Undergraduate Course Descriptions

ACCT1501
Accounting and Financial Management 1A
School of Accounting
UOC6 HPW3

This is the first course in a sequence of courses dealing with the profession and practice of accounting. It illustrates the analysis and design of a financial accounting system which processes financial data and produces financial reports geared to the information needs of interested parties. It introduces students to the design of accounting systems based on double-entry book-keeping and incorporating other internal controls; also, to the problems of accounting for cash, debtors, inventories and property plant and equipment. It also provides a critical introduction to the ideas underlying accounting practice and to issues associated with the uses and limitations of traditional financial reports.

ACCT1511
Accounting and Financial Management 1B
School of Accounting
UOC6 HPW3
Prerequisite: ACCT1501

This is the second course in a sequence of accounting courses and includes financial accounting topics such as an examination of the regulatory environment of financial reporting; the definition and recognition of assets, liabilities, revenues and expenses; and accounting for corporations. Aspects of managerial and investor decision-making are covered including financial statement and cash flow analysis, and examination of cost/volume/profit relationships in a single product firms, and short term budgeting.

ACCT2522
Management Accounting: Process Improvement and Innovation
School of Accounting
UOC6 HPW3
Prerequisite: ACCT1511; Excluded: ACCT2532.

This course examines management accounting, directed towards the effective use of organisational resources. Organisations create value through the use of resources, and can enhance such value by focusing and reconfiguring their internal processes in various ways; that is, by changing the ways in which they conduct business and perform work. It is argued that, in world class organisations, the management of time, flexibility, quality, integration, variability and interdependencies is critical to sustained value generation. This course explains how management accounting supports such value generation, within changing organisational processes.

ACCT2542
Corporate Financial Reporting and Analysis
School of Accounting
UOC6 HPW3
Prerequisite: ACCT1511; Excluded: ACCT2552.

This intermediate financial accounting course is intended for students who will be involved in the preparation or use of corporate financial reports whether as accountants, financial executives, auditors, financial analysts, actuaries or legal advisors. This course builds on the foundation laid in ACCT1501 and ACCT1511 and covers financial reporting on, and analysis of, more complex business transactions, events and structures. Topics include tax effect accounting and the preparation of consolidated financial statements as well as accounting for specific industries, such as insurance and superannuation.

ACCT3563
Issues in Financial Reporting and Analysis
School of Accounting
UOC6 HPW3
Prerequisite: ACCT2542 or ACCT2552; Excluded: ACCT3573.

This is the final course in financial accounting. Building on the foundation laid in ACCT2542, it covers more advanced topics including accounting and analysis in respect of associates, joint ventures, foreign currency transactions, offshore operations, diversified operations and derivative financial instruments. The course also covers topical issues related to the scope and quality of financial reports. Examples of such topics from past years include environmental reporting, ethical reporting dilemmas, and the information that should be reported on cultural and heritage assets.

ACCT3573
Issues in Financial Reporting and Analysis (Honours)
School of Accounting
UOC6 HPW3.5
Prerequisite: ACCT2552 or ACCT2542; Excluded: ACCT3563.

The content of this course includes that of ACCT3563 Issues in Financial Reporting and Analysis as well as additional and more advanced work in financial reporting and accounting theory.

ACCT3583
Stakeholder Value Management
School of Accounting
UOC6 HPW3
Prerequisite: ACCT2522 or ACCT2532; Excluded: ACCT3593.
Subject to availability - consult school timetable.

This course is concerned with the ways in which tangible and intangible resources are combined and leveraged in order to deliver stakeholder value in contemporary organisational contexts. The ways in which these resources are managed affects the ability of organisations to deliver value to various stakeholders, such as shareholders, customers, employees, suppliers, the community and the natural environment, both in the short and long-terms. A strategic challenge for organisations is to achieve a balance between these different forms of stakeholder value in the present and the future. This course examines the ways in which a set of practices that bears the label of 'management accounting' constrains and enables processes of stakeholder value management . The course will draw upon a variety of readings and cases to explore these issues.

ACCT3585
E-Business: Strategy & Processes
School of Accounting
UOC6 HPW3
Prerequisite: ACCT2522 or ACCT2532

Organisations engaging in electronic forms of business are seeking to create and sustain value by radically altering conventional business models whilst focusing and reconfiguring their internal processes. Emergent electronic business models such as information, brokerage, electronic auction, virtual community, third party market place (or portal) and value chain integrator, are challenging the conventional ways by which business is conducted and work is performed. It is argued that, for such organisations, the strategic management of time, cost, flexibility, quality and integration is critical to sustain value generation. This course will build on existing second and third year courses in accounting. It has the following aims. First, it seeks to highlight and evaluate the new business strategies and models adopted by e-Businesses. Second, it seeks to explore how these models have differential effects on business processes. Third, it examines the implications of reorienting existing organisational structures, processes and culture to e-Business strategy. Fourth, it discusses the relevance of new performance metrics (shareholder value analysis, economic value added, etc) in the management of intangible assets. The course draws upon research, professional literatures and case studies to explore the issue of creating value through electronic forms of business.

ACCT3593
Stakeholder Value Management (Honours)
School of Accounting
UOC6 HPW3.5
Prerequisite: ACCT2522 or ACCT2532; Excluded: ACCT3583.

The content of this course includes that of ACCT3583 Stakeholder Value Management, as well as more advanced work dealing with theoretical and research issues in management accounting.

ACCT3601
Global Financial Reporting and Analysis
School of Accounting
UOC6 HPW3
Prerequisite: ACCT2542 or ACCT2552

With the increasing globalisation of business and capital markets, there is a more extensive use of cross-border financial information. This course considers the key issues in international financial reporting and analysis. Topics include: the types of differences in national financial reporting practices; the reasons for the differences; the progress of the International Accounting Standards Board in reducing the diversity; foreign exchange risk and foreign currency accounting issues; reporting and disclosure in developed countries including the USA, Japan and the members of the European Union; the role of accounting in developing countries and Eastern Europe; financial reporting in emerging capital markets including

those in the Asia-Pacific region; and analysis of country-specific financial statements in the cultural, business and legal context of each country. Numerical examples and cases are used to highlight important concepts and issues.

ACCT3610
Financial Statement Analysis
School of Accounting
UOC6 HPW3
Prerequisite:ACCT2542 or ACCT2552, FINS1613

This course is about the analysis of financial information arising primarily from the financial reports of entities. Fundamental analysis techniques are examined in detail with particular emphasis on the application of these techniques in equity (share) valuation decisions. Some attention is also given to credit assessment and debt valuation decisions. The techniques are applied in cases and projects involving listed companies. Topics considered include fundamental ratio analysis using reported and ' off-balance sheet' information, an analysis of accrual accounting and cash flows, the analysis of profitability, growth and valuation generation in a firm, determining the quality of financial reports, forecasting earnings and cash flows, pro-forma analysis for strategy and planning, analysis of risk, and a comparison of alternative valuation models.

ACCT3708
Auditing and Assurance Services
School of Accounting
UOC6 HPW3
Prerequisite: ACCT2542 or ACCT2552 or approval from the School; Excluded: ACCT3718.

This course examines the practice of auditing and the underlying concepts, auditors responsibilities and the audit environment. Although the focus of attention is on audits carried out under the provisions of the Corporations Law, reference is also made to other forms of audit. The course is intended to provide an overview of the audit process as it exists in Australia. Both CIS and computer-assisted audit techniques are an integral part of this course.

ACCT3718
Auditing and Assurance Services (Honours)
School of Accounting
UOC6 HPW3.5
Prerequisite: ACCT2542 or ACCT2552 or approval from the School; Excluded: ACCT3708.

The content of this course includes that of ACCT3708 Auditing and Assurance Services, as well as introducing students to major research areas in current auditing research, critically examining research methods used and considering possible future developments in audit theory and research. Topics covered may include demand and supply of the audit function, audit fee research, behavioural audit research and audit expertise studies.

ACCT4794
Thesis (Accounting)
School of Accounting
UOC24
Prerequisite: Admission to BCom Degree at Honours level majoring in Accounting.

ACCT4809
Current Developments in Auditing Research
School of Accounting
UOC6 HPW3
Prerequisite: Admission to BCom Degree at Honours level majoring in Accounting.

An examination of current areas of research in auditing and substantive studies in each area. The following topics will be considered: theory about auditing; overview of audit research; nature of audit work; agency theory and the existence of the audit function; human information processing in auditing; audit teams and the review process; experience and expertise; independence; audit fees and other service fees; effect of the audit report; and future development in audit theory and research.

ACCT4851
Current Developments in Accounting Research - Financial
School of Accounting
UOC6 HPW3
Prerequisite: Admission to BCom Degree at Honours level majoring in Accounting.

Review of alternative approaches to the development of theories in external reporting. Explication and evaluation of substantive theories and associated research studies. Examination of research findings related to the accounting and reporting environment, agency cost and financial contracting, the properties of reported accounting numbers, predictive value of accounting information, the use of information in capital markets, and the use of accounting reports by individual decision makers.

ACCT4852
Current Developments in Accounting Research - Managerial
School of Accounting
UOC6 HPW3
Prerequisite: Admission to BCom Degree at Honours level majoring in Accounting.

The aim of this course is to equip students with a comprehensive understanding of contemporary management accounting research, which emanates from different philosophical perspectives and employs different theories and research methods. Research is divided into two broad streams: work that seeks (a) to explain and design , and (b) to understand and interpret the practice of management accounting in organisational societies. Topics covered include design approaches using behavioural decision theory, contingency theory, institutional theory, and others and interpretive approaches using symbolic interactionism and theories of culture. There is also brief coverage of national differences in management accounting practice and of critical analyses of the development and operation of management accounting systems.

ACCT4897
Seminar in Research Methodology
School of Accounting
UOC6 HPW3
Prerequisite: Admission to BCom Degree at Honours level majoring in Accounting.

To assist BCom Hons students in completion of research project requirement. May consist of an examinable readings program defined to meet the needs of a particular student or a formal program undertaken by a group of students whose research projects are in a common area.

ACCT8691
Industrial Training 1
School of Accounting
UOC12

ACCT8692
Industrial Training 2
School of Accounting
UOC18

ACCT8693
Industrial Training 3
School of Accounting
UOC18

ACCT8694
Business Internship (Type A)
School of Accounting
UOC6
Excluded: ACCT8695

Type A Interns enrol for 18 week session including the examination period. Placement attendance is an average 2 days per week. In addition to academic requirements students are required to complete a norm of 180-200 hours on work placement. The internship is considered to be equal to one course.

Note: Available only to Study Abroad students.

ACCT8695
Business Internship (Type C)
School of Accounting
UOC12
Excluded: ACCT8964

Type C Interns Enrolment is for 18 week session including the examination period. Placement attendance is an average 3 days per week. In addition to academic requirements students are required to complete a norm of 220-240 hours on work placement.

Note: Available only to Study Abroad students.

ACCT9003
Introduction to Accounting Principles
School of Accounting
UOC3 HPW2
Excluded: ACCT1501, ACCT9001, ACCT9002, ACCT9062

This course will provide students with a basic understanding of the key financial statements and how transactions they are likely to be involved with will affect those financial statements. Students will learn about some of the internal controls and why they exist in organisations. They will learn to analyse financial statements and make decisions using those statements. The basics of management accounting will be introduced including cost behaviour, cost-volume-profit analysis, costing and budgeting.

ACTL1001
Actuarial Studies and Commerce
Actuarial Studies Unit
UOC6 HPW3

This course is designed to provide an introduction to actuarial studies. It covers the basic principles underlying the actuarial analysis and management of insurance, superannuation and other financial contracts. It also aims to demonstrate the importance of statistics, mathematics, demography, economics, accounting, finance, business law and computing to actuarial studies.

ACTL2001
Financial Mathematics
Actuarial Studies Unit
UOC6 HPW3
Prerequisite: ECON1202 or MATH1131 or MATH1141 or MATH1151

This course develops the financial mathematics required for the analysis of financial and insurance transactions. Topics covered include: mathematics of compound interest; discounted cash flow techniques; valuation of cash flows of simple insurance contracts; analysis and valuation of annuities, bonds, loans and other securities; yield curves and immunisation; introduction to stochastic interest rate models and actuarial applications.

ACTL2002
Probability and Statistics for Actuaries
Actuarial Studies Unit
UOC6 HPW3
Prerequisite: ECON1203 or MATH1231 or MATH1241 or MATH1251

This course covers probability and statistics topics relevant to actuarial studies. Topics covered include probability generating functions, moment generating functions, marginal and conditional distributions, independence and convolution, conditional expectation and compound distributions, sampling distributions, estimation methods, hypothesis tests, regression, analysis of variance. Examples relevant to actuarial studies are used to illustrate the application of the topics covered.

ACTL2003
Stochastic Models for Actuarial Applications
Actuarial Studies Unit
UOC6 HPW3
Prerequisite: ACTL2002 or MATH2801, MATH2831 or MATH2901, MATH2931

This course provides an introduction to the stochastic models used by actuaries to model both liabilities and assets and illustrates their applications in actuarial work. Topics covered include the terminology of stochastic processes; main features of a Markov chain and application to experience rating; Markov process models and application to survival, sickness and marriage models; simple time series models including random walk and auto-regressive models and their application to investment variables; properties of Brownian motion and applications to investment variables; methods for simulation of a stochastic process. Students will be required to implement models using spreadsheets and programs in a numerical computer package.

ACTL2100
Industrial Training 1 (Co-op)
Actuarial Studies Unit
UOC6
Prerequisite: ACTL1001

Students consider the practical application of the fundamental principles of actuarial studies in an industry environment.

ACTL3001
Actuarial Statistics
Actuarial Studies Unit
UOC6 HPW3
Prerequisite: ACTL1001, ACTL2003

This course covers survival models, their estimation and application to mortality and other decrements. Specific topics include: the concept of a survival model and actuarial notation; estimation of lifetime distributions; multiple state models; maximum likelihood estimation of transition intensities; construction of multiple decrement tables; the binomial model of mortality and its estimation; models with transition intensities depending on age and duration; the census approximation and formulae; statistical comparison of crude rates with standard table; graduation of crude estimates and tests of fidelity and smoothness; analysis of mortality/morbidity and the main forms of selection; models for projection of populations. The analysis of data using a numerical computer package will form a part of the course assessment.

ACTL3002
Life Insurance and Superannuation Models
Actuarial Studies Unit
UOC6 HPW3
Prerequisite: ACTL1001, ACTL2003

This course covers the actuarial mathematics and models for use in the analysis and actuarial management of life insurance and superannuation contracts. Topics covered include: the main forms of life insurance and annuity contracts, disability and long term care contracts and superannuation fund benefits; actuarial notation and the life table; moments of the value of the benefit payments; Thiele's differential equation for policy values; stochastic modelling of claims and benefit payments; gross premiums, net premiums, policy values and reserves; allowing for expenses and inflation; use of discounted emerging costs and profit tests; asset shares in life insurance; termination and alteration values; cost of guarantees; joint life functions; valuation of disability insurance contracts.

