. (Not offered in 1991.)  
Credit Points: 10  
Contact Hours: 3 per week

MU3063 STUDIO MUSIC TEACHING
An introduction to the teaching of music in the studio; understanding child development; lesson preparation; teaching materials; survey of group methods. (Not offered in 1991.)  
Credit Points: 10  
Contact Hours: 3 per week

MU3064 GUITAR WORKSHOP
Development of basic skills in guitar performance; single-line melodies; chord progressions; song accompaniment. (Not offered in 1991.)  
Credit Points: 10  
Contact Hours: 3 per week

MU3065 PRACTICAL STUDIES A1
Development of a strong and reliable technique, interpretation and performance skills on the chief practical instrument or voice; performance seminar; participation in performance activities; recital.  
Credit Points: 15  
Contact Hours: 2 per week

MU3066 PRACTICAL STUDIES A2
Group tuition on an orchestral wind or string instrument; basic performing techniques. Directed ensemble activities including membership of wind or choral ensemble depending on chief instrument; repertoire and reading choir.  
Credit Points: 15  
Contact Hours: 6 per week

MU3067 PRACTICAL STUDIES A3
Exploration of established and new repertoire on the chief practical instrument or voice. Continued development of technique, together with the acquisition of analytical and interpretive skills; participation in performance activities; performance seminar, recital. Instrumental or vocal ensemble.  
Prerequisite: MU3065  
Credit Points: 15  
Contact Hours: 2 per week

MU3068 PRACTICAL STUDIES B1
Group tuition on an orchestral wind or string instrument; basic performing techniques. Directed ensemble activities including membership of wind or choral ensemble depending on chief instrument; repertoire and reading choir.  
Credit Points: 15  
Contact Hours: 6 per week

MU3069 PRACTICAL STUDIES B2
Group tuition on an orchestral wind instrument or guitar; basic performing techniques.  
Prerequisite: MU3066  
Credit Points: 15  
Contact Hours: 6 per week

MU3070 CHORAL ARRANGING & CONDUCTING
Arrangement of keyboard and diverse ensemble music for choral ensemble; harmonisations of set melodies and arrangements of same for choral ensemble; arranging for large vocal ensemble. Score preparation; conducting techniques; rehearsal procedures; development of a personal style in the direction of choral music.  
Co/Prerequisite: MU3040  
Credit Points: 10  
Contact Hours: 4 per week

MU3071 INSTRUMENTAL ARRANGING & CONDUCTING
Harmonic analysis and arranging of keyboard music for instrumental ensemble; harmonisation of set melodies and arrangement of same for instrumental ensemble. Arranging for a variety of ensembles including concert band, popular music ensemble.
Preparation of instrumental scores for conducting; baton techniques; rehearsal procedures; development of a personal style in the direction of instrumental ensembles.

Co/Prerequisite: MU3040
Credit Points: 10  Contact Hours: 4 per week

**MU3072 ENSEMBLE**
Participation in rehearsals and concerts for one or more of the performing ensembles operating within the Department of Music at Kelvin Grove. Groups include Choir, Wind Ensemble, Stage Band, Popular Music Ensemble and a range of discrete, small, instrumental ensembles.
Credit Points: 10  Contact Hours: 4 per week

**MU4033 TWENTIETH CENTURY MUSIC**
Use of twentieth century rhythms through dictation, composition improvisation and performance; exploration of overtime series; understanding tone clusters, sound mass and aleatoric procedures; performance of material of twentieth century.
Credit Points: 12  Contact Hours: 3 per week

**MU4034 BAROQUE & THE ROCOCO**
Written and aural activities to improve musicianship; studies of Baroque and Rococo music literature, analysis, form, continuo; performance practice.
Credit Points: 12  Contact Hours: 3 per week

**MU4035 CLASSICAL & ROMANTIC MUSIC**
Interpret and perform work from Viennese/Romantic eras; understand musical forms and theory of these eras; compose short works.
Credit Points: 12  Contact Hours: 3 per week

**NU3025 NUTRITION**
Simple tools used in nutrition education; food groups and food composition tables; role of nutrients in the Australian diet; function of water in human systems; energy requirements; individual research.
Prerequisite: PL3026
Credit Points: 10  Contact Hours: 4 per week

**NU3027 SOCIAL NUTRITION**
Evaluation of nutritional information; psychology of food; methods of assessing nutritional status; nutritional disorders; community, remedial and nutrition education programs.
Prerequisite: NU3025
Credit Points: 8  Contact Hours: 4 per week

**NU3071 NUTRITION APPRECIATION**
Biochemical approach to nutrition; history and evolution of nutrition; critical evaluation of popular nutrition literature; development of a philosophy of nutrition.
Prerequisite: Home economics studies at Diploma of Teaching level
Credit Points: 12  Contact Hours: 3 per week

**OE2800 OUTDOOR PURSUITS**
Outdoor recreation: philosophy behind outdoor adventure activities; the practice of minimal input skills. Bushcraft skills: practical experience in pioneering skills including navigation, construction site selection, meal preparation. Outdoor adventure activities: participation in a wide range of activities such as kayaking and initiative games.
Prerequisite: PE2823
Credit Points: 10  Contact Hours: 4 per week

**PE2085 HEALTH & PHYSICAL EDUCATION**
Historical background; anatomy, physiology, kinesiology; physical growth and development of children; static and dynamic posture; child health; exercise, rest and recreation; psycho-social factors; child safety; the concept of health and the philosophy and language of health education; the Primary Health Education Curriculum Guide; health behaviour and decisions; nutrition; health modules; planning of a selected health module; aims and objectives of physical education; swimming and water safety; physical skills; folk and social dance; physical education in the total curriculum.
Credit Points: 12  Contact Hours: 5 per week

**PE2086 PHYSICAL EDUCATION**
Historical, sociological and climatic influences on the content of physical education; rural and urban programs; teaching and coaching; educational gymnastics; track and field athletics; creative dance; curriculum development.
Prerequisite: PE2085
Credit Points: 6  Contact Hours: 2 per week

**PE2701 RESOURCE TEACHING IN PHYSICAL EDUCATION**
Principles involved in planning a program for years 1-7; voice control; written communication in physical education; consultation skills; individualising physical education; adaptive physical education; coaching individual sports.
Credit Points: 8  Contact Hours: 3 per week

**PE2702 CONTEXTS FOR TEACHING & LEARNING**
Teaching and learning in physical education; the concept of teaching; the individual learner; management and control of small and large groups in physical education; physiological and motor development.
Credit Points: 8  Contact Hours: 3 per week

**PE2705 TOTAL PROGRAMMING IN PHYSICAL EDUCATION**
Concept of daily physical education; movement education; organisation and administration (carnivals etc.); roles of the physical educator in total programming; outdoor education; evaluation.
Credit Points: 8  Contact Hours: 3 per week

**PE2706 PHYSICAL EDUCATION & THE ARTS**
Music and movement; frameworks for listening and moving; music and dance relationships; program planning. Administration of sport and recreation: the processes of administration; administrative policies; facilities; organisation of track and field and swimming meetings; organisation of school sporting events and teams; camps and leisure pursuits; budgeting; purchase and care of equipment.
Credit Points: 8  Contact Hours: 3 per week

**PE2712 TEACHING GAMES & SPORTS**
Skill recognition (catching, throwing, striking) development of physical skills; skill analysis and teaching; study of a selected sport; certification in coaching school sports; presentation of a coaching workshop.
Credit Points: 8  Contact Hours: 3 per week

**PE2713 RESOURCE TEACHING & CONSULTANCY**
Self-awareness; interpersonal relationships; communication skills; response modes; functioning as a resource teacher in physical education; the organis-
• PE2807 SOCIO-CULTURAL STUDIES OF SPORT
Bases of sociology; discipline areas in socio-cultural study of sport; lifestyle and physical activity of Neolithic era; sociocultural influences in Pre-Hellenic, Greek, Roman, Dark Ages and Medieval eras; development of sport from Renaissance to nineteenth century in England; historical development of sport in Australia; Aboriginal play and games; dance throughout history: field trip; presentations; comparative study.
Credit Points: 8 Contact Hours: 3 per week

• PE2808 SPORT IN SOCIETY
Play games and sport; sport as a business: the role of the media in sport; aggression and violence in sport; children in sport; sport and social class.
Prerequisite: PE2807
Credit Points: 8 Contact Hours: 3 per week

• PE2809 AQUATIC RECREATION
Planning aquatic pursuits: snorkelling and scuba diving; sailing; power boating and skiing; fishing; equipment design and maintenance.
Credit Points: 8 Contact Hours: 3 per week

• PE2810 INTRODUCTORY SPORTS SCIENCE
Aerobic conditioning for sport; muscular strength, endurance and flexibility; body composition and sport; the energy systems of the body; the female athlete; the development of sporting skill.
Credit Points: 8 Contact Hours: 3 per week

• PE2811 MEASUREMENT OF PHYSICAL GROWTH
Morphological considerations: assessment of biological or maturation age; postural adjustments and growth and development; nutrition and growth; critical periods in growth; secular growth trends.
Credit Points: 8 Contact Hours: 3 per week

• PE2812 ADVANCED SPORTS SCIENCE
Specificity of conditioning and training techniques; sport for specific groups particularly the handicapped; sports medicine; prevention of sporting injuries; evaluation techniques used in sports science research.
Prerequisite: PE2810
Credit Points: 8 Contact Hours: 3 per week

• PE2813 INTRODUCTION TO HUMAN MOVEMENT
Rhythmic experiences: range of rhythmic experiences including folk dance, singing games, rhythmic patterns with music and percussion. Games and gymnastics activities: basic skills in games and gymnastics with emphasis on improvisation in play situations. First-aid studies: theoretical and practical aspects of emergency aid including resuscitation and bandaging.
Credit Points: 5 Contact Hours: 3 per week

• PE2820 DANCE FOR RECREATION
Community dance: development of basic techniques in square, round and bush dancing, latest trends in popular dance. Ballroom dance: basic figures in ballroom dancing such as cha-cha, quickstep, modern waltz. Aerobic dance: rhythmic activities for personal fitness.
Credit Points: 10 Contact Hours: 4 per week

• PE2823 RHYTHMIC MOVEMENT
Folk and square dance: steps and figures of folk dances of varying complexity; emphasis on improving students' knowledge, ability to interpret dance. Creative dance: experimentation with stimuli - words and poems, percussion, music, drama; movement exploration utilizing student's own ideas. Rhythmic activities: development of skill in working with music and a variety of rhythmic activities.
Credit Points: 5 Contact Hours: 2 per week

• PE2824 PERSONAL HEALTH & FITNESS
Health: development of a personal health program; issues, techniques and topics of current personal and societal health concerns. Fitness: theoretical basis of physical fitness; appraisal of personal fitness; development of fitness programs; mandatory practical involvement.
Credit Points: 10 Contact Hours: 2 per week

• PE2825 GYMNASTICS
Personal development incorporating components of gymnastics; progressed activities designed to promote success and challenge through artistic gymnastic skills.
Prerequisite: PE2819 or equivalent experience
Credit Points: 5 Contact Hours: 2 per week

• PE2829 LEISURE EDUCATION
Leisure and recreation: leisure and the individual; leisure and society; future directions for leisure; all-of-life sport.
Credit Points: 10 Contact Hours: 3 per week

• PE2830 GAMES FOR RECREATION
Development of the individual skills and techniques of the game; application of the rules and umpiring procedures. Students are expected to participate in two of the following games: Volleyball, Tennis, Squash.
Credit Points: 10 Contact Hours: 3 per week

• PE3010 MOTOR DEVELOPMENT & SKILLS ACQUISITION
Identification of key terms in motor development and skill acquisition; evaluation of different classification systems; classification of skills using a variety of criteria; awareness of different stages of motor development; interpretation of performance curves; theoretical bases of information processing models; analysis of mechanisms involved in skilled performance.
Credit Points: 10 Contact Hours: 5 per week

• PE3011 ANATOMY & BIOMECHANICS
Recognition of skeletal structures; differences in the structure and function of human joints, muscle attachment; actions of muscles as related to major joints; why certain activities are anatomically harmful; mechanical principles of human movement; diagnosis of errors in technique; isolation of basic elements common to a variety of performance skills.
Credit Points: 10 Contact Hours: 5 per week

• PE3012 EXERCISE PHYSIOLOGY
The structure and function of body systems; key terms and principles relating to specific aspects of systemic physiology; application of general physiological principles to conditions of work; interpretation of a variety of tests and procedures used in evaluating physique, fitness, effects of training and exercise.
Credit Points: 10 Contact Hours: 5 per week
PE3013 FOUNDATIONS OF PHYSICAL EDUCATION

Historical events which have shaped developments in contemporary physical education; demonstration of confidence and competence in the communication of philosophical and historical aspects of education and sport; appreciation of the nature and scope of human movement studies, including physical education, leisure and sport.
Credit Points: 10  Contact Hours: 5 per week

PE3014 PERFORMANCE SKILLS 1

Application of scientific principles to the analysis and development of techniques for swimming and track and field; performance of all aspects of the major swimming strokes and track and field events; instructional strategies and motivational, conditioning and training activities; development of activity programs for various ability levels; application of event rules; water rescue.
Credit Points: 10  Contact Hours: 6 per week

PE3015 PERFORMANCE SKILLS 2

Various game forms: analysis of fundamental game skills; identification of problem areas in skill development; application of relevant skills to suit game situation; application of sport rules; application of relevant strategies for teaching and coaching selected sports for a variety of age groups.
Credit Points: 10  Contact Hours: 6 per week

PE3016 PERFORMANCE SKILLS 3

Basic theoretical principles fundamental to the performance and teaching of gymnastics and dance; physical fitness and basic biomechanical principles in the performance of excellence in gymnastics; performance of routines incorporating a variety of gymnastic and dance skills on floor/apparatus; recognition of unsafe practices.
Credit Points: 10  Contact Hours: 6 per week

PE3017 OUTDOOR EDUCATION

Appreciation of 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.
Credit Points: 10  Contact Hours: 6 per week

PE3018 RESEARCH IN MOVEMENT STUDIES

Data collection, presentation, and interpretation; test design and administration; basic computer programming and analysis; elementary research procedures and design.
Prerequisites: PE3010, PE3011 or PE3012
Credit Points: 10  Contact Hours: 3 per week

PE3019 PERFORMANCE DEVELOPMENT

How physical performance can be improved; development of skills in the young, the atypical, the disabled, the elite, and the aged; subjective and objective evaluation as performers are assessed both physically and psychologically; techniques from the sciences of exercise physiology, sport psychology, and biomechanics; coaching, teaching, program design and motivation.
Prerequisites: PE3010, PE3011 or PE3012
Credit Points: 10  Contact Hours: 3 per week

PE3020 ADMINISTRATION IN PHYSICAL EDUCATION & SPORT

Types of administration and styles of leadership practised in both physical education and sport; the various administrative tasks in both fields; personnel and program administration.
Credit Points: 10  Contact Hours: 3 per week

PE3021 SOCIOLOGY OF SPORT & LEISURE

How sport affects individuals, the local community, and society in general; sport and leisure from a sociological standpoint; commercialism; politics in sport; changing habits in leisure; expansion of individual activities; increased interest in hazardous and life-threatening activities.
Prerequisite: PE3013
Credit Points: 10  Contact Hours: 3 per week

PE3022 ADAPTED PHYSICAL EDUCATION

The causes of short-term and long-term disorders and disabilities from medical and developmental perspectives; procedures for assessing the range of movement and current level of skills; individualised program planning for most disability groups.
Prerequisite: PE3010
Credit Points: 10  Contact Hours: 3 per week

PE3023 SPORT & FITNESS MANAGEMENT

Practical procedures and laboratory work; testing and evaluating: exercise prescription; design and development of conditioning programs.
Prerequisite: PE3012
Credit Points: 10  Contact Hours: 3 per week

PE3024 ADVANCED SKILL LABORATORIES

Investigation of an advanced theoretical structure and application to a performance activity of their choice.
Prerequisites: PE3010 and a Performance Skill subject from Group B
Credit Points: 10  Contact Hours: 3 per week

PE3025 INDEPENDENT STUDY

Students are required, with guidance, to propose, carry out, and report on some achievable enquiry which may take a variety of forms, from a specialised development of previously undertaken subjects to a supplementary option chosen to expand the scope of their studies in human performance and physical education.
Prerequisites: Compulsory Level 1 subjects and PE3018
Credit Points: 10  Contact Hours: 3 per week

PE3026 HUMAN PERFORMANCE ANALYSIS

Various methods of conducting performance analysis; deductive and inductive approaches to analysis; analysis of selected activities using observation techniques, video tapes of performance, sequential photographs, film.
Prerequisites: All Level 1 subjects and PE3018
Credit Points: 10  Contact Hours: 3 per week

PE3027 TRENDS & ISSUES IN SPORT SCIENCE

Current trends in the sport sciences; critical interpretation of the information yielded; best approaches to handling of the totality of the sport scene.
Prerequisites: Compulsory Level 1 subjects and PE3018
Credit Points: 10  Contact Hours: 3 per week
PE3032 PHYSICAL EDUCATION CURRICULUM: SECONDARY
Curriculum development in physical education in Australia; curriculum models for secondary school physical education; factors influencing future physical education curriculum development; planning and designing a secondary physical education curriculum; curriculum evaluation.
Prerequisite: CU3040 or equivalent; physical education curriculum studies at Diploma of Teaching level
Credit Points: 12  Contact Hours: 3 per week

PE3033 PHYSICAL EDUCATION CURRICULUM: PRIMARY
Philosophical background; growth characteristics of the primary school child with particular reference to their implications for physical education; orientation of physical education into the primary school program; structuring the learning environment.
Prerequisite: CU3040 or equivalent
Credit Points: 12  Contact Hours: 3 per week

PE3703 MOTOR DEVELOPMENT & LEARNING
The role of reflexes and early voluntary movements in the development of the child; fundamental patterns of movement (walking, running, jumping, throwing, catching) and their sequential development; development of prehension and manipulation; theories of motor learning; evaluation of perceptual-motor, sensory-motor and psycho-motor theories.
Prerequisite: Studies in physical education at Diploma of Teaching level
Credit Points: 12  Contact Hours: 3 per week

PG2800 PHOTOGRAPHY AS AN ART FORM
Exploration of the art potential of the camera and darkroom techniques; the photograph as art: creation of art works, composition, expressive design, manipulation of the image; the beginnings and growth of photography and its emergence as an art form; works of eminent photographers.
Credit Points: 5  Contact Hours: 2 per week

PG2801 PHOTOGRAPHY
How to take photographs using a 35mm SLR camera; darkroom printing work; analysis of the meanings contained in photographs and how these meanings are generated.
Credit Points: 5  Contact Hours: 2 per week

PG2802 PHOTOGRAPHY 1
Operation of a camera; construction of a pin-hole camera; loading and developing film; darkroom techniques; photography in natural light; experience with different lenses; critical analysis of photographs; arrangement of a series of photographs to communicate an event, feeling of thematic statement; presentation of material for display.
Credit Points: 8  Contact Hours: 3 per week

PG2803 PHOTOGRAPHY 2
Technical problems (exposure control, lighting and processing); studio lighting; studio figure studies; auto portrait; consideration of the works of established photographers; project.
Prerequisite: PG2802
Credit Points: 8  Contact Hours: 3 per week

PG2804 PHOTOGRAPHY PRODUCTION & ANALYSIS
Operation of a 35mm SLR camera; taking and composing photographs; basic darkroom procedures; analysing photographic images.
Credit Points: 5  Contact Hours: 2 per week

PG4004 PHOTOGRAPHIC MEDIA 1
Photographic processes; aesthetic aspects of photography; history of art and photography; personal approaches to photography.
Credit Points: 12  Contact Hours: 3 per week