ACTL3003
Insurance Risk Models
Actuarial Studies Unit
UOC6 HPW3
Prerequisite: ACTL1001, ACTL2003

This course covers the actuarial mathematics, statistics and models used in non-life insurance actuarial practice. Topics covered include: basic concepts of decision theory and Bayesian statistics; loss distributions and reinsurance, risk models including compound Poisson; estimation of aggregate claims distribution; probability of ruin; premium rating and credibility; experience rating systems; claims reserving for loss run-off data and generalised linear models.

ACTL3004
Financial Economics for Insurance and Superannuation
Actuarial Studies Unit
UOC6 HPW3
Prerequisite: ACTL2001

The aim of this course is to introduce the mathematical and economic models of financial economics and highlight their application to asset-liability management for insurance, superannuation and funds management. Topics covered include; risk and utility; risk measures; mean variance models; factor models; asset liability models using portfolio selection models; equilibrium and arbitrage-free valuation; valuation of derivatives; term structure models; actuarial stochastic investment models and their application. The topics will be illustrated with applications to the valuation and risk management of insurance and superannuation contracts especially those with embedded options and financial guarantees.

ACTL3005
Superannuation and Retirement Benefits
Actuarial Studies Unit
UOC6 HPW3
Prerequisites: ECON1101, ECON1203

This course provides a comprehensive analysis of superannuation and retirement benefits, primarily in Australia. Topics include: alternative superannuation arrangements, taxation and regulation of superannuation, risk management and investment strategies for superannuation, design of retirement benefits, the retirement decision, policy developments and controversies and international comparisons.

ACTL3100
Industrial Training 2 (Co-op)
Actuarial Studies Unit
UOC15
Prerequisite: ACTL2100

Students study, in depth, the application of actuarial principles in an industry environment.

ACTL4000
Thesis (Actuarial Studies)
Actuarial Studies Unit
UOC24
Prerequisite: Admission to BCom Hons in Actuarial Studies

Honours students complete a thesis under the direction of a supervisor. The thesis requires the reporting of research in an approved topic area in actuarial studies including a literature review, analysis of a research problem along with presentation of research methods and data analysis.

ACTL4001
Actuarial Theory and Practice A
Actuarial Studies Unit
UOC6 HPW3
Prerequisite: Admission to BCom Hons in Actuarial Studies

This course develops the theory and practice underlying the actuarial management of risk-based and other products offered by financial institutions. The course draws examples from actuarial practice and discusses implications for life insurance, general insurance, superannuation, asset-liability management and other areas where actuaries are involved in product design, pricing, reserving, investment and surplus management. The course emphasises recent developments in actuarial theory. This course, along with ACTL4002, corresponds to the Part II courses of the professional examinations of The Institute of Actuaries of Australia.

ACTL4002
Actuarial Theory & Practice B
Actuarial Studies Unit
UOC6 HPW3
Prerequisite: Admission to BCom Hons in Actuarial Studies

This course, along with ACTL4001 Actuarial Theory and Practice A, develops the theory and practice underlying the actuarial management of risk-based and other products offered by financial institutions. The course draws examples from actuarial practice and discusses implications for life insurance, general insurance, superannuation, asset-liability management and other areas where actuaries are involved in product design, pricing, reserving, investment and surplus management. The course emphasises recent developments in actuarial theory. This course, along with ACTL4001, corresponds to the Part II courses of the professional examinations of The Institute of Actuaries of Australia.

ACTL4003
Research Topics in Actuarial Studies
Actuarial Studies Unit
UOC6 HPW3
Prerequisite: Admission to BCom Hons in Actuarial Studies

This course is an advanced course in actuarial science covering selected topics in the areas of actuarial modelling in insurance risk, life insurance, superannuation and financial economics. The course will involve the study and discussion of current research papers and advanced texts of interest to research students. As part of the course, students will learn to develop a research topic, apply the methodology of scientific research and gain exposure to the presentation of research in actuarial journals.

ACTL4004
Thesis (Actuarial Studies) (Part Time)
Actuarial Studies Unit
UOC24 HPW3
Prerequisite: Admission to BCom Hons in Actuarial Studies

Honours students complete a thesis under the direction of a supervisor. The thesis requires the reporting of research in an approved topic area in actuarial studies including a literature review, analysis of a research problem along with presentation of research methods and data analysis.

ACTL4100
Industrial Training 3 (Co-op)
Actuarial Studies Unit
UOC15
Prerequisite: ACTL3100

Students study, in depth, the application of actuarial principles in an industry environment.

AERO3101
Aerospace Design 1A
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Corequisite: AERO3620

Aerospace vehicle types, characteristics, size and performance. The special constraints involved in the design of an aerospace vehicle. Aerospace regulations and materials; quality control. Introduction to computer design techniques. Design of typical thin wall structures; struts; joints and fasteners. ESDU data sheets and resource material. Design work in selected areas and reports.

AERO3102
Aerospace Design 1B
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: AERO3101, Corequisite: AERO3400

Vehicle loads; thrust inertia, atmospheric flight (manoeuvre and gust), wings fuselage, empennage and controls. Material fatigue and degradation; safe life and fail safe design. Weight and balance, centre of gravity; applied forces and moments; static and dynamic equilibrium, vehicle trim. Landing gear. Vehicle systems. Interaction of production engineering and maintenance requirements. Design work in selected areas and reports.

AERO3400
Analysis of Aerospace Structures 1
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MECH2412

Aerospace applications of plane frames and space structures. Open and closed section thin walled beams, Stresses due to torsion and shear in multicell tubes. Wing and fuselage structures, ribs and bulkheads. Deflections. Structural instability, buckling of perfect and imperfect columns, bending and buckling of thin flat plates. Introduction to composite materials, sandwich panels.

AERO3610
Aerodynamics and Propulsion
School of Mechanical and Manufacturing Engineering
UOC6 HPW6
Prerequisite: MECH2612, MECH2712

Inviscid conservation relations. Potential flow source, sink, doublet and point vertex; superposition with uniform flow. Airfoil formation and Kutta condition. Two dimensional incompressible flows around thin airfoils. Incompressible flow about wings of finite span. Experimental techniques. Introduction to propulsion systems; history, types, basic thrust, efficiency equations, propellors, rotors and fans.

AERO3620
Flight Dynamics and Systems
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MECH2320 or MECH2300

Introduction to atmospheric and space environment. Aircraft performance in terms of drag, thrust and power. Minimum and maximum speeds, range and endurance. Rates of climb and energy height methods. Manoeuvring and flight loads including manoeuvre and gust envelopes. Mission profiles including take-off and landing. Introductory longitudinal static stability; manoeuvre points and margins. Flight testing. Fluid, mechanical and electrical systems in aerospace vehicles; power, mass and information transfer; environment control. Flight control.

AERO4101
Aerospace Design 2A
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: AERO3102

Project teams are formed to carry out the initial design of an aerospace vehicle within a simulated industrial environment. Work involves current design and analysis tools and use of experimental data. A lecture program supports this work. A satisfactory grade in this course is provisional pending successful completion of AERO4102.

AERO4102
Aerospace Design 2B
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: AERO4101

Building on work in AERO4102, project teams complete their initial design study, produce a group report and an individual portfolio, and present their findings.

AERO4401
Analysis of Aerospace Structures 2A
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: AERO3400, MECH3400 Excluded: AERO9415, MECH9410, NAVL4401

Finite element analysis of aerospace structures, including modelling, resource requirements and accuracy. Applications from linear and non-linear elasticity using commercial finite element programs.

AERO4402
Analysis of Aerospace Structures 2B
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: AERO4401 Excluded: MECH4410, MECH9410

Introduction to the dynamic response of aerospace structures. Aeroelasticity including control reversal, divergence and flutter. Analysis of bonded and bolted joints. Fracture mechanics and fatigue including residual strength of cracked components, crack growth, arrest and damage tolerance. Thermal stresses.

AERO4610
Advanced Aerodynamics and Propulsion
School of Mechanical and Manufacturing Engineering
UOC6 HPW6
Prerequisite: AERO3610

One-dimensional gas flow. Thermodynamic and sonic speed relations; Mach number, isentropic variable area flow, Prandtle Meyer flow, normal and oblique shock waves. Method of characteristics. Compressible potential flow. Viscous flow; method of calculating viscous drag. Engine intakes; subsonic, supersonic, ramjets, gas turbines, piston engines, design performance. Rockets. Noise. Pollution.

AERO4620
Aerospace Vehicle Dynamics and Avionics
School of Mechanical and Manufacturing Engineering
UOC6 HPW6
Prerequisite: AERO3620

Space dynamics; exo-atmospheric vehicles, three body problem, orbit selection and prediction, tracking, maneuvering and rendezvous. Dynamics of space launchers; single stage and multi stage rockets, optimization and control. Dynamic stability and control of atmospheric and exo-atmospheric vehicles; dynamic response to the mission. Avionics and advanced aircraft systems; flight control, computer-aided vehicle management.

ANAT1510
Introductory Histology for Health and Exercise Science
School of Medical Sciences
UOC3 HPW3
Prerequisite: BIOS1201

This course will provide an introduction to the histology of basic tissue, bones, joints, muscle tissue, nervous tissue, circulatory, respiratory and urinary systems. Other topics covered include early development, growth and aging, and human evolution.

ANAT2111
Introductory Anatomy
School of Medical Sciences
UOC6 HPW6
Prerequisites: BIOS1201, BIOS1101 or PHPH1501 or HESC1501. Excluded ANAT2511, ANAT2151

Note: From S1 2007 ANAT2111 will also require 6UOC of Level 1 Chemistry.

Introduction to gross anatomy of the whole body, based on a study of prosected specimens. General topographical and systematic anatomy, musculoskeletal, cardiovascular, respiratory, gastrointestinal, genitourinary and nervous systems. This course is designed for students who wish to proceed to Level III studies, or a major, in Anatomy.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective.

ANAT2151
Introductory Functional Anatomy
School of Medical Sciences
UOC3 HPW3

Overview of basic human anatomy and physiology with an emphasis on structures and systems which are most vulnerable to chemical and physical trauma under industrial conditions, such as the eye, ear, and skin. Other systems studied include the musculoskeletal system, central and peripheral nervous systems, circulatory, respiratory, gastrointestinal, endocrine, and urogenital systems. Offered as a distance education course.

ANAT2241
Histology: Basic and Systematic
School of Medical Sciences
UOC6 HPW6
Prerequisite: BIOS1101, BIOS1201. Excluded ANAT1510, ANAT2200, ANAT2210, ANAT2511

The first half of this course provides an overview of the structure of mammalian cells and their organization into tissues. Topics include the use of the light microscope, the preparation of tissues and morphological examination of epithelium, glands, connective tissue (e.g., cartilage, bone, and blood), muscular, and nervous tissues. An emphasis will be placed on the recognition of cell types and the correlation of structure and function. The second half of the course deals with a histological examination of the major body systems namely cardiovascular, respiratory, lymphatic, integumentary, digestive, endocrine, urinary, reproductive, and special senses. Emphasis will be placed on integrating structure of a system with function. This whole course provides an excellent basis for the future study of pathological disorders.

ANAT2341
Embryology: Early and Systematic Development
School of Medical Sciences
UOC6 HPW6
Prerequisite ANAT2241, Excluded ANAT2300, ANAT2310

The first half of this course introduces the morphological and molecular mechanisms of segmentation and patterning responsible for organizing the body plan in the embryo. Topics will include the molecular, genetic and cellular approaches to the study of human embryology using four main vertebrate systems: frog, fish, chick and mouse. The second half of this course will cover human fetal development through to birth, including the developmental anatomy of the organ systems. The course will examine the common principles and differences that underlie normal and abnormal development of vertebrates: specifically, the roles of cell differentiation, proliferation and migration, target recognition, interaction in the nervous system, axial polarity, cell adhesion, cell fate and signalling. Emerging technologies such as genomic analysis and the use of transgenic and dysfunctional mouse mutants in research will be covered.

ANAT2511
Fundamentals of Anatomy
School of Medical Sciences
UOC6 HPW6
Excluded: ANAT2111, ANAT2151, ANAT2200, ANAT2241

This course provides an introduction to the fundamental principles of human structure. It includes an introduction to the histology of basic tissues; an overview of the functional anatomy of the major body systems; human development, growth and aging; human evolution; body imaging. This course is designed for students who do not plan to major in Anatomy. Students who achieve a credit level pass or better can use this course as a prerequisite for ANAT3411 Neuroanatomy or ANAT3121 Visceral Anatomy.

ANAT2601
Biological Anthropology A: The Primates
School of Medical Sciences
UOC6 HPW4
Prerequisite BIOS1101, BIOS1201, Excluded ANAT2600

This course introduces the study of primates within comparative, functional and evolutionary frameworks drawing heavily on evidence from anatomy. It details distinguishing anatomical features of the Order Primates. Primate diversity is considered through various approaches: by studying adaptations in anatomy and behaviour between and within major primate groups and their relationship to ecological variables, biological classifications and reconstructed evolutionary relationships, and the record for primate evolution via the complimentary lenses of evolutionary biology, palaeontology and genetics. The place of humans within the order primates is an important topic. Aspects of primate ecology are considered.

ANAT2611
Biological Anthropology B: Human Evolution
School of Medical Sciences
UOC6 HPW4
Prerequisite BIOS1101, BIOS1201, Excluded ANAT2600

This course introduces the field of palaeoanthropology. It examines evidence for our early ape ancestors, the emergence of the human lineage, earliest hominins, australopithecine diversity, and genus Homo up to the emergence of modern humans (a topic covered in detail in ANAT3601). It draws heavily on evidence from anatomy, especially from the human fossil record, in considering major adaptations of the human lineage and evidence for anatomical change. The multidisciplinary nature of modern palaeoanthropology is examined in recognition of the complex nature of the evidence for our biological origins.

ANAT3121
Visceral Anatomy
School of Medical Sciences
UOC6 HPW6
Prerequisite: ANAT2111 or a minimum of a credit in ANAT2511.

Extends on the teachings of ANAT2111 and ANAT2511 and compliments the other level III anatomy courses (ANAT3131, ANAT3141 and ANAT3411) by providing detailed information regarding the viscera and associated musculoskeletal structure of the head, neck, thorax, abdomen and pelvis. The course aims at providing students with sound knowledge of the structure and, to a lesser degree, the function of the respiratory, cardiovascular, gastrointestinal, urinary, reproductive, lymphatic and autonomic nervous systems. Lectures focus on the structure and function of the viscera as well as clinical cases and surface anatomy, while the laboratory classes involve the study of wet and plastinated prosected specimens, cross-sectional images and radiographs. Assessment consists of two practical exams, an essay assignment and a theory exam and this course can be used towards obtaining a major in Anatomy and/or Physiology.