PG4005 PHOTOGRAPHIC MEDIA 2
Continuation of PG4004. Photographic techniques; innovative approaches to photography; history of photography; personal approaches to photography.
Credit Points: 10  Contact Hours: 3 per week

PG4006 PHOTOGRAPHY IN EDUCATION
Use of black-and-white photographs in educational situations; production of black-and-white photographs for teaching and learning; requirements for setting up a photography program in a school; evaluation criteria and design of slide/tape programs for educational situations; application of this knowledge to planning a photography program in a school.
Credit Points: 9

PH3005 PHYSICS FUNDAMENTALS 1A
Kinematics; dynamics; fluids; kinetic theory.
Co-requisite: PH3006
Credit Points: 10  Contact Hours: 4 per week

PH3006 PHYSICS FUNDAMENTALS 1B
Forces; electrical energy; current electricity; electromagneticism, AC circuits; basic electronics; vibrations and waves.
Co-requisite: PH3005
Credit Points: 10  Contact Hours: 4 per week

PH3007 ATOMIC & NUCLEAR PHYSICS
Introduction to modern physics; physical principles including: the relativity principle; the quantum principle; the Pauli exclusion principle; the conservation of matter principle; nuclear forces; the search for additional principles.
Prerequisites: PH3005 and PH3006
Credit Points: 10  Contact Hours: 4 per week

PH3008 ELECTRONICS
The physics of active devices, operational amplifiers and oscillators; analog measurement, pulse circuits and digital electronics.
Prerequisites: PH3005 and PH3006
Credit Points: 10  Contact Hours: 4 per week

PH3026 INTRODUCTION TO PHYSICS
Introduction to the major areas of physics and their relevance to the development of equipment and appliances utilised by the consumer.
Credit Points: 9  Contact Hours: 4 per week

PH3030 PHILOSOPHY & THE CLASSROOM
Recent developments in philosophy and philosophy education; understanding the relationship between theory and practice; application of this philosophy to understand classroom problems, e.g., teaching/lear-
ing, discipline, equality, academic freedom, classroom texts and utterance.
Prerequisites: SY3013 and SY3014
Credit Points: 10 Contact Hours: 2 per week

PI3003 PHILOSOPHY OF SCIENCE
Definitions of science and scientific knowledge; the interlinking of science and politics; technology in modern society; the contributions of Popper, Kuhn, Feyerabend, Kuhn, Koyre, Bergson and Bachelard; implications for teaching science.
Prerequisites: SY3013 and SY3014
Credit Points: 10 Contact Hours: 2 per week

PI3005 PHILOSOPHY
The early educational innovators; the concept of free schooling; the non-libertarian and anarchist tradition; sexism, abortion, euthanasia, suicide, sexuality. Alternative schooling; socialist models of education.
Co/Prerequisite: ED3303 or equivalent
Credit Points: 12 Contact Hours: 3 per week

PI3026 HUMAN PHYSIOLOGY
The basic structure and function of human body systems; the chemical structure of food components and their role in the body; roles of nutrients within the human body systems; nutrients and maintenance of good health.
Prerequisite: BC3026
Credit Points: 9 Contact Hours: 4 per week

PO2890 CONTEMPORARY POLITICAL ISSUES
Credit Points: 5 Contact Hours: 2 per week

PT2911 PRACTICE TEACHING
Orientation to the primary school; planning, implementation and lesson closure; observations; program of other activities (group sessions and discussions).
Credit Points: 10

PT2912 PRACTICE TEACHING
See PT2911.
Credit Points: 10

PT2913 PRACTICE TEACHING
Planning, implementation and evaluation of subjects and total programs of work; observations; program of other activities (group sessions and discussions).
Credit Points: 10

PT2914 PRACTICE TEACHING
See PT2913.
Credit Points: 10

PT2915 PRACTICE TEACHING
Planning, implementation and evaluation of subjects and total programs of work; observations; program of other activities (group sessions and discussions).
Credit Points: 10

PT2916 PRACTICE TEACHING
See PT2915.
Credit Points: 10

PT2917 PRACTICE TEACHING: EARLY CHILDHOOD
Five continuous days in a pre-school/kindergarten and five continuous days in a lower primary school; guided observation of child learning and behaviours, and of the teacher's role; interacting and communicating with children, staff and parents in selected areas of the program; assisting with the preparation and organisation of indoor and outdoor learning environments.
Credit Points: 5

PT2918 PRACTICE TEACHING: PRE-SCHOOL 1
Five single days and five continuous days in kindergartens/pre-schools observing and recording individual child behaviours and selected aspects of the teaching/learning environment; planning teaching and evaluating experiences with individual children and small groups; participating in selected areas of the program with staff, parents and children; preparing and introducing materials into indoor and outdoor learning environments.
Prerequisite: PT2917
Credit Points: 5

PT2919 PRACTICE TEACHING: PRE-SCHOOL 2
Five single days and fifteen continuous days in kindergartens/pre-schools observing and recording the behaviour and learning of small groups of children and selected aspects of the teaching/learning environment; planning, teaching and evaluating an increasing number of learning experiences, for small groups in
selected areas of the program, and for the total group in one area.
Prerequisite: PT2918
Credit Points: 10

PT2920 PRACTICE TEACHING: SCHOOL 1
Five single days and fifteen continuous days in lower primary schools observing and recording child and teacher behaviours, classroom and school environments; planning, teaching and evaluating experiences, with increasing responsibility for individuals, small groups and the class group; assuming responsibility for the total program for two days.
Prerequisite: PT2919
Credit Points: 10

PT2921 PRACTICE TEACHING: SCHOOL 2
Twenty continuous days in lower primary schools observing and recording child and teacher behaviours, classroom and school environments; role of ancillary staff and administrative procedures; planning, teaching and evaluating experiences with increasing responsibility for individuals, small groups and the class group for longer periods of time; assuming responsibility for the total program for eight days.
Prerequisite: PT2920
Credit Points: 15

PT2922 PRACTICE TEACHING: PRE-SCHOOL 3
Twenty continuous days in kindergarten/pre-schools observing children and the teaching learning environment; planning, implementing and evaluating a comprehensive curriculum, culminating in a continuous control period of at least one week; communicating with children, parents and colleagues; utilising organisational and administrative skills in the assumption of responsibility for the total pre-school or kindergarten program.
Prerequisite: PT2921
Credit Points: 15

PT2947 PROGRAMS FOR YOUNG CHILDREN 0-12 YEARS
The equivalent of five continuous days in each of two services, centre-based day care, family day care, out-of-school-hours care, hospital or work-related care; guided observations of individual children's behaviour and learning; and of the service-providers role; interacting and communicating with children, staff and where possible, parents; assisting with the preparation, organisation and implementation of selected learning opportunities; evaluation of processes and practices.
Credit Points: 5

PT2948 PROGRAMS FOR INFANTS & TODDLERS 0-3 YEARS
Ten continuous days participating in a group care setting for infants and toddlers; observing and recording individual children's behaviour and learning; planning, implementing and evaluating learning opportunities for individuals which foster communication and exploration; responding to family contexts and child rearing practices; practising and adopting rigorous health and safety standards appropriate for infants and toddlers in group care settings.
Prerequisite: PT2947
Credit Points: 5

PT2949 PROGRAMS FOR CHILDREN 0-3 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/caring/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 practice.
Prerequisite: PT2948
Credit Points: 10

PT2950 PROGRAMS FOR CHILDREN 3-5 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/caring/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.
Prerequisite: PT2949
Credit Points: 10

PT2951 FIELD PROJECT (CHILDREN 0-5 YEARS)
Twenty continuous days (Internal Mode) and fifteen continuous days (External Mode) in a group care setting for children birth to five years observing, recording and analysing the behaviour and learning of individuals and groups of children; recording and evaluating selected aspects of the teaching/caring/learning environment; planning, implementing and evaluating learning opportunities for individuals and groups; developing a specific management program for an individual or small group of children based on a series of observations taken prior to the placement; implementing and evaluating the management of the program in the context of the whole group plan; assuming specific leadership responsibilities for the total program for a selected period.
Credit Points: 15

PT2952 ELECTIVE PROGRAMS (CHILDREN 0-12 YEARS)
Twenty continuous days (Internal Mode) and fifteen continuous days (External Mode) in a selected service, centre-based long day care, family day care, out-of-school-hours care, occasional 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 which was 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 interrelated-
This subject has identical purposes and the same understanding of the roles of teachers and pupils in interactive school communities, followed at a later stage by six weeks of teaching experience in a Curriculum A subject area. In this section, students apply their studies to the planning, implementation and evaluation of short sequences of classroom activities and lessons. Emphasis is upon developing confidence and competence in basic teaching strategies and interpersonal and professional relationships.

Credit Points: 20

PT3002 INTEGRATED FIELD STUDIES 1B
This subject has identical purposes and the same duration and timing of school and teaching experience as PT3001, Integrated Field Studies 1A. However, it focuses on teaching experiences in a Curriculum B subject area.

Credit Points: 20

PT3003 INTEGRATED FIELD STUDIES 2A
Two weeks of school experience in which students identify and record the range of beginning year procedures that set in place pupils' learning expectations for the new school year; to be followed later in the course by six weeks of teaching experience. This aims at preparing students for beginning teaching in their Curriculum A area. Students will assume responsibility for effectively teaching their 'own' classes, employing appropriate planning, researching, managing, collegial and teaching skills needed in the interactive classroom and in the wider school community.

Credit Points: 25

PT3004 INTEGRATED FIELD STUDIES 2B
This subject is identical with PT3003 in terms of purposes, and the timing and duration of its school and teaching experiences; there is the proviso that teaching activities are carried out in a Curriculum B subject area.

Credit Points: 20

PT4900 PRACTICE TEACHING 1
Orientation to the primary school; planning, implementation and lesson closure; planning, implementation and evaluation of subjects; observation; other activities including group talks and discussions.