ANAT3131
Functional Anatomy 1
School of Medical Sciences
UOC6 HPW4
Prerequisite: ANAT2111; Excluded: ANAT2151

Functional anatomy of the musculoskeletal system in the head, neck and upper limb, includes biomechanics of connective tissue; in particular bone, cartilage and tendon. Laboratory classes involve study of prosected specimens, X-rays and surface anatomy.

ANAT3141
Functional Anatomy 2
School of Medical Sciences
UOC6 HPW4
Prerequisite: ANAT3131

Functional anatomy of the musculoskeletal system in the trunk and lower limb. Includes functional aspects of muscle and a discussion of the mechanics and energetics of walking and running. Laboratory classes involve study of prosected specimens, X-rays and surface anatomy.

ANAT3231
Cell Biology
School of Medical Sciences
UOC6 HPW4
Prerequisite: ANAT2200 or ANAT2241

Cell Biology has broad applications to medical and basic science research. This course studies both cellular structure and cell functions. Also covered are the current and developing cell biology research techniques.

ANAT3411
Neuroanatomy
School of Medical Sciences
UOC6 HPW6
Prerequisite: ANAT2111 or a minimum of a credit in ANAT2511.

Provides an overview of the anatomical organisation of the central nervous system. Topics covered include: cytoarchitecture of brain and spinal cord; functional anatomy of sensory and motor systems and higher cerebral functions such as language and emotions; blood supply of the central nervous system; cerebrospinal fluid and meninges.

ANAT3421
Neuroscience Research Seminars
School of Medical Sciences
UOC6 HPW3
Prerequisite: ANAT3411 or PHPH3131

Focuses on selected areas of interest in contemporary neuroscience research. Includes: brain development and axon guidance, pain pathways, spinal cord injury, central control of cardiovascular function, cortical processing of visual information and bionic eyes, drug addiction, control of appetite and the neuropathology of degenerative disorders. The course is organised in seminar format with discussion of original research papers. It is ideal for students considering doing Honours as it provides a background to current research problems and the opportunity to undertake a small project.

ANAT3601
Biological Anthropology C: Modern Humans
School of Medical Sciences
UOC6 HPW4
Prerequisite ANAT2601 or ANAT2611. Excluded ANAT2610

This course covers biological aspects of modern humans from origins to challenges faced by present and future populations. Study commences with a detailed examination of the evolution of modern humans building on evidence introduced in ANAT2611. Global colonisation lead to new stresses and biological challenges for humans: these challenges and human biological responses to them are considered. A major focus is understanding physical (anatomical and biochemical) variation among recent and contemporary humans, the forms its takes and its causes. Other topics include human sexual dimorphism, growth, development, ageing and physique, and their relationship to function, disease and behaviour. The possible future course of human evolution is explored. This course draws heavily on evidence from anatomy.

ANAT4508
Anatomy 4
School of Medical Sciences
UOC24

An Honours program consisting of the preparation of a research thesis and participation in School seminars.

ARCH1102
Architectural Design Workshop 1
Architecture Program
UOC8 HPW6

Exploration of the implications of precedents for design practice. Focus on the development of integrated design strategies and approaches responding to human needs, the natural environment and technical aspects of architecture. There will be an emphasis on the development of foundational knowledge and skills of research, critical analysis, conceptualisation, speculation and communication. Development and application of basic design principles. Critical reflections on students own design approaches and strategies. Detailed consideration of architectural elements, components, construction assemblies and environmental systems. Design of small-scale spaces and buildings, with simple programmatic requirements, to a basic level of integration. Predominantly individual work supported by peer-group activities. A series of studio-based design projects and assignments will be defined within tight programmatic limits, and resourced across selected aspects of the History and Theory, Technology and Communication streams to maximise possibilities of integration.

ARCH1121
Architectural History and Theory 1
Architecture Program
UOC4 HPW3

A general introduction emphasizing major thresholds in Western architectural history, with brief cross-cultural explorations of Asian architectural history. The key issues examined will include: geometric and iconographic order, the status and role of architectural designers and writers, methods of representation and reproduction involved in constructing and propagating architectural ideas, and 20th-century architecture in the context of developments in the visual arts generally. Assignments include exercises in writing short analytical texts and in typographic design.

ARCH1122
Architectural History and Theory 2
Architecture Program
UOC4 HPW3

A series of close examinations of key buildings and writings in 20th-century architecture of Western Europe, North America, Australia and Japan. A substantial proportion of the selected buildings will be small and medium-scale projects. They will be examined in terms of key concepts and issues, including: plan libre and raumplan, designing in section, public and private, architecture and the media, architecture and the city, architecture and landscape, and cross-cultural interaction. Assignments include exercises in writing short analytical texts and in freehand drawing and typographic design.

ARCH1142
Communications 1
Architecture Program
UOC4 HPW3

This is a foundation course in developing capabilities in a broad range of architectural manual graphic communication skills, particularly architectural drawing and model making. Students are introduced to the various architectural drawing conventions, to freehand architectural drawing styles and media and to creative drawing as a means of analyzing and exploring architectural and design ideas. The course also teaches model making as a means of exploring the 3D resolution of spatial concepts and theories, and verbal skills through in-class presentations that teach the ability to intelligently talk about architectural ideas. Assessment is a mixture of exams, assignments and continuous assessment with a particular stress on in-class participation. Marks are based on each student's engagement with the problems, the development of specific skills, their creative engagement with the course content and willingness to push their envelope of knowledge. Project tasks are designed to be relevant to, complement and parallel other subject areas taught in first year, and to integrate the manual skills necessary to develop and communicate architectural ideas and designs intelligently, clearly and creatively.

ARCH1171
Architectural Technologies 1
Architecture Program
UOC9 HPW5

Specialists in environment, structures and construction describe the basic concepts of their fields. An introduction to concepts of social responsibility, environmental accountability and ecological sustainability. Implications for the urban/built and natural environments. Fundamentals of building physics, as they relate to the concepts of comfort and environmental control. Foundation is basically quantitative but assumes only basic numeracy skills. Introduction to basic structural behaviour and its relationship to construction, material and environmental aspects of design. Introduction to different ways of thinking about construction in relation to design practice. Investigation of the artifactual nature and materiality of buildings. Outline of construction principles and their implications for the development of construction strategies in architectural design. Introduction to building material science; sustainable resource management and life cycle energy assessment.

ARCH1172
Architectural Technologies 2
Architecture Program
UOC8 HPW5

Environment: Thermal comfort and building climatology: perception and comfort; the body's responses; bioclimatic classification and traditional buildings. Solar geometry and control of sunlight. The building envelope: thermal performance; principles of heat transfer; solar radiation effects; absorptivity, reflectivity, conduction, thermal gradients; condensation and thermal insulation; degree day concept and prediction of heating requirements. Structures: Analysis of structural precedents in relation to human need and design practice. Outline of key structural behaviour concepts: loading - including load transfer, forces at supports and connections; resistance to loads - including stability, strength and stiffness; stress - including axial, shear, bending and deformation. Focus on basic linear structural elements and systems - including cable and arch, strut and column, beam, truss, frame. Concept and techniques of modelling, predicting and incorporating structural behaviour in design. Basic structural modelling techniques and problem solving tools - physical, graphical, numerical, computer-assisted. Introduction to basic statics, properties and strength of materials. Introduction to basic building physics. Implications for structural, constructional and environmental issues in design. Construction: Introduction to masonry and timber in design and construction with an emphasis on small to medium scale buildings. The basic physical properties, manufacturing processes, use and performance of masonry and timber. An introduction to construction documentation standards. Lecture material will be supported through associated projects in the Design Workshop program.

ARCH1201
Architectural Design Workshop 2
Architecture Program
UOC8 HPW6

Exploration of theoretical, tectonic and technological factors influencing design thinking and practice. An emphasis on critical and strategic skills of research and architectural speculation, directed to the development of useful implications for design practice. Detailed design of small to medium-scale spaces and architectural elements, components and construction assemblies, to a moderate level of integration. Individual and collaborative group-based work. A series of studio-based design projects and assignments will be defined within tight programmatic limits, and resourced across selected aspects of the History and Theory, Technology and Communications streams to maximise possibilities of integration. See ARCH1221, ARCH1271, ARCH1241.

ARCH1202
Architectural Design Workshop 3
Architecture Program
UOC8 HPW6
Prerequisite: BENV1101, ARCH1102; Corequisite: ARCH1222, ARCH1272, BENV1242.

Critical research and elaboration of strategic architectural design approaches responding to behavioural, technological and environmental issues. A focus on the implications of design contexts and environmental sustainability for the development of ethical and sustainable design practices and outcomes. Detailed design of medium-scale buildings, with simple programmatic requirements, to a moderate level of integration. Consideration and incorporation of construction assemblies and integrated environmental systems of medium complexity. Individual and collaborative group-based work. A series of studio-based design projects and assignments will be defined within tight thematic and technological limits, and resourced across selected aspects of the History and Theory, Technology and Communications streams to maximise possibilities of integration.

ARCH1221
Architectural History and Theory 3
Architecture Program
UOC4 HPW3

History: Nineteenth-Century architecture and the present. By interpreting certain nineteenth- and early twentieth-century issues and debates, this Module makes it possible to clarify and question contemporary beliefs and achievements, such as technological progress, imperial expansion and the division of labour (which has prevented the exploration of more substantial relationships between the human body and architecture). Lectures will also look to history to reconsider issues which demand contemporary attention, including ornament, decorum, anthropomorphism, empathy and memory. Rather than presenting a survey of nineteenth-century architecture, each lecture will focus on a single issue and explore it through the works of particular architects and writers. The relevance to our current debates will be spelt out. Material is presented as one- and/or two-hour lectures supplemented with readings and analyses of selected texts in architectural history and architectural theory.

ARCH1222
Architectural History and Theory 4
Architecture Program
UOC3 HPW2
Prerequisite: BENV1101, ARCH1121, ARCH1102, ARCH1122; Corequisite: ARCH1202.

An introduction to the architecture of Asia with primary focus on India, China and Japan. Aspects of indigenous traditions as well as developments in the 20th century will be examined. Some attention will be given to materials relating to other countries of the region. The approach of the course is thematic. A range of key concepts, significant buildings and cities will be studied; for instance: the role of geometry, the rise of the modern profession of architecture, cross-cultural exchanges, colonialism, conservation and regionalism.

ARCH1241
Communications 2
Architecture Program
UOC3 HPW3
Prerequisite: ARCH1142, BENV1101.

Through the application of basic drawing, compositional, modelling and rendering practices developed in Communication One, students will extend their ability in techniques of architectural representation. Opportunities will be provided for students to develop skills in model making, using materials such as cardboard, plastics and wood and in rendering techniques, using a selection of media. Students will be encouraged to explore different compositional, modeling and media techniques and critique the implications of their application. Students will develop basic capabilities in professional drawing production and will be required to demonstrate their understanding of architectural drawing conventions and their application in rendering and presentation techniques. A series of well-defined group and individual projects will provide opportunities for students, in tutorial settings, to demonstrate their extended skill and technique development as well as their ability to critique different modes of architectural representation. Integral to the assessment process is the requirement that students provide written evaluation and feedback about their own and their peers completed tasks.

ARCH1271
Architectural Technologies 3
Architecture Program
UOC6 HPW4
Prerequisite: ARCH1171.

Environment: Natural and artificial lighting. Quantitative and qualitative aspects of lighting design. Electric light sources, light control and prediction methods. Structures: Structural steel design. Material characteristics, analysis and optimisation of structural systems and elements in steel. Design and behaviour of members in bending, shear and axial loading. Load path and action/effect diagrams - the use of to Multiframe. Strength and deflection. An introduction to the structural design of masonry. Codes of practice and Australian Standards. Construction: Steel in construction: framing, wall and roof cladding, basic detailing. Introduction to the Building Code of Australia [BCA]. Footing systems for steel and concrete framed buildings. Basements and retaining walls. Concrete frame, wall, floor and roof systems for low to medium scale buildings.

ARCH1272
Architectural Technologies 4
Architecture Program
UOC4 HPW3
Prerequisite: ARCH1172.

Structures: Structural concrete design. Material characteristics, analysis and optimisation of structural systems and elements in steel. Design and behaviour of members in bending, shear and axial loading. Load path and action/effect diagrams - the use of to Multiframe. Strength and deflection. Codes of practice and Australian Standards. Characteristics of insitu, precast including 'tilt-up', pre- and post-stressed concrete structures. Construction: Concrete in construction - medium to high rise buildings: insitu, precast including 'tilt-up', pre- and post-stressed concrete structures. Basic detailing. Concrete finishes.

ARCH1282
Research Practice
Architecture Program
UOC3 HPW2

A core course which introduces students to basic empirical and interpretive research methods, and referencing requirements. Classes are by lecture and seminar. Assignments are designed to lead students through both theoretical and research in-the-field processes. Critical evaluations of the appropriateness of methodologies used and the value/meaningfulness of conclusions drawn are expected. This course is a prerequisite for Investigation Workshop (final year).

ARCH1301
Architectural Design Studio 1
Architecture Program
UOC8 HPW6
Prerequisite: ARCH1201, ARCH1202; Corequisite: ARCH1321, ARCH1371, BENV1341.

Exploration of the implications of theoretical, historical, technological and environmental factors influencing design thinking, practices, outcomes and modes of representation. An emphasis on the integration of critical research, visualisation, modelling and the development of appropriate design strategies. Detailed design of medium-scale buildings, and medium to large-scale architectural spaces, to an intermediate level of integration. Consideration and incorporation of selected components, construction assemblies and integrated environmental systems of increasing complexity. Predominantly collaborative group-based work.

ARCH1302
Architectural Design Studio 2
Architecture Program
UOC9 HPW6
Prerequisite: ARCH1301.

Exploration of architectural design strategies responding to socio-cultural, tectonic, technological and environmental issues. Incorporation of legal and procedural parameters and constraints such as statutory planning and building codes. Detailed design of medium-scale buildings, with complex site and programmatic requirements, to an intermediate level of integration. Design of complex medium to large-scale architectural spaces, components, constructional assemblies and integrated environmental systems. Predominantly individual work articulated in relation to collaborative group-based objectives. A selection of a series of studio-based design projects and assignments will be defined within tight theoretical, pragmatic and technological limits, and resourced across relevant stream areas to maximise possibilities of integration. Students may apply to carry out exchange studies with universities which have an agreement with UNSW. Any application should be made to the university and is at the discretion of the Head of Program (Architecture).

ARCH1321
Architectural History and Theory 5
Architecture Program
UOC3 HPW2
Prerequisite: ARCH1222, ARCH1202; Corequisite: ARCH1301.

Module 1: Theory: Design and human behaviour. This Module provides an understanding of behaviour-environment theory and its relevance to environmental design and raises questions concerning contemporary values and understandings in architecture. Lectures are presented on elementary behavioural theory, behaviour settings, personal space, territoriality, crowding, privacy, way-finding, place and place-making (genius loci), all of which are examined for their impact on architecture and planning. Aesthetic and functionalist ideas in architecture are cross-related with contemporary notions of meaning, community, identity and polity. Major architectural ideas and design approaches are subjected to scrutiny in light of behaviour-environment research techniques and findings. Material is presented as two-hour lectures supplemented with readings and analyses of selected texts in sociology, psychology, anthropology, environment-behaviour research and architectural theory. Module 2: Theory: Urban theory and practice. This Module deals with architecture and the city, especially as it relates to the nature of the design task. The objective is to bring students attention to our current understanding of urban design and the various roles architects have in shaping the city. Explicit in this analysis will be a redefinition of functionalism in architectural and urban design. Implicit in all designs, if not explicit, is some positive construct of the people imagined as users or participants in the work designed. Questions arise about the adequacy of our definitions and people-constructs, about the degree to which the facts can assist our projections for the future, and on whether our modelling and imaging of life is sufficiently real. Critically evaluating the models we use enhances our creativity because it opens up possibilities that generally fall beyond the scope of our thoughts. Material is presented as two-hour lectures and supplemented by readings in urban theory, town-planning, architectural theory, and people-environment research.

ARCH1371
Architectural Technologies 5
Architecture Program
UOC4 HPW3
Prerequisite: ARCH1171, ARCH1172, ARCH1271.

Environment: Acoustics and noise control: design of rooms, basic shape and volume, acceptable ambient levels. Acoustic performance: properties and behaviour of sound, sound transmission loss, external noise levels, structural borne and impact sound, reverberation times, selection of building envelope elements, selection of interior building materials and elements. Structures: Systems design and optimisation. Brief survey of advanced structures - including wide span, high-rise and lightweight structures. Construction: Cladding systems for walls and roofs: material selection and detailing. Stair and lift shaft construction and detailing. BCA fire performance requirements

ARCH1381
Professional Practice 1
Architecture Program
UOC3 HPW2

An overview of the profession and an introduction to the legal system. The client architect agreement. Types of building contracts and methods of building procurement. Aspects of the law of contract, torts, agency, trade practices, property and agency. Contract documentation and specification writing techniques. Estimating, feasibilities, cost planning, scheduling, bill of quantities and budgeting.

ARCH1382
Practicum
Architecture Program
UOC3 HPW2

This course is concerned with student preparation of a professional portfolio and the development of capabilities necessary for professional practice employment and academic study overseas. Topics in this component include writing letters of application, preparing resumes, interview and oral presentation techniques, working in teams, developing an understanding of your capabilities and strengths, practice ethics, working in cross cultural environments, negotiating, workplace issues and personal management skills. Students will receive instruction in documenting practice placement diaries and journals. A series of guest lectures and workshop activities will complement the assessable task, which is to complete a well-presented portfolio of student work. The second component of the course is concerned with an introduction to law and ethics relevant to architectural practice - including the architect-client agreement; agency and employment law; appointment of and liaison with consultants; professional codes of conduct; the Architects Act; land use controls; the Building Code of Australia; Local Government Act; Environmental Planning and Assessment Act and the Heritage Act.

ARCH1398
Research Project 1
Architecture Program
UOC6
Prerequisite: ARCH1282.

Introductory project on a topic area selected by the student in accordance with his or her field of specialization. This project provides the opportunity to practice research methods, planning, organising and conducting and documenting study in the chosen field. The topic must be approved by the Program Coordinator and the research supervised by an appropriate member of staff.

ARCH1399
Research Project 2
Architecture Program
UOC9
Prerequisite: ARCH1398.

Advanced project on a topic area selected by the student in accordance with his or her field of specialization. This project represents the culmination and integration of knowledge and skill gained in the student's field of specialization, and should include social, environmental and ethical aspects. The research project report is to be presented in a thesis format and be supervised by an appropriate member of staff.

ARCH1401
Architectural Design Studio 3
Architecture Program
UOC9 HPW6
Prerequisite: ARCH1301, ARCH1302.

The design of medium to large-scale buildings and/or developments, with complex site and programmatic requirements, to a high level of integration. Emphasis on advanced integration of social, pragmatic, technological, urban and environmental aspects. Elaboration and management of implied conflicting issues and needs - including site constraints, planning controls and building regulations, cultural, behavioural, functional and technical issues. Conservation and heritage values pertaining to adaptive re-use. Individual and group work, articulated in relation to collaborative group-based objectives. A range of studio project options will be offered each session, each with a different focus. Projects will be further defined and resourced by each student through elective specializations selected from a range of advanced electives offered in the History and Theory, Communications and Technology Streams. Students may apply to carry out exchange studies with universities which have an agreement with the University of New South Wales. Any application should be made to the university and is at the discretion of the Head of Program (Architecture) UNSW.

ARCH1402
Architectural Design Studio 4
Architecture Program
UOC9 HPW6
Prerequisite: ARCH1301, ARCH1302, ARCH1401.

The design of medium to large-scale buildings and/or developments, with complex site and programmatic requirements, to a high level of integration. Emphasis on theoretical, technological and environmental aspects of the project. Elaboration and management of implied conflicting issues - including theoretical, technological and representational aspects. Individual and group work, articulated in relation to collaborative group-based objectives.

A range of studio project options will be offered each session, each with a different focus. Projects will be further defined and resourced by each student through elective specializations selected from a range of advanced electives offered in the History and Theory, Communications and Technology Streams. Students may apply to carry out exchange studies with universities which have an agreement with the University of New South Wales. Any application should be made to the university and is at the discretion of the Head of Program (Architecture) UNSW.

ARCH1470
Building Services 1 & 2
Architecture Program
UOC6 HPW4
Prerequisite: ARCH1271, ARCH1272, ARCH1371.

Sources and distribution of water, wastes and energy supplies, application of electrical power, hydraulics, vertical transport, fire protection in buildings, security, telecommunications. Air conditioning, heating and ventilating of buildings. Equipment selection and space allocations for these services. Students will be able to undertake preliminary selection and sizing of systems, and to translate them into space and planning requirements for complex buildings. Assignments include tutorial projects and/or field investigations, and open book examination. The course requires students to have WebCT access.

ARCH1498
Honours Project 1
Architecture Program
UOC24 HPW0
Prerequisite: ARCH1399.

This project represents a major research-based investigation into a subject related to the student s area of specialization. It should represent an original contribution to work in that area which demonstrates a high level of scholarship and an understanding of good research methods. It can appropriately be seen as stage one of a two-part project linked to the second honours project, but must be complete in and of itself. The work is to be closely supervised by a member of the academic staff. On rare occasions, permission may be sought from the Program Coordinators to have this project supervised by someone outside the University, but there must always be an internal co-supervisor in that event. The intended topic must be lodged as a fully-worked research proposal, and must be approved by the Program Coordinator prior to its commencement. The submitted work must be properly bound and will be assessed internally by at least two readers.

Note: Students must seek approval from Program Coordinator to enrol in this course.

ARCH1499
Honours Project 2
Architecture Program
UOC24 HPW0
Prerequisite: ARCH1498.

This project represents a major research-based investigation into a subject related to the student's area of specialization. It should represent an original contribution to work in that area which demonstrates a high level of scholarship and an understanding of good research methods. It can appropriately be seen as stage two of a two-part project linked to the first honours project, but must be complete in and of itself. The work is to be closely supervised by a member of the academic staff. On rare occasions, permission may be sought from the Program Coordinator to have this project supervised by someone outside the University, but there must always be an internal co-supervisor in that event. The intended topic must be lodged as a fully-worked research proposal, and must be approved by the Program Coordinator prior to its commencement. The submitted work must be properly bound and will be assessed internally by at least two readers.

Note: Students must seek approval from Program Coordinator to enrol in this course.

ARCH1501
Investigation Workshop
Architecture Program
UOC9
Prerequisite: ARCH1282, ARCH1302, ARCH1371, ARCH1401, ARCH1402, ARCH1583.

Critical research, exploration and speculation, leading to the detailed definition of a proposal for an individual design project. An emphasis on the ethical and political dimensions of architectural practice as a public act. A focus on the integration of theoretical, socio-cultural, programmatic, technological and professional issues. Individual submissions developed within a collaborative and supportive peer-group environment. Proposals will be initiated, researched and elaborated by each student through elective specializations selected from a range of advanced electives offered in the History and Theory, Technology and Communications streams. Preparation of an investigative study and detailed conceptual and functional design brief, articulating the parameters, values, objectives, components and implications of the project. Communication of the proposal through seminars, concept drawings/models and investigative reports.

ARCH1502
Graduation Project
Architecture Program
UOC9
Prerequisite: ARCH1371, ARCH1501, ARCH1583.

Design development of the project defined in Investigation Workshop. Further elaboration of the project framework, content, criteria and parameters through elective specialization. Detailed resolution and presentation of the design to an advanced level of integration across all dimensions of the project: theoretical, historical, ethical, technological, environmental and professional. Individual submissions developed within a collaborative and supportive peer-group environment. Presentation of the project to peers, eminent critics and practitioners through various seminars, forums, and a high profile end of session graduate exhibition.

ARCH1582
Professional Practice 2
Architecture Program
UOC6 HPW4
Prerequisite: ARCH1371

Legal implications of architectural practice. Liabilities of architects. The architect/client agreement. Types of building contract and methods of building procurement. Tendering and negotiating. Contract administration procedures. Professional defensive measures and crisis management. Introduction to management theory. The structure and organization of an architectural office. Aspects of company and partnership law and insurance. Business principles and management procedures relevant to an architectural practice. The course will examine the production of architecture as a social event, it will analyse a series of explanations of the relationships between society and space and will look at both Asian and Western cultures as examples. The focus of this analysis will include issues such as: the role of economics and politics, urban administration, cultural difference, social theory etc, to architecture. This will be carried out by examining questions such as what is the relationship between architecture and urban politics? What part does architecture play in the political economy of cities? How does architecture as a commodity reflect commodity producing society as a whole? What basic social theories inform what we might call a social theory of architectural production? How do investors, developers, industrialists and others view architecture and building? What is the administrative environment for the production of architecture? (Government policy at national, regional and local levels, development planning, planning legislation, structure and local plans etc). How does architecture relate to the reproduction of culture - what theories of cultural production exist, and how do they interface with urban politics? What part does architecture play in the sustainability of cities and urban environments as a whole?

ARCH1583
Work Experience
Architecture Program
UOC24
Prerequisite: BENV1101, ARCH1102.

This course provides an opportunity for students to gain off-campus experience in the discipline and profession of Architecture. Each student is required to undertake twenty four weeks of activity with the minimum single period of approved activity being eight weeks. The preferred activity is to work under the supervision of a registered Chartered Architect for the twenty four week period. This period of activity must be undertaken outside the formal academic session. Students undertaking this activity during the academic session shall not be enrolled in any other courses. This course must be completed before commencing ARCH1501-Investigation Workshop. For students to achieve a satisfactory assessment they must provide documented evidence of undertaking the preferred activity. Students have two options in providing evidence. Firstly, by using the accepted form of log-book provided by the Architects Accreditation Council of Australia or other professional bodies. Secondly, submitting a signed letter from their supervising registered Chartered Architect outlining the dates and period of time they were employed, their responsibilities and the activities / projects they have been engaged in. On completion of the course requirements students are required to submit the selected documentation to the Faculty Student Centre. Where students wish to undertake other activities such as an architectural study tour, employment on construction projects or other related architectural activity, a proposal must be submitted to the course authority for approval. Students are required to document these activities in accordance with guidelines issued by the Head of Program. The Faculty reserves the right to disallow any activities as meeting the requirements for this course, for which prior approval has not been sought and obtained in writing.

ARTS2000
Arts and Social Sciences Internship
School of Social Science and Policy
UOC6 HPW3
Prerequisite: 36 units of credit

This practical workplace experience is accompanied by a reading program. The reading component examines different approaches to the study of organisations, their structures, functions and policies, and links these issues to the internship experience.

Note: Students must have achieved a credit level or better average across the courses in their degree.

ARTS3001
Censorship and Responsibility in the Performing Arts, Film, Literature and Media
School of English
UOC6 HPW3
Prerequisite: 48 units of credit; Excluded: THFI2020

Investigates ethical issues in the production and reception of cultural works, including live performance, film and television programs, literature, popular music, advertising and the internet. Particular topics to be addressed include the moral responsibilities of production companies and media organisations, and the function and impact of regulation and legislation.

Note: Offered jointly by the Schools of English and Media, Film and Theatre.

ARTS3002
Making Histories and Historians: Ethics, Scholarship and Public Roles
School of History
UOC6 HPW3
Prerequisite: 48 units of credit

Introduces students to the social role, impact and responsibilities of historians. Seminars deal in a practical way with professional ethics; scholarly standards concerning bias, interpretation and plagiarism; the impact on these standards of new ideas of postmodernism; new methods and evidence in history and the ethical dilemmas these methods and

procedures may raise; the use and abuse of history in public discourse and in education.

Note: Offered jointly by the School of History and the School of History and Philosophy of Science.

ARTS3005
Arts and Social Sciences Graduates in the Workplace: Ethical and Social Responsibility
School of Social Work
UOC6 HPW3
Prerequisite: 48 units of credit

Arts and Social Sciences graduates are employed in an enormous range of capacities throughout the workforce, where they are routinely called upon to exercise their ethical and social responsibilities. Combines orientational lectures from Faculty academic staff with presentations by graduates who discuss the nature and consequences of their university education, and issues of ethical and social responsibility from the perspective of their own workplace experience. Weekly seminars allow students to pursue in depth the issues raised by graduates' presentations and to relate these issues to the purposes and consequences of their educational experience at UNSW.

Note: Offered by the School of Social Work.

ARTS3006
Corruption and Integrity in Public Life
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 48 units of credit

Debates over corruption and integrity in public life are intense, with the actions of public officials, government bodies and citizens coming under increasing scrutiny. Addresses debates about how individuals and institutions should behave in public life, drawing on a range of ethical perspectives and on case studies from different countries. Issues include at least some of the following: conflicts of interest; the limits of serving the public; lying and honesty; bribery and gifts; sex and sleaze; partiality and impartiality; the responsibilities of government to non-citizens (war, overseas aid, immigration, etc); the role of culture in defining corruption and ethics; whistle-blowing; civil disobedience; limiting corruption and promoting integrity through codes of conduct, watchdog bodies and constitutional engineering.

Note: Offered by the School of Politics and International Relations.

ARTS3007
East Asian Values and Identities
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 48 units of credit

Introduces the recent stages in a discussion of values, which has accompanied East Asian awareness of an identity crisis for well over a century. This discussion has produced a new notion of East Asian business and work ethics and contributed to the formation of a new complex and controversial East Asian identity. The Confucian focus on self-discipline, family coherence, hierarchical order and social status will be contrasted with the traditional focus on health, preservation of life and energy, individual identity and integrity, and personal spontaneity. Analysis will be from an East Asian perspective.

Note: Offered jointly by the School of Modern Language Studies, the School of Philosophy and the School of Politics and International Relations.