Credit Points: 12

PT4901 PRACTICE TEACHING 2
Planning, implementation and evaluation of subjects and total programs of work; observation; other activities including group talks and discussions.

Credit Points: 12

PT4916 PRACTICE TEACHING 1
Orientation to the primary school; supervised completion of learning tasks with individuals and small groups; planning, implementation and evaluation of single-faceted learning activities; class lesson and module planning in conjunction with the class teacher; compilation of a series of written observations of class and school procedures.

Credit Points: 10

PT4917 PRACTICE TEACHING 2
Orientation to the special education unit or support program; supervised completion of learning tasks with individuals and small groups; planning, implementation and evaluation of single-faceted learning activities; class lesson and module planning in conjunction with the class teacher; compilation of a series of written observations of class and school procedures.

Credit Points: 10
tion, loneliness through the lifecycle; relationships between intimacy/alienation and other key concepts; operationalising the expression of intimacy, warmth and rejection; causes and effects of loneliness and isolation; measuring intimacy and developing skills in its expression; the ‘future’ of love, sexuality and intimacy; enrichment program.
Credit Points: 10 Contact Hours: 3 per week

PY3016 INTERPERSONAL PSYCHOLOGY 1
The ‘inductive’ learning approach; models of interpersonal communication and perception; the concept of ‘self’ and self-esteem; dealing with emotions – defensiveness vs openness; communication skills: attending, responding, interpreting and influencing skills; non-verbal communication; attitudes and clarification; stress and burnout; an assertive life style.
Credit Points: 10 Contact Hours: 3 per week

PY3017 INTERPERSONAL PSYCHOLOGY 2
Social influence factors; interpersonal influence: power, authority, control, personal styles; attitude change and persuasion; interpersonal conflict; the interpersonal influencing skills: confrontation, self-disclosure, feedback, assertion, reframing, problem solving, decision making and planning; gender roles and sexuality; social support systems; stress and burnout.
Prerequisite: PY3016
Credit Points: 10 Contact Hours: 3 per week

PY3033 PERSONAL & INTERPERSONAL CHANGE
Construction of identity, self, self-concept, self-esteem, and self-development; understanding and using a wide range of personal and interpersonal change methods, theories and approaches, together with relevant research data.
Credit Points: 10 Contact Hours: 3 per week

PY3034 INTERPERSONAL & GROUP PROCESSES
Understanding relationships and small group dynamics with emphasis on skill development in listening, helpful responding, assertion, conflict resolution, disclosures, feedback; models of groups development and roles lead to facilitation and leadership skills. Skills are applied and analysed outside the class group.
Credit Points: 10 Contact Hours: 3 per week

PY3035 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 students’ own development; the sexual development of adolescents; issues of social concern such as the sexual abuse of children.
Prerequisite: PY3033
Credit Points: 10 Contact Hours: 3 per week

PY3046 HUMAN RELATIONSHIPS: A SOCIOLOGICAL PERSPECTIVE
The significance of social context to human relationships; the impact of social and demographic change on families and communities; the implications of such changes for interpersonal relationships; society and human relationships in contemporary and historical settings.
Credit Points: 10 Contact Hours: 3 per week

PY3048 SOCIAL PSYCHOLOGY
General study of social psychology and its relevance to the work and role of home economist; theory and research of group dynamics and related concepts; analysing small group development.
Prerequisite: SS3025
Credit Points: 9 Contact Hours: 4 per week

PY3049 INTERPERSONAL RELATIONS
Overview of concepts related to interpersonal relationships; interpersonal communication; the emotions and their effect on communication; facilitating communication; self-concept; interpersonal attraction; competition, cooperation and mistrust; interpersonal influence; human relationship skills.
Prerequisite: PY3048
Credit Points: 8 Contact Hours: 4 per week

PY3050 DEVELOPMENTAL PSYCHOLOGY
The themes of cognitive, physical and socio-emotional growth in recurring sequences through life’s major phases: infancy, toddlerhood and early childhood, middle childhood; adolescent phase; adulthood; old age and the end of life span.
Prerequisite: SS3025
Credit Points: 8 Contact Hours: 3 per week

PY3051 SOCIO ETHICS & HUMAN RELATIONSHIPS
Philosophical and pedagogical issues underpinning the human relationships dimension of classroom practice and school cultures (eg, concept of personhood, the nature of love, power, desire, human rights); consideration of the socio-cultural factors and changes which are generating moral dilemmas in contemporary society; case studies of moral issues and moral decision making; the ethics of teaching controversial issues and matters such as indoctrination and censorship – all in the context of the possibilities of Human Relationships Education, within the Queensland education system.
Credit Points: 10 Contact Hours: 3 per week

PY3052 COUNSELLING PSYCHOLOGY
Personal effectiveness in satisfying needs and wants; becoming an effective facilitator of ‘help’ to others.
Credit Points: 10 Contact Hours: 3 per week

PY3053 ADOLESCENT DEVELOPMENT & HUMAN RELATIONSHIPS
Adolescence and the search for identity; social, physical, cognitive and moral development; overview of human relationships; self-concept and self-awareness; interpersonal relationships; group processes; and educational applications of interpersonal psychology.
Credit Points: 10 Contact Hours: 3 per week

PY3054 PSYCHOLOGY OF LEARNING & TEACHING
Approaches to learning as well as factors that influence effective teaching and learning – motivation, classroom management, learning styles, individual differences, teaching effectiveness, as these issues apply to the full range of learners, including those with special needs.
Credit Points: 10 Contact Hours: 3 per week

PY3055 CONTEMPORARY ISSUES IN ADOLESCENCE
The search for identity; variations in adolescent physical and physiological development; socialising influences on the adolescent; vocational choice in a changing world; adolescents and drugs; troubled adolescents; emerging issues in adolescence.
Credit Points: 10 Contact Hours: 3 per week
• PY3056 ADVANCED CLASSROOM MANAGEMENT & DISCIPLINE
  Teaching for need gratification; special motivational needs of students from disadvantaged backgrounds and methods for attacking the associated issues; maintaining classroom control; theoretical constructs for decision making.
  Credit Points: 10  Contact Hours: 3 per week

• PY3057 GIFTED CHILDREN IN REGULAR SCHOOLS
  Conceptions of giftedness particularly the definition suggested by Renzulli identifying the gifted and talented; traditional and innovative schemes for catering for gifted and talented children within the regular school; adapting teaching styles and curriculum content to meet the needs of gifted and talented children in the regular classroom.
  Credit Points: 10  Contact Hours: 3 per week

• PY3058 HELPING STUDENTS WITH LEARNING PROBLEMS
  Correlates of low achievement in the secondary school (biological, psychological, environmental), identification of slow learners and students with learning disabilities; collection, interpretation and reporting of data; teaching strategies for learning-disabled and slow-learning children; evaluation of teaching/learning strategies.
  Credit Points: 10  Contact Hours: 3 per week

• PY3059 INNOVATIVE TEACHING METHODS
  Definition of innovation; review of literature on innovative teaching methods; school/classroom organisation as a framework from which innovative approaches may grow; small group process; application of small group process to a range of curriculum areas; school-based practice.
  Credit Points: 10  Contact Hours: 3 per week

• PY3060 THE TEACHER AS COUNSELLOR
  The nature of counselling; theories of counselling; listening and relationship-building skills; goal-setting and action skills; critical evaluation of counselling; community resources.
  Credit Points: 10  Contact Hours: 3 per week

• PY3304 APPLIED STRATEGIES IN CLASSROOM LEARNING
  Contemporary theoretical approaches to human development and learning; dimensions of learning (cognitive, affective, psychomotor); corollaries of learning; developing teaching/learning strategies; gathering and interpreting information; consideration of a range of advanced teaching/learning strategies; development and implementation of a specific program.
  Credit Points: 10  Contact Hours: 3 per week

• PY3305 HUMAN DEVELOPMENT & LEARNING
  Human development: cognitive, affective and psychomotor development; classroom management and interactions; learning and problem solving; educational evaluation. Teaching atypical children; the needs of atypical children; special teaching procedures, referral agencies.
  Credit Points: 10  Contact Hours: 3 per week

• PY3306 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 affective teaching; self-concept; small group development; applications of interpersonal psychology. Study school for external students strongly recommended.
  Co/Prerequisite: ED3303 or equivalent
  Credit Points: 12  Contact Hours: 3 per week

• PY3603 CREATIVITY IN PROBLEM SOLVING
  Definition of creativity; history of creativity; theories of creativity; principle features of the creative process; the creative personality; creativity and intelligence; creativity and curriculum; altered states of awareness.
  Prerequisite: Relevant studies at Diploma of Teaching level
  Credit Points: 12  Contact Hours: 3 per week

• PY3604 INNOVATIVE TEACHING METHODS
  Factors which affect the selection and use of interactive teaching strategies; review of research findings on small-group dynamics in educational settings; classroom organisation to enhance learning.
  Prerequisite: Must be currently teaching
  Credit Points: 12  Contact Hours: 3 per week

• PY3703 HUMAN SEXUALITY
  Physical and psychological development; attitudes and beliefs about sex; sexual expression; sexuality in childhood and adolescence; sex roles; contraception; sexually transmitted disease; sexuality, disability and illness; sexual abuse of children; sexual problems; pregnancy; abortion; sex education in schools.
  Prerequisite: Studies in developmental psychology at Diploma of Teaching level
  Credit Points: 12  Contact Hours: 3 per week

• PY4030 LEARNERS WITH SPECIAL NEEDS
  Special educational needs of school (P-12) and TAFE College learners arising from cognitive, behaviour and socio-cultural differences; diagnosing student functioning in cognitive, social-emotional, self-help and motor skill areas; developing teaching strategies suited to student learning styles; techniques of formative and summative assessment appropriate to student learning needs; mixed ‘ability’ teaching.
  Credit Points: 10  Contact Hours: 3 per week