ARTS3010
Feminist Thought and Action
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 48 units of credit; Excluded: GENT1206

Addresses both general concerns and principles of Australian feminism and their application to a sample of specific issues involving personal and public life. Sets current feminist demands within the social context of past failures and achievements. Feminist questions provide the opportunity to examine the basis of conventional ethics and social responsibility. The feminist influence on academic discourse is also examined. Changes in subject content and tools of analysis will be explored. Students will be encouraged to examine their own educational experiences from a feminist perspective in order to extend their critical analysis skills.

Note: Offered by the School of Sociology and Anthropology.

ASIA1001
Introduction to Contemporary Asia
Department of Chinese & Indonesian Studies
UOC6 HPW3

Deals historically with the great civilisations of Asia, and the transformations which produced modern Asian states. Topics include: religion, society, politics, economic and social conditions in contemporary China, Indonesia, Japan and Korea. Students will be encouraged to complete one major task on their country specialisation and one outside the specialisation.

ASIA1002
Introducing Southeast Asia
School of History
UOC6 HPW3
Prerequisite: Enrolment in Program 3424 or 4765; Excluded: HIST1010

Introduces students to the history of the Southeast Asian region through a survey of the major eras from the classical civilisation of Angkor, Pagan and Borobodur up until the early twentieth century. Beginning with the religious and cultural traditions of Southeast Asia, kingship and power, pre-colonial society, colonial society and nationalist visions are explored. Analyses the ideas of nationalist figures like Jose Rizal and Sukarno, as well as peasant rebellions against colonialism and capitalism. The Philippines, Indonesia, Cambodia, Burma and Thailand receive particular attention.

ATAX0001
Basic Tax Law and Process
Board of Studies in Taxation
UOC6

This course is an introduction to the legal system and lawyers' reasoning. It also gives an overview of the Australian tax system, with emphasis on income tax and it deals, in some depth, with key income tax concepts. The skills of handling cases and statutes are developed using income tax material. The course builds these skills systematically, from the basic skill of extracting the binding rule from a case and consciously addressing the choices delegated to judges and bureaucrats by statutes, to skills of synthesising groups of cases, dealing with conflict and ambiguity in case law and applying statutes and cases to real world problems. In the final module, the policy implications of tax decisions are introduced. The course is the foundation for a first tier university approach to tax and it is constructed on this premise. A critical approach is emphasised throughout. Emphasis is put on the increasing importance of statutory construction and the new approaches necessary to adapt to a simplified tax system and rapid change. Students are encouraged to think beyond the traditional categories in textbooks which have inhibited effective critical thinking and to understand how key income tax concepts operate across traditional categories.

ATAX0002
Computer Information Systems
Board of Studies in Taxation
UOC6

This course aims to provide the student with an understanding of the content of information systems, the types of systems and their position in society and at an organisational level. It emphasises the growing interdependence between business strategy, rules and procedures on the one hand and information systems software, hardware, data and telecommunications on the other. This course addresses the importance of data and the structuring of data and seeks to provide an introduction to the systems development life cycle, design concepts, data analysis and models and data communications. In addition, this course presents the student with an overview of information systems in order to enable each student to fully understand the concepts involved in general systems development.

ATAX0003
Microeconomics and the Australian Tax System
Board of Studies in Taxation
UOC6

This course provides an introduction to basic microeconomic concepts and skills, and demonstrates their use in order to gain a clear understanding of economic problems and policy issues relevant to the Australian economy. It introduces students to the economic behaviour of small decision-making units such as households, firms and government agencies, with particular reference to the effects of taxation on markets. Emphasis is placed on analytical skills and key concepts which are relevant to tax professionals including, for example, opportunity cost, market equilibrium, elasticity,

substitution and income effects, tax incidence and efficiency costs of taxation.

ATAX0004
Framework of Commercial Law
Board of Studies in Taxation
UOC6

This course deals with the basic principles of contract law, agency, misleading and deceptive conduct, cheques and bills of exchange. The course is a building block in the understanding of basic concepts of the enforceability of promises; it deals with the basic principles of misrepresentation, illegality and termination of contracts, and provides an introduction to statutory and equitable remedies applicable where contractual obligations have been broken.

ATAX0005
Accounting 1
Board of Studies in Taxation
UOC6

This is the first course in a sequence of courses dealing with the profession and the practice of accounting and the literature associated with it. Students will be introduced to: the design of accounting information systems (classifications and chart of accounts, cash or accrual systems, concept and measurement selection, continuous or periodic recording); systems of accounting record (the accounting equation, document flows, accounts and ledgers, the double-entry systems, journals and subsidiary ledgers internal and accounting control); recording merchandising operations (sales, purchases, returns, allowances, receipts, payments, inventory effects); accounting for receivables and payables; inventories; and accounting for non-current assets.

ATAX0006
Tax Administration
Board of Studies in Taxation
UOC6

This course examines the operation of tax institutions in Australia's mass decision making process. It includes self-assessment and decision making in the bureaucracy, statutory review in the AAT and courts, the basics of administrative law and the Ombudsman's role. It deals with rulings, information collection powers, powers to collect tax owing and impose penalities. It includes taxpayer protections like the Charter of Taxpayer Rights and Freedom of Information. The course emphasises a coherent, critical understanding of the decision making system and its practical administration.

ATAX0008
Principles of Capital Gains Taxation
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0001

This course deals with Australia's capital gains tax regime. The course begins with a study of the theory behind taxing capital gains and its place in the income tax base. This is followed by an examination of the background leading to the introduction of Australia's first system for taxing capital gains and why that system was altered to our present system. The main features of the current legislation are then examined in detail, including its structure, main concepts and principal operative provisions. The course concludes with a look at the main concessions and exemptions available to individuals and small business.

ATAX0009
Law of Companies, Trusts and Partnerships
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0001

This course deals with the law relating to these particular entities, with an emphasis on the principles that are important to their operation and organisation. In company law, the course covers such issues as legal personality, share and capital structure, company debt, directors' duties, the enforceability of contracts with a company, insolvency and winding up. Trust law deals with the nature of a trust, the obligations and duties of trustees and the nature of a beneficiary's interest in a trust, while partnership law covers the nature of a partnership and the rights and obligations of partners.

ATAX0010
Accounting 2
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0005

This course is complementary to ATAX0005 Accounting 1, and completes the preparation of the financial reports using the Australian regulatory requirements. It examines the shareholders' equity and liability section of the statement of financial position and the preparation of the statement of cash flows. Against this background, students prepare and analyse the general purpose financial reports prepared for the external users and examine the information and reports prepared for management decision making.

ATAX0011
Macroeconomics, Government and the Economy
Board of Studies in Taxation
UOC6

Macroeconomics is the study of the entire economy and typically deals with policy issues of unemployment, business cycle, inflation/deflation, current account deficit, foreign debt and government deficits. These areas of study have been greatly influenced by the Keynesian revolution in the 1930s and subsequent developments in macroeconomic thought. This course provides students with an introduction to macroeconomic concepts and theory, with particular reference to the current macroeconomic issues and the role of the government in the Australian economy. In particular, it concentrates on the interaction of the taxing and spending of government with the wider economy.

ATAX0013
Taxation of Companies, Trusts and Partnerships
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0009

This course deals with the taxation of companies, partnerships and trusts, the key structures for business and investment in Australia. This comparative treatment emphasises a coherent understanding of the tax structures and a critical appreciation of the reasons for them. The course deals with practical problems arising from concepts of legal personality (or the lack of it), dual tax at the entity and member level, including the various distribution rules and operation of company franking mechanisms. The course also considers the divergences between the taxation of different structures, and the practical consequences of these divergences. Students should have completed or be enrolled in ATAX0009 The Law of Companies, Trusts and Partnerships.

ATAX0014
Tax Policy Framework
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0003

This course is an introduction to tax policy making in Australia. The emphasis is on economic models. It covers relevant aspects of public finance and welfare economics. It examines choices between the public and private provision of goods, issues of fiscal federalism, constitutional constraints on the division of taxing powers and an evaluation of modes of decision making. A critical understanding of major issues is injected. This covers the justification for the public sector, the financing of the public sector, mainly by taxation, the consequences for the economy at the micro and macro levels arising from taxation and some specific tax reform issues.

ATAX0015
Intermediate Financial Accounting
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0005, ATAX0010

This course is concerned with external financial reporting and, in particular, the accounting and reporting practices of listed companies. It is an issues based course where more complicated business transactions and events are considered, as well as accounting problems in certain specific areas. The regulatory requirements for preparation of a set of company financial statements together with the continuous disclosure requirements and voluntary disclosures made by companies are examined. Alternative accounting practices and issues, and the choice of technique by different preparers of accounts are also examined. Emphasis is placed on the understanding of the theory of accounting and its development.

ATAX0016
Critical Perspectives and Ethics
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0001

This course requires students to evaluate critically key aspects of Australia's tax system especially relating to tax evasion and avoidance. It asks students to evaluate the ethical behaviour of participants in the tax system. It ensures that students understand the ethical rules of Australia's leading professional accounting and legal bodies. It explores legal controls on professional actions and civil liability. It reviews why rules are obeyed and explores whether formal sanctions at the legal or professional level lead to ethical conduct. It concludes with an in-depth analysis of Australia's specific and general anti-avoidance provisions.

ATAX0017
Tax Accounting Systems
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0001, ATAX0005

The primary focus of the course is upon issues of timing. Earlier courses have concerned themselves with the question of what constitutes taxable income. Tax Accounting Systems moves the analysis to issues that are concerned with when. When should income be brought to account? When are deductions to be taken? In other words, the emphasis shifts to the basic question of how we achieve a fair reflex of the gain for a particular period. This course is intended to provide a practical analysis of the area of tax accounting in its broadest sense, and therefore also covers trading stock, depreciation and the Simplified Tax System.

ATAX0018
Tax Litigation
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0001, ATAX0006

This course introduces the principles of civil procedure and evidence for taxation dispute resolution. It covers the commencement of proceedings, pre-trial procedures, the course of the trial, and the rules of evidence, in the particular context of Federal Court and Administrative Appeals Tribunal proceedings. This course also includes a skills component called Moot Court and Oral Communication. Students are required to present formal oral argument on a typical tax problem before a judicial style Tribunal. Student assessment is formal, based upon presentation and participation.

ATAX0020
Introduction to Australian International Taxation
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0001, ATAX0009

This course is designed to provide a broad overview and understanding of the most important elements of Australian tax law as it affects international transactions. It includes analysis of: Australian residency for tax purposes; Australian source rules; the taxation of residents in respect of their foreign sourced income (including an overview of controlled foreign companies legislation); the taxation of non-residents in respect of their Australian sourced income; the operation of Australia's double tax agreements; and the competing policy factors inherent in the design of an international tax regime.

ATAX0022
Goods and Services Tax: Design and Structure
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0001

This course explores the conceptual and theoretical issues which have influenced how a GST/VAT finds implementation in practice around the world. Attention is given to how different goods and services are treated under the tax and how the tax is administered in practice. Issues such as the importance of planning by government and business for the successful operation of a GST and its compliance and administration costs are considered. Importantly, it explores conceptual issues arising during the transition from a tax like a Wholesale Sales Tax to a GST along with the management of the economic impact of introducing a GST.

ATAX0023
Principles of Goods and Services Tax Law
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0001

The course works through all aspects of the GST law and looks briefly at the underlying policy implications of each area of the law. The object of this course is to provide conceptual and analytical knowledge of GST appropriate for the practical requirements of business, legal and accounting advisers working with GST on a regular basis. The course explores complex legislative and policy structures so that we acquire expert knowledge of what the law is meant to do, what it actually does and where problems arise. Recommended prior knowledge: Completion of ATAX0022 Goods and Services Tax: Design and Structure.

ATAX0053
Accounting for Complex Structures and Instruments
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0015

This course is concerned with the accounting issues posed by complex financial transactions and organisational structures. It looks at the issues concerning the accounting for various extended entities, such as corporate groups, associated entities and joint venture arrangements. Other relevant accounting and reporting issues for large corporations are addressed such as segment reporting. Finally, complex issues such as accounting and reporting requirements for foreign currency transactions, off-shore operations, and financial instruments are addressed. Careful treatment of these issues is essential to fairly determine the income and financial position of particular business entities.

ATAX0055
Taxation of Property Transactions
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0008, ATAX0023

Property transactions are one of the most common and significant dealings within most tax bases. This course examines all income tax, CGT, GST, land tax and stamp duty consequences of acquiring, holding, developing, building on, leasing, disposing of or otherwise dealing with land and buildings, including investment options such as property trusts and their structuring. Income tax considerations dealt with include property sale or development, financing, income recognition, rent, home offices, lease incentives and deductions. CGT, GST, land tax and stamp duty as applied to freehold, leasehold, residential and commercial property are considered, including their many special rules and concessions.

ATAX0057
Business Finance
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0003, ATAX0010, ATAX0058

Business Finance is an introductory course in financial management designed to meet the professional requirements of Australian accounting bodies and other objectives. It stresses the modern fundamentals of corporate financial decision making with special reference to investment, financing and dividend distribution decisions. Specific topics to be covered include: financial mathematics, security valuation, techniques for capital investment decisions, financial decision making under uncertainty , corporate capital structure, cost of capital, and dividend decision and policy. As students undertaking this course already will have acquired substantial tax knowledge, the course allows a student to analyse the tax effects more deeply than a traditional undergraduate Business Finance course would dare. This tax analysis makes this a more practical than a normal introductory finance course. While the course can be taken as a terminating unit, its contents form the foundation for advanced studies in banking and finance such as funds management, international finance, banking, risk and insurance, electronic security trading, investment banking, electronic commerce, options and futures and derivatives. As the field of banking and finance is rapidly expanding, the foundation knowledge gained from this course opens up opportunities for further studies and/or employment in the domestic and global financial markets.

ATAX0058
Quantitative Analysis
Board of Studies in Taxation
UOC6

Quantitative Analysis is an introductory course in mathematical and statistical concepts and techniques with applications in commerce and taxation. This course will train students in essential quantitative skills and show how these skills can be used in formulating and solving a wide variety of problems in economics, accountancy, finance and taxation. In this course the application of mathematical and statistical methods are more than mere illustrations; they constitute an integral part of the course material. Quantitative Analysis is intended to be as comprehensive and self-sufficient as practicable. It introduces and develops ideas and techniques from the basic principles, assuming very little knowledge on students' part.

ATAX0059
Management Accounting
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0010

Management accounting systems are designed to provide managers in all types of organisations with information to assist them in decision making, planning and control. This course addresses how management accounting provides information to meet the organisation's and manager's compliance, control and competitive support needs. The goals of this course are to acquaint students with the fundamentals of management accounting, and to permit students to analyse the impact of choices that are made in the design, implementation and operation of management accounting systems.

ATAX0060
Auditing and Assurance Services
Board of Studies in Taxation
UOC6
Prerequisite: ATAX0015

This course examines the practice of auditing and the concepts which underlie the practice within the assurance framework. Although a large part of the course does cover the financial report audit, the other forms of audit are discussed. The course is intended to provide an overview of the audit process as it exists in Australia. The aims of the course are to develop students' understanding of the audit function; familiarise students with the professional, legal, commercial and regulatory constraints within which audits are carried out; and examine techniques used by auditors including risk analysis, evidence collection and evaluation, and audit reporting.

ATAX0605
Taxation of Trusts
Board of Studies in Taxation
UOC6
Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

This course thoroughly explores issues relating to private trusts and describes those applicable to public trusts. It explains the nature of a trust and the differences between types of trust. It critically examines the taxation of income of a trust. Thereafter it considers taxation of capital gains derived in the context of trusts, and the potential application of the special and general anti-avoidance provisions to trusts where they are used for purposes of income-splitting or income-diversion. Finally, there is discussion of the reforms to the taxation of trusts and their implications.

ATAX0607
Taxation of Corporate Finance
Board of Studies in Taxation
UOC6
Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

The course deals with the fundamental building blocks, both theoretical and technical legal, of taxation of corporate finance. It focuses on debt finance but also covers aspects of equity financing. It provides thorough grounding in basic concepts like the time value of money, the deductibility of interest, and the debt/equity distinction. The course deals in depth with temporal apportionment, with taxation of discounted and deferred interest securities and with leasing finance. It introduces hybrid instruments and derivatives, which are explored in more depth in ATAX0321/0421 Taxation of Structured Finance. This course complements ATAX0303/0403 Taxation of Corporations.

ATAX0610
Taxation of Superannuation
Board of Studies in Taxation
UOC6
Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

The aim of this course is to provide students with a thorough understanding of the current taxation principles applicable to superannuation. There are taxation consequences involved in every aspect of superannuation. Thus, the course examines the taxation consequences for persons making contributions to superannuation funds. It then examines the taxation of superannuation funds themselves (both complying and non-complying funds) and, finally, it examines the taxation of benefits (both lump sums and pensions) paid by superannuation funds to their members. The course also examines the operation of the Superannuation Guarantee (Administration) Act 1992, which imposes a superannuation guarantee charge (a form of tax) on those employers who do not make the minimum superannuation contributions specified in that Act. Finally, the course provides an introduction to the provisions of the Superannuation Industry (Supervision) Act 1993.

ATAX0614
Selected Problems in Stamp Duty
Board of Studies in Taxation
UOC6
Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

This course provides a general knowledge of Australian duty law, identifying the common themes and important areas of divergence across the various states. The course critically analyses the concepts behind duties in Australia, covering the main rules and problem areas. The course examines duty on transfers of dutiable property, leases, transfers, dutiable transactions and trusts. Although the course has broad focus, duty rules in New South Wales, Victoria, Western Australia and Queensland are specifically covered.

ATAX0615
Taxation of Industry and Technology
Board of Studies in Taxation
UOC6
Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

The tax system is used to support industry through special incentives. Some target specific industries (primary production, mining and energy, films), some target sectors of the economy (small business), while others apply to industry generally (research and development, intellectual property). Modern modes of doing business, most notably the advent of ecommerce, also present problems in the traditional application of tax laws.

This course covers special tax rules and incentives that apply to persons or entities operating in specific industries or sectors of the economy, including small business, as well as more general incentives to encourage inventiveness and increase competitiveness. Concentration is on productive sectors of the economy (as opposed to financial services) and extends to taxation of ecommerce. Coverage includes a critical analysis of why special rules exist and the desirability and effectiveness of using the tax system to achieve government industry policy.

ATAX0625
Taxation of Employee Remuneration
Board of Studies in Taxation
UOC6
Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

This course provides a comprehensive coverage of the taxation issues relating to the taxation of employee remuneration. The course commences by examining the employer/employee relationship, contrasting it with the principal/independent contractor relationship. Fringe benefits tax and tax collection obligations imposed on employers, including under PAYG and the payroll tax system, are considered in detail. Employers' obligations and employees' rights under the superannuation guarantee system are examined, as are the rules on the deductibility of superannuation contributions and the taxation of payments made on termination of employment. The course concludes with an examination of the rationale and tax consequences of salary packaging, and the ATO's response to arrangements aimed at avoiding tax on payments for services performed.

ATAX0626
Taxation and Investment Regulation in China
Board of Studies in Taxation
UOC6
Prerequisite: 48 units of credit completed and a cumulative weighted average of at least 65

This course provides comprehensive coverage of the tax system and investment regulation in China. Students completing the course will obtain a thorough working knowledge of the practical operation of China's tax and investment regulatory system in the context of common business, investment and employment activities.

Topics covered include: The enterprise and individual income tax, private enterprise regulation, foreign investment regulation, the value added tax, the business tax, Chinese business vehicles including companies, double taxation agreements, incentives and special zones.

ATAX0921
Fieldwork Research Project
Board of Studies in Taxation
UOC6

This course must be completed within the session for which the student enrols in that course and within two (2) calendar years of the end of the year in which the candidate completes the last program requirement for the Associate Diploma in Taxation other than ATAX0921 Fieldwork Research Project. (The Associate Diploma in Taxation is not available to students entering ATAX Programs in 2002 or later.)

ATSI1001
Introduction to Aboriginal People and Society
Nura Gili (Indigenous Programs)
UOC6 HPW3

Provides an historical and conceptual overview of Aboriginal people, cultures and societies in Australia. Introduces key concepts such as relationship to country, cultural identities, Indigenous knowledge systems, language, spirituality, ceremony, kinship, social and governance systems past and present and introduces Indigenous perspectives on debates on Australian history and culture as sites of contestation.

ATSI1002
Australia: Representations, Identities and Difference
Nura Gili (Indigenous Programs)
UOC6 HPW3
Excluded: AUST1001

A multidisciplinary study of Australian popular culture focusing on the nature of Australian identity. Examines film, television, newspapers, including fictional and non-fictional material (documentaries, biographies, autobiographies). Draws particularly but not exclusively on the way images of Aborigines and of Australian women (both black and white) have been created.

ATSI2001
Aboriginal Australia: The Pre-Colonial and Colonial Experience
Nura Gili (Indigenous Programs)
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: AUST2002, AUST2004, GENS4521, GENS5527

Examines pre-colonial and colonial Aboriginal Australia in areas such as social organisation, Indigenous knowledge and connections to country. The effects of European colonisation from policies of 'protection' through to those of 'assimilation' are explored. Also critically examines the legacy of colonisation and the continuing consequences of this history for contemporary society through the study of film, Indigenous languages, education and the archival record.

Note: The course is distinct from, but complementary to ATSI2002.

ATSI2002
Aboriginal Australia: The Post-Colonial Experience
Nura Gili (Indigenous Programs)
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: AUST2003, AUST2005, GENS4521, GENS5526

Examines political and social constructs of contemporary Aboriginal Australia and the processes which have shaped them. Contemporary issues which affect Indigenous Australians, such as health, education, racism, land rights and law will be examined. The structural position of Aboriginal people within Australian society will be contextualised within the theory that colonialism is an ongoing experience for Aboriginal Australians. Considers the implications for the future of Aboriginal self-determination and reconciliation in relation to contemporary government initiatives.

Note: The course is distinct from, but complementary to ATSI2001.

ATSI3001
Colonisation and Indigenous Identity Formation
Nura Gili (Indigenous Programs)
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCA3208, SOCC3701

Investigates the formation of contemporary Indigenous identities in the context of the ongoing colonisation of Australia. Explores the interplay between culture and identity and analyses the various historic and academic constructions of Aboriginality. The history of imposed colonial notions of Aboriginal identity and their consequences for both Aboriginal people and non-indigenous Australians are identified and examined. The use of contemporary media such as film, television, literature and art are examined as case studies in the analysis of contested identities.

ATSI3002
Indigenous Australia: Gendered Identities
Nura Gili (Indigenous Programs)
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: AUST2012, SOCA3209, SOCC3717

Encourages students to engage in a critical analysis of the way in which gender influences and structures the experiences of Aboriginal women and men in the past and the present. A wide range of issues involving gender roles will be covered including land, art, activism, feminism, violence, race, and literature. Particular attention will be paid to colonial constructs of gender roles within Aboriginal communities. Aboriginal women's and men's roles in subverting the colonisation of their identities will be explored.

ATSI3003
Cultural Heritage Management
Nura Gili (Indigenous Programs)
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HPSC2881, SCTS3120

Over 40,000 years of human habitation has helped to shape Australia's environment. Examines the policies and processes of managing both Aboriginal and non-Aboriginal (historical/European) 'cultural heritage'. It will define the notion of 'cultural heritage' and examine to what extent the Australian environment may be defined as 'natural'. Identifies and examines the values attributed to cultural heritage items, sites and places by a variety of interest groups, and critically examines the legal, ethical and policy requirements which dictate management processes.

ATSI3004
Aboriginal People and Social Work
Nura Gili (Indigenous Programs)
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCW2100

Examines the history and current legacy of colonisation and government policies for Indigenous Australians and their position in contemporary Australian society. Social movements and actions relevant to Indigenous Australians' social experience will be discussed. Addresses in particular the skills social workers need to work with Indigenous clients and what role social work can play in progressing equity and social justice for Indigenous Australians.

ATSI3005
Whiteness Beyond Colour: Identity and Difference
Nura Gili (Indigenous Programs)
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCA3210

Whiteness is generally assumed to be the norm in classifying difference. It is also assumed to be neutral. Delves into whiteness as a mode of identification and whether it can be assumed to be the norm as well as neutral. Topics include whiteness as Other, whiteness as a non-Indigenous identity, and whiteness in coloniser societies. Explorations of whiteness as a representation of oppression and as transformation will be addressed.

AUST1001
Australia: Representations, Identities and Difference
School of English
UOC6 HPW3
Excluded: ATSI1002

A multidisciplinary study of Australian popular culture focusing on the nature of Australian identity. Examines film, television, newspapers, including fictional and non-fictional material (documentaries, biographies, autobiographies). Draws particularly but not exclusively on the way images of Aborigines and of Australian women (both black and white) have been created.

AUST1003
Paradise Lost? Australian Environmental History
School of History
UOC6 HPW3

How has the landscape shaped the definition of what it means to be Australian? Why was the bush so often seen as a place of the weird and the monstrous? Have white Australians learned from Aboriginal relationships with the natural environment? Looks at the climatic, cultural, political and economic forces which have shaped the Australian landscape from the period before known human settlement until the present, taking a dynamic approach to the relationship between humans and their environment. Draws on a broad range of disciplines, including literature, geography, history, politics, sociology and cultural studies.

AUST2004
Aboriginal Australia: The Pre-Colonial and Colonial Experience
School of English
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ATSI2001, AUST2002, GENS4521, GENS5527

Examines pre-colonial and colonial Aboriginal Australia in areas such as social organisation, Indigenous knowledge and connections to country. The effects of European colonisation from policies of 'protection' through to those of 'assimilation' are explored. Also critically examines the legacy of colonisation and the continuing consequences of this history for contemporary society through the study of film, Indigenous languages, education and the archival record.

Note: The course is distinct from, but complementary to AUST2005.

AUST2005
Aboriginal Australia: The Post-Colonial Experience
School of English
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ATSI2002, AUST2003, GENS4521, GENS5526

Examines political and social constructs of contemporary Aboriginal Australia and the processes which have shaped them. Contemporary issues which affect Indigenous Australians, such as health, education, racism, land rights and law will be examined. The structural position of Aboriginal people within Australian society will be contextualised within the theory that colonialism is an ongoing experience for Aboriginal Australians. Considers the implications for the future of Aboriginal self-determination and reconciliation in relation to contemporary government initiatives.

Note: The course is distinct from, but complementary to AUST2004.

AUST2008
In the Firing Line: Australians go to War
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2078

Examines the importance of the experience of war in shaping Australia; its contribution to definitions of nationality, ethnicity, citizenship, masculinity and femininity; the extent to which it has defined and/or redirected Australia's relationships with her allies from the colonial period to Vietnam. Focuses on the battle zones and looks at the way that participants understood and represented the experience of war, drawing on literature and film, personal letters and diaries, reminiscences and oral interviews as well as official records. Includes an optional field trip to the Australian War Memorial in Canberra.

AUST2009
Australian Urban Environments
School of English
UOC6 HPW4
Prerequisite: 36 units of credit; Excluded: ENVS2020, GEOG2641, GEOH2641

Examines human environments in Australia. Theoretical frameworks include political ecology, economic and poststructuralist geography. Begins by exploring ideologies of human-nature relations. Urban and natural landscapes, the built environment and planning principles are all considered as cultural constructions - as concepts linked to ideologies of human nature-nature relations. Considers environmental impacts of urbanisation, poulation growth and economic production that stem from different articulations of human-nature relations, and discusses forms of resistance, theories of environmental justice and participatory decision-making that seek to transform human-nature relations. Practical classes include field exercises and introductory Geographical Informations Systems (GIS) workshops.

AUST2010
Society and Environmental Process: Botany Bay
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: HPSC2500 or HPSC2550 or SCTS2118 or SCTS3106; Excluded: HPSC3500, SCTS3013, SCTS3020, SCTS3126

Interprets the concept of the social construction of the environment in the specific context of Botany Bay and its region. Environmental issues are identified and examined in the light of historical, sociological, economic and political developments at the regional, national and global levels. Prospects and processes for intervention.

In addition to other work, each student completes a substantial research project.

AUST2011
Australian Migration Issues
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCA3407, SOCI3614, GENT1209

An examination of racial, ethnic and social issues surrounding migration to Australia. Topics will be drawn from: an ecologically sustainable population; globalisation and international migration flows; brain drain to and from Australia; multiculturalism; criteria in determining migration policy; settlement issues; skilled migrants; refugees, international aid and social justice; identity, ethnicity and community.

AUST2012
Indigenous Australia: Gendered Identities
School of English
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ATSI3002, SOCA3209, SOCC3717

Encourages students to engage in a critical analysis of the way in which gender influences and structures the experiences of Aboriginal women and men in the past and present. A wide range of issues involving gender roles will be covered including land, art, activism, feminism, violence, race and literature. Particular attention will be paid to colonial constructs of gender roles within Aboriginal communities. Aboriginal women's and men's roles in subverting the colonisation of their identities will be explored.

AUST2014
Twentieth-century Australian Literature
School of English
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ENGL2300, ENGL2520

An examination of some major post-colonial issues in Australian writing of the twentieth century.

AUST2015
Contemporary Australian Women Writers
School of English
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ENGL2621, ENGL3401

Examines the particular concerns of a selection of contemporary Australian women novelists, poets and a short story writer. In the process asks whether women write from a different perspective, or have different concerns from their male counterparts in a culture that is generally considered to be male-dominated. Also considers the special question of women writing about the land.

AUST2017
Labour History
School of English
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: IROB2715

Focuses on the transformation of working life in nineteenth and twentieth century Australia and changes in management. Considers the origins and development of the Australian labour movement and laborism. Themes covered include the nature and purpose of historical inquiry and research methods; the origins and development of of labour markets and trade unions; the emergence of working class culture and consciousness; the influence of gender, race, ethnicity and locality on worker outlook and agency; worker political mobilisation and the rise of party politics; the role of the state in industrial relations; the impact of radical ideologies; immigrant and Aboriginal workers and the role of women in paid employment.