• PY4032 DEVELOPING RELATIONSHIPS & GROUPS
  Overview of concepts relating to a model of interpersonal relationships; study of some human relationships concepts such as verbal and non-verbal interpersonal communication, power, influence, authority/control, trust and mistrust, confrontation and constructive resolution of conflict; interviewing and consulting skills; self-concept studies; small group dynamics; student and teacher stress; assertion-related theory and skills; resource teacher as change agent.
  Credit Points: 10  Contact Hours: 4 per week

• PY4036 REMEDIATING LITERACY DIFFICULTIES
  Review of significant learning difficulties among learners in schools (Years 1-12) and post secondary education; foundation studies in language and learning; assessment and monitoring of literacy-related curriculum tasks; test interpretation and development; related approaches to teaching, informed by principles derived from psycholinguistics, metacognition
and process approaches to literacy; service delivery based on an adjunct model.
Credit Points: 10  Contact Hours: 3 per week

PY4037 RESOURCE TEACHING FIELDWORK 1
Students participate in colloquia on resource/support teaching and undertake school- or college-based projects related to other subjects studied in the first half of the course; observe and report on classroom teacher and students on a particular resource teaching project; demonstrate a range of personal and professional attributes necessary for successful resource/support teaching.
Credit Points: 8  Contact Hours: 2 per week

PY4038 STUDY SKILLS, LITERACY & LEARNING
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, functions of language and foundations studies of language and learning leading to detailed study of composing and comprehending tasks as they relate to curriculum demands; recent language/learning research, genre theory; study skills development and organisation; test-wiseness, notetaking, organisation, managing examination stress; service delivery based on an adjunct model.
Credit Points: 10  Contact Hours: 3 per week

PY4039 RESOURCE TEACHING FIELDWORK 2
Students participate in colloquia on resource/support teaching and undertake school- or University-based projects related to other subjects studied in the second half of the course; observe and report on curriculum and socio-cultural influences in schools/colleges; work with classroom teacher and students on a study skills, language and learning project; demonstrate a range of advanced personal and professional attributes necessary for successful resource/support teaching.
Prerequisite: PY4037
Credit Points: 10  Contact Hours: 3 per week

PY4040 RESEARCH METHODS IN RESOURCE TEACHING
Introduction to research quantitative and qualitative research methodologies; literature reviews; gaining access to research sites; data collection and analysis; ethical issues in research; reporting research; completion of minor research task or preparation of masters research proposal.
Credit Points: 10  Contact Hours: 3 per week

PY4041 INDEPENDENT STUDY IN RESOURCE TEACHING
Action research, literature reviews or special project development on a topic arising from resource/support teaching; designing appropriate investigative strategies; implementation of investigation; producing and presenting final report using computer and various audiovisual formats as required.
Credit Points: 10  Contact Hours: 3 per week

PY4045 SOCIO-CULTURAL CONTEXTS OF HUMAN RELATIONSHIPS
Poverty; marriage and partnerships; divorce and separation; family violence; disability.
Credit Points: 12  Contact Hours: 3 per week

PY4046 HUMAN SEXUALITY & RELATIONSHIPS
Sexual behaviour and the life cycle; sexual health and reproduction; sex and society.
Credit Points: 12  Contact Hours: 3 per week

PY4047 INTERPERSONAL RELATIONSHIPS
Models of interpersonal relationship and social change; interpersonal influencing skills; counselling and the 'helping relationship'; attitudes and values; group facilitation and development; professional communication.
Credit Points: 12  Contact Hours: 3 per week

PY4048 INTERPERSONAL & SMALL GROUP TEACHING STRATEGIES
The value of cooperative learning; cooperative learning and interpersonal skills; the role of the teacher; classroom organisation; cooperative strategies and educational objectives; investigation and review of small group and interactive teaching strategies; developing research and testing theory.
Credit Points: 12  Contact Hours: 3 per week

PY4049 ETHICS & HUMAN RELATIONSHIPS EDUCATION
Philosophical approaches to human relationships; moral philosophy and education; development of an integrated and clearly articulated agreement for a philosophy of human relationship education.
Credit Points: 12  Contact Hours: 3 per week

PY4050 HUMAN RELATIONSHIPS THROUGHOUT THE LIFE SPAN
The developmental processes; issues in human development across the lifespan; developmental theory and research; development of human relations; aspects of development (physical, cognitive, social-emotional); the socio-cultural context of development.
Credit Points: 12  Contact Hours: 3 per week

PY4052 RESOURCE TEACHING FIELDWORK 1A
See PY4037.
Credit Points: 4

PY4053 RESOURCE TEACHING FIELDWORK 1B
See PY4037.
Credit Points: 4

PY4054 RESOURCE TEACHING 2A
See PY4039.
Credit Points: 4

PY4055 RESOURCE TEACHING 2B
See PY4039.
Credit Points: 4

RE3704 TRENDS IN THE TEACHING OF READING
Theoretical models of the reading process; implications for development of school policy and for class reading programs; analysis of a range of text; the reader; development of a class reading program.
Prerequisite: Studies in the teaching of reading at Diploma of Teaching level
Credit Points: 12  Contact Hours: 3 per week

RE3705 PSYCHOLOGY OF READING DISABILITY
Investigation of reading and spelling disability; an overview of assessment and remedial procedures; an examination of the consequences of this phenomenon.
Credit Points: 12  Contact Hours: 3 per week
LEARNING TO LEARN THROUGH READING

The reading process: comparison of the reading processes of efficient and inefficient readers; analysis of texts to determine how information is structured and presented; evaluation of a variety of strategies which may be used to teach content and information processing simultaneously; implications of reading-to-learn activities for school programs.

Credit Points: 12  Contact Hours: 3 per week

WORKPLACE EXPERIENCE

Use of skills obtained in the first three terms in the on-the-job context of the Industrial Commission, court and parliament; non-defensive communication; conflict resolution; relationship contracting and role negotiation.

Prerequisite: RP1028

Credit Points: 12  Contact Hours: 6 per week

REPORTING 1

Introduction to the theory and application of stenograph computer compatible theory (machine shorthand).

Credit Points: 24  Contact Hours: 10 per week

REPORTING 2

Consolidation and reinforcement of theory acquired in RP1026 with emphasis on speed development; introduction to court procedures and basic legal, medical and technical terminology.

Prerequisite: RP1026

Credit Points: 36  Contact Hours: 14 per week

REPORTING 3

Further emphasis on speed development and familiarity with specialist vocabularies; introduction to court etiquette and court reporting practices.

Prerequisite: RP1027

Credit Points: 36  Contact Hours: 16 per week

REPORTING 4

Refinement of students' shorthand and transcription skills and development of a stenograph shorthand speed to a minimum of 180wpm with transcription accuracy of 98 per cent.

Prerequisite: RP1028

Credit Points: 24  Contact Hours: 12 per week

REFERENCE SERVICES & MATERIALS 1

Provision of reference and information services to students, teachers and administrators; development of students and teachers as autonomous finders of information; current trends in information storage and retrieval, such as online database searching; services beyond the school. Includes a compulsory study school.

Prerequisite: All Part A subjects

Credit Points: 10

COLLECTION DEVELOPMENT FOR LEARNING

Principles and procedures involved in collection development in schools; the relationship between current curricula, learning theory, educational resources and ways of using them; issues affecting collections; the goals of particular collections.

Prerequisite: All Part A subjects

Credit Points: 10

RESOURCES: SELECTION & USE

How to select library resources, including children’s literature, matched to the needs and interests of children and teachers, and how to assist them in using these materials in resource-based teaching and learning situations.

Credit Points: 9  Contact Hours: 4 per week

REFERENCE SERVICES & MATERIALS 2

Familiarisation with a wide range of reference materials and the development of the ability to evaluate them critically; principles involved in the development, maintenance and use of an effective reference collection; preparation for undertaking a comprehensive range of user services in a school library.

Credit Points: 9  Contact Hours: 5 per week

AUSTRALIAN LITERATURE FOR YOUNG PEOPLE

History to 1959; critical assessment of trends 1960-1980; visual representation and interpretation of Australian children's literature in books, film and display; criticism and review; the needs of K-12.

Credit Points: 9

ISSUES IN LITERATURE FOR ADOLESCENTS

The literature written for adolescents; issues facing adults who are involved in the selection of such literature; strategies for the encouragement and promotion of reading amongst this age group. Incompatible with LI3701.

Prerequisites: All Part A subjects

Credit Points: 9

ISSUES IN LITERATURE FOR CHILDREN

Issues, genres and materials relevant to both contemporary children’s literature and the historical background from which it evolved; the place of children’s literature as a core component of children’s reading programs; exploration of current trends and controversies. Incompatible with LI3701.

Prerequisites: All Part A subjects

Credit Points: 9

STORYTELLING

History of storytelling; skills and techniques of storytelling; storytelling as a tool for teacher-librarians.

Credit Points: 10  Contact Hours: 3 per week

SCHOOL STUDIES 1

Students undertake a range of activities which are functionally related to their University-based studies; activities are of three types: school study, class study and child study. Students also undertake a program of field studies competencies in first aid and school swimming.

Credit Points: 8  Contact Hours: 5 per week

SCHOOL STUDIES 2

Students undertake a range of activities which are functionally related to their University-based studies; activities are of three types: school study, class study and child study. Students also have the opportunity to select an area of study that they identify within the educational context that will enrich their professional development.

Credit Points: 8  Contact Hours: 5 per week

SCIENCE EDUCATION

Approaches to teaching primary science; processes in science; commercial curriculum materials; content in the conceptual areas of energy and matter; curriculum development.

Prerequisite: MA2089

Credit Points: 6  Contact Hours: 2 per week
SC2800 THE AUSTRALIAN ENVIRONMENT
Distinctive elements in Australian native flora and fauna; the geological and climatic history of the Australian continent; overview of evolution and evolutionary influences within the Australian context; Australian ecosystems with particular reference to Queensland; effects of Aboriginal and European settlement.
Credit Points: 5  Contact Hours: 2 per week

SC2801 ENVIRONMENTAL PHYSICAL SCIENCE
The composition and structure of the atmosphere; general principles of water chemistry; current methods of treatment of industrial and municipal waste water; the role of water in the generation of meteorological phenomena; problems related to the presence of toxic substances in the atmosphere, soil, water supply.
Credit Points: 5  Contact Hours: 2 per week

SC2807 AUSTRALIAN FLORA & FAUNA
Relationships in the biosphere; terminology related to the ecology of plants; evolution of Australian flora; the impact of introduced species; laboratory and field techniques; terminology and techniques of animal ecology; survival mechanisms; theories of the evolution of Australian fauna; applied ecological techniques.
Credit Points: 8  Contact Hours: 3 per week

SC2808 BOTANY OF AUSTRALIAN PLANTS
Relationships between plants; recognition of major groups; plant needs, preferences and tolerances with respect to the physical environment; consideration of how plants obtain, distribute and utilise nutrients and products of metabolic activity; flowering patterns; means of plant propagation; seed dispersal and conditions which favour weed production; common plant diseases, their causes and methods of control.
Credit Points: 8  Contact Hours: 3 per week

SC2809 ZOOLOGY OF SMALL DOMESTIC ANIMALS IN AUSTRALIA
Classification of major groups with particular reference to domestic animals; legal controls relating to domestic animals in Queensland; the keeping and feeding of animals; ethology and its link with evolution; reproductive biology; husbandry of small animals; common health problems.
Credit Points: 8  Contact Hours: 3 per week

SC2810 THE SCIENCE OF CHANGE
Scientific study of changes in systems of varying sizes and of different time scales eg, micro-organism populations in a small pond over a period of days; changes in Australian ecosystems over millions of years; changes in scientific methodology related to technological development during this century.
Credit Points: 8  Contact Hours: 3 per week

SC2811 EARTH & SPACE
The nature and behaviour of light; optical properties of various materials; construction and operation of instruments that rely on optical components; the role of earth-based instrumentation in extending knowledge of earth and space; production and observation of spectra; use of spectra as a tool of discovery in space science; observational astronomy.
Credit Points: 8  Contact Hours: 3 per week

SC2816 DISCOVERING SCIENCE
Practical investigation of basic scientific concepts; practice in skills in science and the application of scientific methods of investigation to problems in the laboratory and in the field.
Credit Points: 5  Contact Hours: 2 per week

SC3015 SCIENCE FOUNDATIONS
Major concepts in physical and inorganic chemistry as they relate to 'home economics' systems; conceptual framework for the chemistry of carbon compounds; application of concepts to an introductory study of more complex macromolecular structures in chemical and biological systems; fundamental concepts in physics-forces, energy, fluids, pressure, heat, temperature, electromagnetic radiation and electricity - as related to the study of home economics.
Credit Points: 10  Contact Hours: 6 per week

SC3016 SCIENCE, TECHNOLOGY & SOCIETY
The nature of science and technology; the sociological functioning of the scientific enterprise - its norms, values; the nature of scientific knowledge - objectivity and epistemological issues; the origins of modern science and technology; the future of science and technology.
Credit Points: 10  Contact Hours: 3 per week

SC3017 MARINE STUDIES
Ecological principles and ecology of the marine environments; biological and abiotic components of a variety of marine coastal ecosystems; sandy and rocky shores, mangroves, mud flats, estuaries and the Great Barrier Reef; oceanography; the ecology of coastal environments; the management and conservation of marine ecosystems; field studies.
Prerequisite: BI3012
Credit Points: 10  Contact Hours: 4 per week

SC3018 ORGANIC & BIOLOGICAL CHEMISTRY
The structure and properties of important classes of biomolecules using a functional group approach; the basic organic chemistry of these substances; reaction mechanisms; application of these principles to life processes; cellular metabolism and molecular genetics; theories relating to chemical and biological evolution.
Prerequisites: BI3012 and CH3006
Credit Points: 10  Contact Hours: 4 per week

SC3019 THE CHEMISTRY & PHYSICS OF THE ENVIRONMENT
The physical and chemical processes which affect our lithosphere, hydrosphere and atmosphere; energy sources; soil, water and air pollution; chemical and radioactive wastes; toxins; household and farm chemicals.
Prerequisite: CH3005
Credit Points: 10  Contact Hours: 4 per week

SC3020 THE PHYSICAL UNIVERSE
Application of physical principles and remote sensing techniques to studies of the structure and composition of the Earth, Solar System and the Universe; sensors include those which detect, measure or record physical variables (temperature, etc); waves (seismometers and sonar); force fields (magnetometers, gravimeters); electromagnetic radiation (telescopes, astrophotography, photometry, spectroscopy); radioactivity (radioactive dating); the role of satellites
in remote sensing, weather forecasting and space research.
Prerequisites: ER3002 and ER3003
Credit Points: 10  Contact Hours: 4 per week

- SC3032 PRIMARY SCIENCE CURRICULUM DEVELOPMENT
The nature of science; the purpose of teaching science in primary school; consideration of those areas of science and teaching strategies particularly suitable to the primary school; the structure and rationale of the Queensland Primary Science syllabus; the philosophy and structure of selected commercial science curriculum materials; the development of primary science subjects.
Prerequisite: CU3040
Credit Points: 12  Contact Hours: 3 per week

- SE3710 NON-TRADITIONAL CLASSROOM MANAGEMENT
Application of learning principles to the management of behaviour problems; application of social psychology research to the management of behaviour; application of parenting programs to the management of behaviour in the school.
Prerequisite: Relevant studies at Diploma of Teaching level
Credit Points: 12  Contact Hours: 3 per week

- SE3711 PSYCHOSOCIAL FOUNDATIONS OF HANDICAP
Development of skill in teaching children with handicapping conditions other than those already studied; psychological and sociological implications of handicapping conditions as these relate to the design and implementation of appropriate educational programs. Incompatible with Diploma of Teaching and Graduate Diploma in Teaching subjects in the area of exceptionality chosen.
Prerequisite: Studies in special education
Credit Points: 12  Contact Hours: 3 per week

- SK3701 ADVANCED SECRETARIAL STUDIES
The role of the administrative secretary; secretarial procedures; office systems; office supervision; technology and the administrative secretary. Incompatible with degree or higher qualification in secretarial technology.
Prerequisite: Diploma of Teaching with major in commercial studies or equivalent
Credit Points: 12  Contact Hours: 3 per week

- SK4015 SKILLS FOR OFFICE AUTOMATION
Development of keyboard skills using microcomputers; introduction to basic word processing and text editing techniques covering a range of typewritten business communications (correspondence, reports, tabulations).
Credit Points: 12  Contact Hours: 4 per week

- SK4016 OFFICE AUTOMATION & ADMINISTRATION
Introduction to the concepts and practice of office automation with emphasis on advanced techniques of computerised text generation and editing using the word processor; office style integrated projects; implications for administrators of the introduction of computer-based technology into the office and implementation of appropriate procedures.
Prerequisite: SK4015 or demonstrated keyboard competence
Credit Points: 12  Contact Hours: 4 per week

- SK4017 OFFICE ADMINISTRATION ASSIGNMENTS
Development of advanced production techniques; office style integrated projects with emphasis on a problem-solving approach covering a variety of business communications utilising the most appropriate technology.
Prerequisites: AD4010 and SK4015
Credit Points: 12  Contact Hours: 4 per week

- SS2026 AUSTRALIAN CITIZENSHIP
Legal and political studies; the problems of law, such as assets and judicial procedure; the teacher and the law; aspects of politics and government in contemporary Australia.
Credit Points: 10  Contact Hours: 3 per week

- SS2038 ABORIGINAL CULTURE STUDIES
Overview of hunter-gatherer societies, examining how lifestyles and beliefs provided for the material and spiritual needs of their members; traditional Aboriginal society (economy, socio-economic groups, religion, laws, the life cycle, significance of art); comparison of the values of the traditional Aboriginal society, of urban Aborigines and of western society; contemporary issues including health, housing, education, self-determination, identity.
Credit Points: 10  Contact Hours: 3 per week

- SS2046 ABORIGINES & TORRES STRAIT ISLANDERS
Early human occupation in Australia; reading archaeological evidence; traditional Aboriginal and Torres Strait Islander society from an Aboriginal and Islander perspective; interaction with Anglo-Australians; contemporary issues relevant to Aboriginal and Torres Strait Islander culture and identity.
Credit Points: 5  Contact Hours: 2 per week

- SS2053 FOUNDATIONS IN THE HUMANITIES
Structures, concepts and strategies in the humanities with special references to social sciences and language arts; the humanities in the classroom; elements of curriculum planning; preparation of modules in the humanities.
Credit Points: 14  Contact Hours: 6 per week

- SS2054 SOCIAL STUDIES EDUCATION
Approaches to primary social studies teaching; processes fundamental to primary social studies teaching: cognitive, affective, psychomotor, evaluative; question sequences, lesson sequences, unit planning.
Prerequisite: SS2053
Credit Points: 6  Contact Hours: 2 per week

- SS2055 THE NATURAL & SOCIAL WORLD
Identifying and establishing the content area; identifying and evaluating modes of inquiry; approaches to curriculum development; curriculum program development.
Credit Points: 8  Contact Hours: 3 per week

- SS2805 INTRODUCTION TO THE SOCIAL SCIENCES
Contemporary issues in Australian society including ecology and the environment, poverty and under-development, human rights, multicultural Australia; various approaches and methods used by social scientists in cognitive and values inquiry.
Credit Points: 5  Contact Hours: 2 per week
SS2809 CULTURAL & REGIONAL STUDIES 1
Culture through the study of human behaviour in an historical, anthropological and geographical setting; development of social science skills; awareness of the meaning of culture; specialisation in one of the following areas: South East Asian history; culture contact in the nineteenth century Pacific; contact and culture in nineteenth century Queensland; human and physical geography.
Credit Points: 8 Contact Hours: 3 per week

SS2810 CULTURAL & REGIONAL STUDIES 2
Continuation of SS2809. Specialisation in one of the following areas: Indonesian history and culture; contemporary issues in the Pacific; Australia in the twentieth century; human and environmental geography.
Credit Points: 8 Contact Hours: 3 per week