AUST2018
Australian Sport: History and Culture
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2041

Urbanisation transformed the shape of sport and popular culture and created an industry of mass entertainment. Explores how and why this transition took place in 19th-century Australia and England and what it all meant in personal, familial, regional and national terms. Topics include: historiography of sport and mass culture; the leisure revolution in 18th-century Britain; the rise of organised sport and mass culture in Australia; and the social and political implications of new leisure institutions.

AUST2019
A Commonwealth for a Continent: Australia 1901-1949
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2027

Major developments in Australian History in the period from Federation to the beginning of the Cold War. Themes include: Federation, White Australia policy, defence, foreign affairs, entertainment, federal-state relations, labour, World War I and its impact on society, women's rights, the experience of the Great Depression, the impact of World War II, Aboriginal people, work and politics.

AUST2020
Australia since World War II
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2028

Major developments in Australian Society since World War II. Topics include: immigration, religion, culture, government, education, comparative welfare history, external relations, women's experiences, media studies, Aboriginal culture and politics, the impact of the Vietnam war, tough times and the 1980s, Australia and America, sporting culture and Olympism, television and the media, Australia and Asia, and the emergence of the new commercial and communication systems of 'the Information Age'.

AUST2023
Regional Australia: Geographies of Uneven Development
School of English
UOC6 HPW4
Prerequisite: 36 units of credit; Excluded: GEOH3641

Key concepts and theories in regional economic geography. Theories of location and regional development, spatial interaction, uneven development, and structural change. Economic and regional problems in Australia. Field work, workshops and practical skills in regional and spatial analysis. Will be taught in Winter Session.

AUST2024
Power & Policy in Australian Politics
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: POLS2008

Examines Australian public policies in the context of contemporary theories and techniques of policy analysis. Considers the problems of government administration and decision-making in the modern state. Examines the role of the state and the impact of economic rationalism and managerialism. Focuses on a range of policy issues and areas including: economic policy, social policy, Industrial relations and industry policy, the environment, Indigenous affairs, immigration and women's policy. Encourages specialisation in specific policy areas, drawing on relevant analytical frameworks to produce policy briefs and case studies.

AUST2026
Music of Aboriginal Australians
School of Music and Music Education
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GENT0501, all MUSC and MUSI courses

A study of traditional and contemporary Aboriginal music in its social, historical and cultural contexts.

AUST2027
Staging Australia
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: MEFT2300, THST2163

Broadly-based study of the rise of Australian theatre since the 1960s, with the focus on recent performance. The emphasis is on wide theatrical movements, including the larrikin theatre of the 1970s, alternative/community theatre; Aboriginal theatre; women's and multicultural performance; and current trends in playwriting and contemporary performance.

AUST2028
Australian Cinema & Television
Media, Film and Theatre
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: FILM2002, MEFT2201

Traces the emergence and significance of Australian screen cultures. Studies the development of the Australian film industry, including analysis of the economic, social and political factors and the myths which have shaped the industry. Studies the role of television in shaping the experience of modern Australia and its place in the world. Looks at a number of of non-mainstream forms of audio-visual production in Australia.

AUST2029
Cities: Experiencing Sydney
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCA2106, SOCC2703

Focuses on experiences and representations of cities. It is concerned with how the city has become the archetypal site and sign of modernity, and with how spatiality is now central to how cities are lived and imagined. Looks at the city as the site of social transformation in the twentieth century and the tensions between order and disorder. Explores images of the city as the site of liberal and radical utopian dreams as well as the promise and disaster of cities. The changing landscapes of the city are investigated through examples such as streets, crowds, light/darkness, gardens, museums and shopping malls.

AUST2030
Approaches to Australian Art
School of English
UOC6 HPW3
Prerequiste: 36 units of credit; Excluded: SAHT1213, SAHT2214

Introduces some of the preoccupations of Australian Art in the years since colonisation. Issues include: the notion of the artist as a recorder in the 19th century and a tourist in the 20th; the search for a 'Great' Australian artist; national identitity and art; links between art and commerce; the idea of 'modern' in an Australian context; and attempts to place Australian art in an international context.

AUST2031
Transport, Land Use & Environment
School of English
UOC6 HPW6
Prerequisite: 36 units of credit; Excluded: GEOG2071, GEOG3181, GEOG3671, GEOH3671

Introduction to the complex interactions between transport, land use and the environment in urban areas. Special focus on the long term environmental consequence of transport decisions. Introduction to the various methods used to analyse and predict the consequences of policy changes. Australian cities as case studies.

AUST2032
Environmental Impact Assessment
School of English
UOC6 HPW4
Prerequisite: 36 units of credit; Excluded: GEOG3911, GEOH3911

History and legislative framework. State and Commonwealth guidelines for environmental impact assessment (EIA). Impact evaluation in terms of environmental and socio-economic criteria. Case studies of environmental impact studies (EIS). Procedures, techniques and issues. Future directions in EIA.

AUST3103
Urban Legends: The History of Sydney
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: AUST2022, HIST2100, HIST3103

Explores Sydney's dramatic transformation from a tiny preindustrial penal settlement to a sprawling city of over four million people by examining the interplay of natural, cultural and spatial histories in the broader context of urban history and historiography. Themes include Sydney's environmental, Aboriginal, immigrant and gendered histories, 'slums' and suburbs, communities and sub-cultures, heritage and modernity, sex and food, the creation and impact of urban images.

AUST4500
Combined Australian Studies Honours (Research) Full-Time
School of English
UOC12 HPW2
Prerequisite: 48 units of credit in AUST approved courses with an average of 65%, including AUST2004 or AUST2005

Students must complete a seminar course chosen in consultation with the Coordinator of Australian Studies, a seminar in the students major discipline and a thesis of 15,000 to 20,000 words supervised jointly between the Australian Studies program and the chosen discipline.

AUST4550
Combined Australian Studies Honours (Research) Part-Time
School of English
UOC6 HPW2
Prerequisite: 48 units of credit in AUST approved courses with an average of 65%, including AUST2004 or AUST2005

Students must complete a seminar course chosen in consultation with the Coordinator of Australian Studies, a seminar in the student's major discipline and a thesis of 15,000 to 20,000 words supervised jointly between the Australian Studies program and the chosen discipline.

AVEN1310
Basic Mechanics
School of Mechanical and Manufacturing Engineering
UOC3 HPW2

The course explains the basic concepts in statics and strength of materials including Newton's Laws, SI system of units, two dimensional force systems, moments and couples, equilibrium in two dimensions, stress, strain, stiffness and flexibility, analysis of bars, bending stress and measurement of strain, material properties, theories of faliure and composite materials.

AVEN1910
Introduction to Aircraft Engineering
School of Mechanical and Manufacturing Engineering
UOC3 HPW2

An explanation of how aircraft fly and how engineering technologies relate to the vehicle. Concepts and nomenclature relating to flight vehicles and the significance of aircraft configurations and flight systems.

AVEN2220
Aviation Engineering Experimentation 1
School of Mechanical and Manufacturing Engineering
UOC3 HPW2

Exposure to the practical skills associated with aircraft maintenance conducted at the Aeroskills Centre at Padstow College of TAFE. Introduction to a workshop environment and practices including health and safety aspects. Development of respect for the skills of aircraft maintenance craftsmen.

AVEN2910
Aviation Technologies 1
School of Mechanical and Manufacturing Engineering
UOC3 HPW2

Aviation Systems - Mass transfer, power transfer and information transfer fluid systems. Electrical power generation, management and distribution. Environmental control systems, requirements and operation. Avionics - Avionics systems, classification and applications. Flight instruments and controls. Computer aided flight management.

AVEN2920
Aviation Technologies 2
School of Mechanical and Manufacturing Engineering
UOC3 HPW2

Aircraft Propulsion - Elements of internal -combustion (piston) engine cycles, performance and operations, piston engine fuel systems, performance augmentation and engine condition monitoring, elements of propellers, basic propeller thrust equations, variable pitch propellers. Aircraft Performance - Flight environment, aircraft classifications, operational requirements, range, accelerated and unaccelerated flight manoeuvring and flight envelopes, energy height, power and wing loading.

AVEN2930
Aviation Technologies 3
School of Mechanical and Manufacturing Engineering
UOC3 HPW2

Aerodynamics - Introduction to basic aerodynamics of lift and drag. Dimensional analysis to relate wind tunnel results to actual flight tests. Bernoulli's equation. Indicated and corrected airspeed. Airframe Analysis and Maintenance - Aircraft structural layout, configuration of wing and fuselage structures. Bending, shear and torsional stiffness. Materials selection. Elements of aeroelasticity including control reversal. Structural failure modes.

AVEN3220
Aviation Engineering Experimentation 2
School of Mechanical and Manufacturing Engineering
UOC3 HPW2

A selection of experiments from airframe analysis, flight mechanics, aircraft propulsion, aircraft systems and aerodynamics. Experiments will make use of the wind-tunnels, systems laboratories, engines laboratories and structural testing facilities in the Engineering Faculty.

AVEN3230
Aviation Systems and Avionics
School of Mechanical and Manufacturing Engineering
UOC3 HPW2

Typical aircraft systems operation and management. Multiplexing and systems degradation. Communications, internal and external. Fly-by-wire control systems. Aircraft state sensors, air data sensors and inertial sensors. Radio and dead reckoning navigation systems. External world sensor systems. Engine control and management systems.

AVEN3420
Aircraft Maintenance
School of Mechanical and Manufacturing Engineering
UOC3 HPW2

Development of a maintenance program for aircraft. Introduction to fatigue, corrosion and wear. Maintenance technologies and maintenance management. Condition monitoring. Reliability centred maintenance. Examples from airframe, powerplant and systems maintenance.

AVEN3610
Aerodynamics, Stability and Control
School of Mechanical and Manufacturing Engineering
UOC3 HPW2

Drag of an Aircraft - Techniques and devices to reduce drag. Airfoil characteristics at low Reynolds number. Lift and drag at high Mach number. Effect of supercooled cloud, drizzle, rain and icing on airfoil performance. Stability - longitudinal and lateral static and dynamic stability, stability and manoeuvre margins, aircraft loading strategies, reduced stability aircraft. Control-trimmed flight, aircraft response to control input, limits of controllability.

AVEN3710
Aircraft Propulsion
School of Mechanical and Manufacturing Engineering
UOC3 HPW2

Revision of piston engines and propellers. Propeller noise, stall, gyroscopic effects and slipstreams. Elements of gas turbine engines, gas turbine engine classification, gas turbine engine cycles, performance and operation, high altitude operating characteristics. Gas turbine engine condtion monitoring, surge, engine re-starting.

AVEN3930
Aircraft Evaluation and Design Appraisal
School of Mechanical and Manufacturing Engineering
UOC3 HPW2

Evaluation of fitness for purpose, route matching, range load graphs, environmental constraints, indirect and direct and operating costs, maintenance requirements, fleet capacity, crew requirements, safety and reliability.

AVIA1002
Flying Training 1
Department of Aviation
UOC12 HPW8
Excluded: AVIA1000

Ground training and associated theory for Stage 1 of the Bachelor of Aviation (Flying). Covering theory requirements for the issue of a Private Pilot Licence (PPL) including pre-command theory, basic aeronautical knowledge, PPL theory and an introduction to Commercial Pilot Licence theory. This course encompasses ground training phases 1, 2, 3, 4 and 5 as detailed in the UNSW Manual of Flight Training, and the Civil Aviation Safety Authority's Day VFR syllabus (Aeroplane). Practical flight training to PPL is a highly recommended adjunct to this course.

Note: Restricted to Program 3980 Flying Stream.

AVIA1321
Fundamentals of Aviation
Department of Aviation
UOC6 HPW4
Excluded: AVIA1300

The course provides a foundation for the range of courses provided in the BAv, and includes a general description of the aviation industry.

Topics are chosen from the main organisations and the regulatory environment: introductory aviation economics and management practices for airlines and airports; basic aeronautical knowledge including aircraft performance, operation and navigation; international and organisational cultures; human factors; aviation safety.

This course is taught in an interactive context, developing library research skills and written, oral and presentation communication skills.

AVIA1700
Aviation Safety Management 1
Department of Aviation
UOC3 HPW2
Excluded: AVIA2700, PROF2001

This course covers the use of quick access recorders for fleet performance monitoring, corporate structures for safety departments and accident/incident analysis. Safety auditing, emergency planning and in-flight security will also be studied.

AVIA1810
Aviation Security
Department of Aviation
UOC3 HPW2
Excluded: AVIA3703, AVIA3810

Misbehaviour, crime and terrorism provide a range of threats to aviation operations. This course covers the essential topics of threat assessment and management of those risks associated with the threats. Other topics include Regulatory responsibilities of sovereign states and the International Civil Aviation Organisation, and their impact on the practice of security in the various aviation sectors, including ground and air operations.

AVIA1850
Airport Management 1
Department of Aviation
UOC3 HPW4
This course provides an introduction to issues concerning management of an airport, including definitions of an airport's functions and facilities, describing the overall regulatory requirements, managing the airport as a business, managing the operations, both landside and airside, managing the development of an airport and consideration of community relations.

AVIA1900
Aviation Economics
Department of Aviation
UOC3 HPW4
Excluded: PROF0203

This course covers the economics of an airline and how the management of economic problems are analysed. Demand analysis and its relation with price and economic conditions covers revenue issues. Costs and supply are studied with reference to available airline costing information. The interaction of demand and supply are then studied and how airlines manage this aspect.

AVIA2003
Flying Training 2
Department of Aviation
UOC18 HPW12
Prerequisite: AVIA1002; Excluded: AVIA2000.

Ground training and associated theory for Stage 2 of the Bachelor of Aviation (Flying). Covering theory requirements for the issue of a Commercial Pilot Licence (CPL), Night Visual rating (NVFR) and multi-engine endorsement. This course encompasses ground training phases 6, 7 and 8 as detailed in the UNSW Manual of Flight Training, and the Civil Aviation Safety Authority's Day VFR syllabus (Aeroplane), and Civil Aviation Regulations. Practical flight training to CPL with NVFR and multi-engine endorsement are highly recommended adjuncts to this course.

Note: Restricted to Program 3980 Flying Stream.

AVIA2110
Aviation Human Factors 1
Department of Aviation
UOC3 HPW2
Excluded: AVIA1100, PROF0102

This course deals with the effective use of all resources in the aviation decision making process with focus on the mechanism of communication within the hierarchy of the cockpit and the cabin. Evaluation of communication will focus on the impact of modern technology, changes in methods of communication, and the reduction in crew numbers.

AVIA2210
Aviation Human Factors 2
Department of Aviation
UOC3 HPW2
Prerequisite: AVIA1100 or AVIA2110 or AVIA2003 Excluded: AVIA2100

The interrelationships between Captain and crew will be used to illustrate the principle of the hierarchy of command. Effective teamwork will be developed through negotiation of the principles of communications and effective decision management. This course will build on the principles illustrated in Aviation Human Factors 1.