SS3025 CONTEMPORARY SOCIAL SCIENCE
Introduction to the nature of sociology and psychology; social image; social control; deviance; environmental planning and human behaviour; family patterns; gender roles and relationships; work and unemployment.
Credit Points: 10 Contact Hours: 4 per week

SS3037 SOCIAL EDUCATION: CURRICULUM DEVELOPMENT
Curriculum movements in social education; planning, implementing and evaluating a teaching unit; curriculum development projects in social education; curriculum design and evaluation.
Prerequisite: CU3040 or equivalent
Credit Points: 12 Contact Hours: 3 per week

SS3038 SOCIAL EDUCATION IN THE CURRICULUM
The nature and purpose of social education; the current state of social education; competing models; social education and the learner; instructional techniques; preparation of a rationale for a particular program; implementation strategies.
Prerequisite: CU3040 or equivalent
Credit Points: 12 Contact Hours: 3 per week

SS3035 MODERN EUROPEAN STUDIES
Major aspects of the physical geography of Europe; population factors; political institutions and movements; economic activities and institutions; relationships with the rest of the world; current ecological issues; current social issues; political interactions and movements; ecological issues; social issues.
Credit Points: 10 Contact Hours: 3 per week

SS3036 EUROPEAN CULTURAL HISTORY
The development of European civilisation from its origins in Greece and Rome; the spread and influence of Christianity; the fall of Rome and the Barbarian invasions; the Middle Ages and the Renaissance; cultural and artistic achievements which find expression in literature, art, music and architecture; the importance of Renaissance Italy on the whole of European culture; the emergence of the great European powers and the development of national thought in the seventeenth and eighteenth centuries; Romantic period and the significance of the French Revolution; the industrial age, the growth of liberalism and literary and artistic achievements until World War I; developments in the modern age.
Credit Points: 10 Contact Hours: 3 per week

SS3040 LOCAL COMMUNITY
The importance of the local community in relation to broader issues of Australian and global citizenship; the sources of data available for local community studies and methods of collating, analysing, synthesising and evaluating data on local communities; the nature of local communities; the problems and issues facing them; the interrelationship between the local community and broader community groups.
Credit Points: 10 Contact Hours: 3 per week

SS3041 INTRODUCTION TO THE SOCIAL SCIENCES
Principles, theories and procedures of the social sciences; problematic nature of evidence and data used by social scientists; the value base of social science knowledge and inquiry.
Credit Points: 10 Contact Hours: 3 per week

SS3042 ABORIGINAL CULTURE STUDIES
Concepts of culture; Aboriginal and Torres Strait Islander culture; laws, religions, philosophy, social structure, material culture, artistic expression; alternative social stratification, behaviours and values; ritual and ceremonial life, their aspects and importance; contemporary socio-political issues; land rights, health, education, employment and expression.
Credit Points: 10 Contact Hours: 3 per week

SS3043 AUSTRALIA & THIRD WORLD ISSUES
The Third World and Australia; the nature of world poverty; myths surrounding overpopulation; the causes of world hunger; life in 'shanty towns'; the relationship between the arms race and underdevelopment; approaches to development based on self-reliance and global interdependence.
Credit Points: 10 Contact Hours: 3 per week

SS3044 AUSTRALIAN CITIZENSHIP
Principles and values which serve as an analytical and explanatory context for studies of Australian society; the major institutions of society, including government at all levels, economic institutions, organisations of employers and workers, extra-parliamentary political groups.
Credit Points: 10 Contact Hours: 3 per week

SS3045 CONTEMPORARY GLOBAL ISSUES
The world economic system; nation states and self-determination; the causes of conflict and the maintenance of peace; international human rights; the ecological crisis; sustainable development; the role of the United Nations System and non-government groups.
Credit Points: 10 Contact Hours: 3 per week

SS3046 SOCIAL SCIENCE SEMINAR I
The following are examples of topics which could provide the study focus for this subject: philosophies of the social sciences; world systems theory; Pacific Basin studies; Marxism and the social sciences; global studies, development studies; environmental studies; the use of conceptual models in the social sciences.
Credit Points: 10 Contact Hours: 3 per week

SS3047 SOCIAL SCIENCE SEMINAR 2
See SS3046.
Credit Points: 10 Contact Hours: 3 per week

SS3048 CONSUMERISM
The nature of the consumer society and the values underlying it; consumer sovereignty - reality or myth?; the structures and institutions promoting,
maintaining and sustaining the consumer society; the implications of consumer society – a consideration of the benefits and costs; visions of a 'new' consumer society; what needs to be done?; alternative visions to the consumer society.

Credit Points: 10  Contact Hours: 3 per week

SS3803 PATTERNS & PROCESSES OF DEVELOPMENT
Global patterns and inequalities in development; the causes of global development inequalities; their consequences and alternative approaches to solutions.

Credit Points: 12  Contact Hours: 3 per week

SS3804 ENVIRONMENTAL EDUCATION
Nature of environmental education; ecosystems and environment; human impact and resource use; exploitation and management; development of field, research and planning skills; curriculum applications. Incompatible with extensive studies in outdoor or environmental education.

Credit Points: 12  Contact Hours: 3 per week

SS4002 STUDIES IN THE NATURAL & SOCIAL WORLD 1
Commonalities and differences in contributing disciplines (health, science, social studies); planning a learning module for a small group of pupils; modelling a learning module for a larger group of pupils; modelling a learning module which considers the organisation of 'small group tasks' within the total class setting.

Credit Points: 8  Contact Hours: 3 per week

SS4003 STUDIES IN THE NATURAL & SOCIAL WORLD 2
Analysis of the nature of each of the contributing disciplines (health, science, social studies); the role of the contributing disciplines within the framework of the total curriculum; the organisation of content/processes/evaluation within and across the disciplines; analysis of learning resources and their application; development of extended and integrated learning programs.

Credit Points: 4  Contact Hours: 1 per week

ST1011 QUANTITATIVE METHODS
Applications of mathematics in business; exponential and logarithmic functions; interest calculations; annuities; sinking funds; depreciation; descriptive statistics; probability; graphical techniques; linear regression and correlation.

Credit Points: 12  Contact Hours: 4 per week

ST1012 RESEARCH METHODS
Logic and argument; descriptive statistics – collection, presentation and analysis of data; price index numbers; introduction to computers.

Credit Points: 12  Contact Hours: 4 per week

SU2801 SCULPTURE 1
Development of conceptual expression through three-dimensional materials: clay, metal, leather and wood.

Credit Points: 10  Contact Hours: 4 per week

SU2802 SCULPTURE 2
Developing a more expressive approach to sculpture, building on the techniques gained in SU2801 and further applied design studies.

Prerequisite: SU2801

Credit Points: 10  Contact Hours: 3 per week

SY3013 AUSTRALIAN SOCIETY & IDENTITY
Images of the typical Australian; omissions/absences from the cultural stereotype; omissions from the notion of identity; critical analysis of contemporary Australian society; the role of the media in social and cultural reproduction; who are the 'real' Australians?

Credit Points: 10  Contact Hours: 3 per week

SY3014 AUSTRALIAN CULTURE IN A WORLD CONTEXT
The nature of post-industrial society; global economic effects of industrialism and post-industrialism; environmental effects of industrial and post-industrial production; technology and mass culture; current responses to global problems.

Credit Points: 10  Contact Hours: 3 per week

SY3015 YOUTH IN CONTEMPORARY SOCIETY
The relationship between structural economic change and the genesis and extension of youth; an introduction to the issues of: youth sub-cultures; work and unemployment; health, housing and poverty; the law and the policing of the young; education; and the impact of public policy.

Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective

Credit Points: 10  Contact Hours: 3 per week

SY3016 LANGUAGE & POWER
Language as a social and cultural phenomenon; sociolinguistics; ethnicity, class and language; 'man made' language; language and power; concept of cultural capital. Educational implications; language and learning; literacy and learning; bilingual/bicultural programs.

Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective

Credit Points: 10  Contact Hours: 3 per week

SY3017 RACE & ETHNIC RELATIONS
A comparative study of a number of different societies, including Australia, to identify and analyse sources of ethnic and racial minority status; historical roots; political and economic context; political struggles, civil disobedience; revolutions; role of education; strategies for change.

Prerequisite: SY3013

Credit Points: 10  Contact Hours: 3 per week

SY3020 UNDERSTANDING 'THE SYSTEM'
Bureaucracies and how they operate; teaching and bureaucracies; the contradictory demands of bureaucracies and professionalism.

Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective

Credit Points: 10  Contact Hours: 3 per week

SY3023 PEACE STUDIES
Peace as a personal issue and as a political issue; analysis of the human response as seen in the social sciences; peace as an alternative to the arms race, racial conflict and destruction of the environment; conflict resolution; its dilemmas and possible strategies; social change through violent and non-violent means.

Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective

Credit Points: 10  Contact Hours: 3 per week
SY3024 TECHNOLOGY, THE ENVIRONMENT & MORAL DILEMMAS
Technology in society; technology, work and unemployment; the peril and promise of technology; introductory theoretical consideration of social ethics; case study examination of issues such as: Information technology, nuclear energy, technology and work, overpopulation, nuclear weapons, genetic engineering, medical technology, environmentalism, alternative futures. Technocratic mindedness vs. critical mindedness. The dilemmas raised by these concerns for educators and professionals generally are examined eg, the computer and the classroom, technology and the curriculum.
Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective
Credit Points: 10 Contact Hours: 3 per week

SY3025 SOCIOLOGY OF THE FAMILY
Definitions of the family; the family and society; social class and geographical differences in family patterns; influence of changing social conditions; socialisation and child rearing patterns; families in a multicultural society.
Prerequisite: SS3025
Credit Points: 10 Contact Hours: 3 per week

SY3026 CHILDREN'S CULTURE
The history of childhood and theorising about childhood; race, gender and class variants on these issues; Christian versus romantic conceptions of childhood; the representation of childhood in painting, music, philosophy, literature; the social control of childhood to folk and fairy tales; the scicntisation of childhood through psychology; the culture of children's games, plays, skipping rhymes, songs; the future of childhood.
Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective
Credit Points: 10 Contact Hours: 3 per week

SY3028 DISCIPLINE & PUNISHMENT
Sociological approaches to student disruption and resistance; theories of causality; the links between student deviance and aspects of schooling, and the possibilities of change in school structures and teacher practices.
Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective
Credit Points: 8 Contact Hours: 2 per week

SY3030 GENDER & SCHOOLING
The educational situation of girls and women: schooling for women's work; special needs of different groups of girls; gender differences in planned and hidden curriculum; single-sex and coeducation; current initiatives; practices enabling teachers and other youth workers to promote gender equity.
Prerequisites: SY3013, SY3014, ED3053 and any 3rd year education elective
Credit Points: 8 Contact Hours: 3 per week

SY3034 FAMILIES & SOCIETY
Issues which relate to the family in Australia; history of the family; evolution of contemporary family structures; the interrelationship between family and society; the changing roles of men and women; sex stereotyping; violence; child abuse; family breakdown; multicultural values as they affect Australian family life.
Prerequisite: DY3031
Credit Points: 10 Contact Hours: 4 per week

SY3035 FAMILIES IN OTHER CULTURES
Individuals, the structured elements within families and the relationship of families to society; kinship, family structures, mate selection practices, legitimacy and illegitimacy, contemporary issues that relate to family groups.
Credit Points: 10 Contact Hours: 4 per week

SY3303 SOCIETY, SOCIAL POLICY & EDUCATION
Social policy in education; implications for social policy of change in society; the economics of education; social policy and the teacher.
Co/Prerequisite: ED3303 or equivalent
Credit Points: 12 Contact Hours: 3 per week

SY3304 SOCIOLOGY OF THE SCHOOL
Sociological views of schooling; clarifying tasks, structures and relationships of schools and classrooms; the consequences of these for both teachers and pupils.
Co/Prerequisite: ED3303 or equivalent
Credit Points: 12 Contact Hours: 3 per week

SY3305 SOCIOLOGY OF EDUCATION
The nature and scope of sociology; sociology and education; the cultural context of educational institutions and teaching; sub-cultures in the school and their interaction; appropriateness of education to modern Australian society.
Credit Points: 12 Contact Hours: 3 per week

SY3701 STUDIES IN ALCOHOL & OTHER DRUGS
Epidemiology of drug use and misuse; effects of drug taking; socio-cultural influences on drinking behaviour; the nature of dependency; community attitudes and strategies for prevention; occupational programs.
Prerequisite: Studies in social sciences at Diploma of Teaching level
Credit Points: 12 Contact Hours: 3 per week

SY3803 CAREER & LIFE PATTERNS OF WOMEN TEACHERS
Theories of adult development; career development theories; transitions and crises; trends in career development and their implications for women teachers; additional knowledge and skills which women teachers may need for planning future and professional roles.
Credit Points: 12 Contact Hours: 3 per week

SY3804 SOCIAL CHANGE & WOMEN IN AUSTRALIA
Policy initiatives relating to women; current debates on the status of women; ideology and the position of women; effects of economic recession and technological change; educational implications.
Credit Points: 12 Contact Hours: 3 per week

TE2800 FIBRE ARTS
The variety and scope of materials and processes used in textile arts; study of contemporary and past works; dyeing; fibre constructions (spinning, weaving, other construction techniques); or surface decoration (block printing, mono printing, fabric printing, screen printing, embroidery).
Credit Points: 5 Contact Hours: 2 per week

TE2801 TEXTILE STUDIES I
Introduction to the preparation of fibres and yarns and to the study of a range of textile structures; practical work in selected areas.
Credit Points: 8 Contact Hours: 3 per week
TE2802 TEXTILE STUDIES 2
Analysis of the aesthetic principles underlying the production of contemporary textiles and the study of cultural influences on textile artists. Practical work in dyeing, spinning and weaving.
Prerequisite: TE2801
Credit Points: 8 Contact Hours: 3 per week

TE2805 TEXTILES
Further development of fibre techniques in spinning, weaving and dyeing, working towards both functional and ‘fine art’ products.
Credit Points: 10 Contact Hours: 4 per week

TE3701 WOVEN TEXTILES
History of textiles in America, Europe, Australia, New Zealand and the Orient; aesthetics related to fibre and materials; textile design; practical work in dyeing, spinning and weaving; design work; study of one weaving technique.
Credit Points: 12 Contact Hours: 3 per week

TE3801 TEXTILES: FUNCTION & DESIGN
Practical application of designs; historical perspectives with emphasis on Greek, Indian, English, Japanese, Japanese and American influences; yarn construction; fabric construction; fabric finishes; fabric testing; the textile industry; nature of colour and colour formation.
Credit Points: 12 Contact Hours: 3 per week

TE4002 FIBRE ARTS 1
Investigation of both historical and contemporary textile media; development of technical and conceptual textile knowledge; utilisation of fibre/textile materials and processes to develop both 2-D and 3-D textile artifacts/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.
Credit Points: 12 Contact Hours: 3 per week

TE4003 FIBRE ARTS 2
Continuation of TE4002. Nature of fibres; fibre construction; printing techniques suitable for fibre arts; embellishing fibre surfaces.
Credit Points: 12 Contact Hours: 3 per week

TS2906 STUDIES IN TEACHING 1
Analysis of the teaching and learning environment; communication at individual and group level; personal and professional planning; basic teaching skills; self-analysis of teaching skills.
Credit Points: 5 Contact Hours: 3 per week

TS2907 STUDIES IN TEACHING 2
Use of teaching skills to achieve instructional objectives; assessment, evaluation and measurement of pupil learning; identification, selection and evaluation of resources for facilitating learning.
Co/Prerequisite: TS2906
Credit Points: 5 Contact Hours: 3 per week

TS2908 STUDIES IN TEACHING 3
Workshop safety; placement of facilities; storage and display of equipment; beginning and ending a practical class; standards of care, workmanship and behavior; class management; learning styles (creative, acceptance/anxious, rigid/inhibited, undisciplined); basic patterns of grouping for use in the classroom; formats for individualising learning.
Co/Prerequisite: TS2907
Credit Points: 5 Contact Hours: 3 per week

TS2909 STUDIES IN TEACHING 4
Curriculum development as a participatory decision-making process: interpersonal relationships with colleagues, administrators and parents; the curriculum-related needs of the beginning teacher; analysis of beginning teaching and the development of strategies to ease the transition into teaching.
Co/Prerequisite: TS2908
Credit Points: 5 Contact Hours: 3 per week

TS3003 THE BEGINNING TEACHER
There are six components in this subject: socialisation into teaching; the work context of teaching; teachers and their strategies; promoting a positive and effective learning environment; developing an action plan; practice teaching.
Co/Prerequisites: CU3009 and CU3010
Credit Points: 20

TS3604 CLASSROOM MANAGEMENT: MODELS & PRACTICE
Concepts and variables associated with classroom management and control; student and teacher perceptions of classroom contexts and behavior problems; contemporary views of classroom management and discipline; developmental theories of classroom and behavior management; teaching for professional integration and self-actualisation.
Credit Points: 12 Contact Hours: 3 per week

TS3605 PERSPECTIVES ON EDUCATIONAL TECHNOLOGY
Current perspectives on educational technology; development of a theoretical and research basis; the media of instruction; application of educational technology; significant modern manifestations of educational technology; future directions. External students need access to a video recorder. Incompatible with degree or graduate diploma studies in educational technology or media; MB4007.
Prerequisite: Relevant studies at Diploma of Teaching level
Credit Points: 12 Contact Hours: 3 per week

TS3606 TEACHERS & ISOLATED LEARNERS
The isolated community; the isolated learner; consideration of various types of teaching situations; teaching strategies; support services.
Credit Points: 12 Contact Hours: 3 per week

TS3607 TEACHING STRATEGIES
Evaluation of the student’s own teaching strategies; examination of the literature on teaching strategies; critical evaluation of strategies/models of teaching available.
Credit Points: 12 Contact Hours: 3 per week

TX3000 TEXTILES 1
The scientific understanding and aesthetic aspects of textiles and their selection, use and care, with reference to specific end uses; practical aspects of construction and surface design of textile articles; textile project.
Prerequisites: HS3015 and SC3015
Credit Points: 10 Contact Hours: 6 per week

TX3001 TEXTILES 2
Extension of TX3000.
Prerequisite: TX3000
Credit Points: 10 Contact Hours: 6 per week
TX3002 TEXTILES: SUPERVISED PROJECT

Students select and complete an indepth study in one or more methods of creating with textiles. The study will include the development of advanced skills in the technique(s) and an investigation and evaluation of the corresponding commercial production.
Prerequisite: TX3000
Credit Points: 10  Contact Hours: 3 per week

TX3003 CONSUMER TEXTILES

Technological advances in the production of textiles with particular reference to fibres, yarns, fabric, finishing and dyeing; significant technological advances in the manufacture of the major textile products such as apparel, household textiles, furnishings and floor coverings; textile performance requirements of these major consumer textile end-uses; experimental evaluation of textiles for suitability of purpose; development of problem identification and solution skills in consumer textiles through a major project-based assignment.
Prerequisite: TX3001
Credit Points: 10  Contact Hours: 6 per week

TX3026 APPAREL DESIGN

Factors influencing garment and household goods designs; design development; yarn structure; techniques of fabric construction and decoration; the textile industry.
Credit Points: 10  Contact Hours: 6 per week

TX3028 TEXTILE SCIENCE

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.
Prerequisite: CH3025
Credit Points: 9  Contact Hours: 4 per week

TX3029 TEXTILE MARKETING

Theories of clothing consumption; factors affecting individual and family clothing expenditure; standard sizing; pattern styling techniques; preparation of a brief.
Prerequisite: TX3026
Credit Points: 8  Contact Hours: 4 per week