AVIA2400
Aviation Regulations 1
Department of Aviation
UOC3 HPW2
Excluded: AVIA2403

Aviation Regulations 1 introduces the Laws and regulations under which an aviation operation functions. Beginning with regulatory authority and source, this course develops an understanding and awareness of both the direct operational aspects of regulations and the commercial considerations that they demand. The emphasis is that of routine implications of the Civil Aviation Act, Civil Aviation regulations and orders.

AVIA2500
Airline Marketing
Department of Aviation
UOC3 HPW2

This course uses the classic approach to marketing management strategies but is mostly entirely focussed on how this is achieved in the industry. The approach is of a practical nature. The course studies airline market research, marketing strategy development, product development, pricing strategies and yield management, distribution and promotion strategies. The course encourages and emphasises current airline marketing behaviour as examples of the theory.

AVIA2700
Aviation Safety Management 1
Department of Aviation
UOC3 HPW2
Excluded: PROF2001

Topics covered include the use of quick access recorders for fleet performance monitoring, corporate structures for safety departments and accident/incident analysis. Safety auditing, emergency planning and in-flight security will be studied.

AVIA2800
Management of General Aviation
Department of Aviation
UOC3 HPW2
This course covers a broad range of the management decisions faced by the airlines. This course introduces the aviation environment within which the airline management functions and makes economic decisions. Revenue issues are studied with demand analysis, and an airline's ability to manage price and to predict loads. The key elements of supply and cost are analysed by reference to available airline data. The final aspect studied is the combination of the demand and supply issues.

AVIA3004
Advanced Flying Training
Department of Aviation
UOC24 HPW16
Prerequisite: AVIA2003; Excluded: AVIA3000.

Ground training and associated theory for Stage 3 of the Bachelor of Aviation (Flying). Covering theory requirements for the issue of a Command Instrument Rating (CIR), Grade 3 Instructor Rating (QFI), an Air Transport Pilot Licence (ATPL), and multi-crew operations. This course encompasses ground training phases 9, 10, 11 and 12 as detailed in the UNSW Manual of Flight Training, and Civil Aviation Safety Authority's ATPL syllabus (Aeroplane). Practical flight training for CIR and QFI is a highly recommended adjunct to this course; students may also select from options of airline entry training or advanced aircraft endorsement in place of the QFI rating..

Note: Restricted to Program 3980 Flying Stream.

AVIA3101
Airline Management
Department of Aviation
UOC6 HPW4
Prerequisite: AVIA1900, AVIA2003 or AVIA2400; Excluded: AVIA3002.

This course considers the main facets of corporate airline management, and begins with airline organisational practice, management's visions and objective setting. It proceeds with the main corporate processes of business planning, schedule planning, fleet planning and external relationships such as outsourcing. Financial aspects and global alliance matters are introduced.

AVIA3201
Airline Resource Management
Department of Aviation
UOC6 HPW4
Prerequisite: AVIA3101; Excluded: AVIA3002.

This course follows AVIA3101 and introduces management of airline activities at an operational level. Issues include engineering and maintenance, crew planning and scheduling, airport planning for airlines, operations control issues, emergency procedure management, and freight and punctuality management.

AVIA3300
Air Traffic Management
Department of Aviation
UOC3 HPW2
Excluded: AVIA1150, AVIA1103

This course is concerned with the history, development and practical application of Air Traffic Services and their relationship to the commercial and regulatory aspects of commercial aviation. The topics are focussed on both operational and administrative structures within the industry. Emphasis is placed on the role of ATS from the perspective of a service provider. Topics include ATC history, structure, legal aspects and implications. Other significant aspects include communications, safety, noise abatement and the development of future systems.

AVIA3400
Aviation Regulations 2
Department of Aviation
UOC3 HPW2
Prerequisite: AVIA2400; Excluded: AVIA2413.

Aviation Regulations 2 builds on the fundamental concepts introduced in Aviation Regulations 1. The emphasis of this course is the legal ramification for pilots and operations managers imposed by the Civil Aviation Act and associated regulations. Specific case studies will form a large part of this course.

AVIA3600
Simulations Applications
Department of Aviation
UOC3 HPW2
Excluded: AVIA2603

This course addresses the broad application of simulation to the aviation industry. While the emphasis will be on aircraft simulations, aspects of operations systems simulations will also be covered. The perspective of this course will be that of end user application, particularly from management and training of human resource basis.

AVIA3710
Aviation Safety Management 2
Department of Aviation
UOC6 HPW4
Excluded: PROF3001, AVIA3700.

The course develops the knowledge of aviation safety, which has been gained by students in both Aviation Safety Management 1, and Aviation Human Factors lectures. It will emphasise the development of analytical research skills for the investigation of aviation safety occurrences and problems. The course will cover the development of research and report writing skills in the context of air transport safety, and contemporary aviation safety issues with specific reference to technical, human and organisational factors. Each student will be required to undertake a structured, supervised research project on an aviation safety issue to be agreed with the lecturer-in-charge.

AVIA3800
Management of Regional Airlines
Department of Aviation
UOC3 HPW2
A further development to AVIA2800, this course will provide students with the information pertinent to business and corporate operations with the regional airlines sectors of the industry. Aspects covered include requirements for low capacity airlines AOCs and current state and national requirements for such operations.

AVIA3851
Airport Management 2
Department of Aviation
UOC6 HPW4
Prerequisite: AVIA1850

This course follows AVIA1850 and provides an in-depth coverage of the key elements outlined in Airport Management 1. Issues include the regulatory environment, including licensing and obligations, an evaluation of various ownership models, the economics of running the airport as a business, including costs, revenues, subsidies and performance indicators, client relations and services, and general airport administration. Airside operations include practical operational requirements as well as necessary documentation. Other planning issues include managing terminal and landside operations, emergency and crisis management, infrastructure development, socio-economic impacts on the community, and environmental impacts.

AVIA4001
Aviation Honours - Full Time
Department of Aviation
UOC24
This course introduces students to major research areas through a course of advanced lectures and a major research thesis of 20,000 words. Through the taught component of this course, students will critically examine academic and industry developments within aviation with particular emphasis towards the chosen area of their thesis. The research thesis will examine an area of research significance as approved by the Head of Department.

AVIA4002
Aviation Honours - Part Time
Department of Aviation
UOC48

Undertaken over two years, this course introduces students to major research areas through a course of advanced lectures and a major research thesis of 20, 000 words. Through the taught component of this course, students will critically examine academic and industry developments within aviation with particular emphasis towards the chosen area of their thesis. The research thesis will examine an area of research significance as approved by the Head of School.

BEES0005
BEES Internship Study Abroad Program
School of Biological, Earth and Environmental Sciences
UOC6

Note: Individually designed project course available only to overseas students

BEES0006
Special Program in Biological, Earth and Environmental Sciences - Undergraduate 6 units of credit
School of Biological, Earth and Environmental Sciences
UOC6

Note: Individually designed project course generally available only to overseas students.

BEES0007
Special Program in BEES 12uoc
School of Biological, Earth and Environmental Sciences
UOC12

Note: Individually designed project courses generally available only to overseas students.

BEES0008
Special Program UG in BEES 18uoc
School of Biological, Earth and Environmental Sciences
UOC18

Note: Individually designed project courses generally available only to overseas students.

BEES2041
Data Analysis for Life and Earth Sciences
School of Biological, Earth and Environmental Sciences
UOC6 HPW5
Excluded: BIOS2041, SLSP2001, GEOG2101, MATH2801, MATH2829, MATH2831, MATH2839, MATH2841, MATH2859, MATH2899, MATH2901, MATH2931, ECON2241

Development of skills in applying statistics to biological, earth and spatial data; design and analysis of experiments in life and earth sciences; sampling strategies for estimating sample size; analysis of community and environment structure using multivariate statistics; simulation modelling in population biology, and statistical fitting of non-linear models to population growth data; correlation and both simple and multiple regression; improving statistical models using analysis of residuals; analysis of spatial data.

Examples are drawn from ecological, geographical, earth, behavioural, genetic, microbial and immunological data. Practical work emphasises problem-solving and hands-on experience with EXCEL, MINITAB and other specialist software.

Assumed Knowledge: MATH1041

BEES4511
Professional Skills
School of Biological, Earth and Environmental Sciences
UOC6 HPW4

The course provides training in skills needed for the Honours project and any subsequent degree as well as in outside employment. Principal topics covered include occupation health and safety, presentation skills (written, oral and audiovisual including computer-aided presentations), professional ethics and issues of scientific fraud, database and library usage, information retrieval, overview of quantitative skills, as well as more specific research or professional skills which may be tailored to particular interest groups.

Note: Available to students enrolled in an Honours program offered by the School of BEES, and other Honours students as approved by the Honours Coordinator.

BEES4521
Literature Review
School of Biological, Earth and Environmental Sciences
UOC6

Literature research and its presentation in review format covering a defined disciplinary area in either biology, ecology, botany, zoology, physical geography, geology or environmental science. The course is taken in conjunction with an Honours research project in the School. The topic area is decided in consultation with an Honours supervisor and is related to the topic area of the research project.

Note: Available to students enrolled in an Honours program offered by the School of Biological, Earth and Environmental Sciences, and other Honours students as approved by the Honours Coordinator.

BENV1042
World Wide Web in Presentation and Communication
Architecture Program
UOC6 HPW3
Prerequisite: BENV1141.

Web Page: http://www.fbe.unsw.edu.au/courses/benv/1042/

Introduction to the theory and practice of World Wide Web based multimedia and other computer technologies relating to the presentation of designs and/or other information. Assessment will be through the development of a series of Web pages.

BENV1043
Multimedia in Design Presentation
Architecture Program
UOC6 HPW3

This course explores the use of an industry-standard multimedia authoring tool to develop design presentations. Students will develop skills in the integration of media objects including: edited scanned images, rendered images (produced using CAD technology), line drawings, animations (produced using CAD), video (captured off VHS) and sound. Students will be expected to apply these skills in a preliminary learning task and then in the production of one major design presentation.

BENV1072
Design for Energy Efficiency
Architecture Program
UOC6 HPW3

This course develops an understanding of solar efficient architecture and builds on this to develop skills in energy performance simulation. House energy performance rating is fast becoming an essential requirement for building applications and this requires specific skills. It targets core areas of efficiency in space heating and cooling and lighting design. Material is presented as lectures and seminars, supplemented with readings.

BENV1073
Sustainable Design and Practice
Faculty of the Built Environment
UOC6 HPW3
Prerequisite: ARCH1371

This course will assist in laying a basic foundation of knowledge for using 'sustainable design' assessment tools and rating schemes to inform the building design process. The course will also enable students to engage in self-directed studies such as research and continuing development of professional careers.The course will introduce the Australian rating schemes "GREENSTAR" and "BASIX" as sustainable design aids. By the end of the course the students will have become familiar with the use of these two Australian assessment tools in design.

BENV1074
Conceptual Structural Design
Architecture Program
UOC6 HPW3
Prerequisite: ARCH1371

Conceptual structural design of wide-span single storey structures. Conceptual design process selectively applied to bridges, halls for assembly, industry, exhibition and sports. Emphasis on complex lightweight systems - including surface, spatial and hybrid structures with cables, membranes, grid shells and transparent enclosures. Integration of constructional and structural issues related to design, manufacture and building processes. Material is presented as lectures and seminars, supplemented with readings in architectural history and theory.

BENV1075
Structural Systems: Advanced
Architecture Program
UOC6 HPW3
Prerequisite: ARCH1371

This course builds on prerequisite courses by considering in more detail the conception, analysis, design, and construction of more sophisticated structural systems, like shells and grid shells, space frames, cables, membranes, tall buildings and towers, prestressed structures, as well as more refined aspects of conventional material, systems and loading environments. It also considers the wider question of the role of structural

engineering in architecture and its integration with other engineering disciplines, mainly through case studies. Material is presented as lectures and seminars, supplemented with readings in architectural history and theory.

BENV1101
Design Fundamentals: Studio 1
Faculty of the Built Environment
UOC8 HPW7

Introduction to design as fundamental to coherent thought and action in your discipline. Exploration of the influences on design thinking and practice, including the philosophical, historical, social and environmental precedent studies. Critical thinking and expression in different forms. Studio projects and assignments to develop skills and understanding of design elements and principles. Introduction to a basic vocabulary of representation techniques used by designers to facilitate the development and communication of design ideas including: colour, freehand drawing, sketching, painting, construction, mixed media, desktop publishing, photomontage techniques, technical drawing and drafting.

Note: BArch and BScArch students must take this course concurrently with ARCH1121, BENV1141 and ARCH1171.

BENV1141
Computers and Information Technology
Faculty of the Built Environment
UOC3 HPW3

An introduction to the technology of computing and information technology as it pertains to the disciplines of the built environment. The computer is presented as a tool for storing and manipulating information by means of application programs which model the real world needs and activities of professionals in these disciplines. Topics include basic operation of a computer, information handling, networks and communications, computer graphics, CAD technology and computational processes. Students engage in weekly hands-on computer exercises to provide knowledge and experience in the use of applications commonly used in their own discipline. Assessment is based on participation in the hands-on work, some written assignments and tests.

BENV1242
Computer-Aided Design
Faculty of the Built Environment
UOC3 HPW3
Pre-requisite: BENV1141 or SOLA1050 or INTA2141

An exploration of the variety of CAD and graphic tools available for modelling, understanding and presenting design proposals. This course has dual objectives to build skills and confidence in the operation of CAD and related graphic systems, while developing a deep understanding of the unique opportunities offered by computer-based modelling technologies. Applications explored include 2D and 3D CAD, simple visualisation, image editing and composition, and the crossovers possible between these various techniques. Conceptual modelling techniques and their relevance to the design disciplines will be discussed. Weekly one-hour lectures are supported by discipline-focussed laboratory classes where students gain hands-on experience in the use of a variety graphic applications. Assessment is based on satisfactory participation and the completion of staged CAD-based tasks.

BENV1341
Design Modelling and Visualisation
Faculty of the Built Environment
UOC3 HPW3

An exploration of computer graphic techniques for visualising design proposals. Information can be found on the Internet Web Page: http://www.fbe.unsw.edu.au/courses/benv/1341/ The lectures cover the principles and techniques of 3D visualisation including lighting, reflection, transparency, surface shading, texture mapping and depth cues. Laboratory-based exercises explore these different techniques, along with a variety of presentation techniques such as rendered images, image editing, animation, Quicktime VR and VRML. Assessment is based on the earlier staged learning exercises and one major design presentation project.

BENV1382
Social Responsibility and Professional Ethics
Building Construction Management Program
UOC3 HPW2

Issues of social responsibility and professional ethics explored via the analysis of case studies, seminars, discussion and debate.

BENV2101
Adaptive Re-Use
Interior Architecture Program
UOC3 HPW2

An examination of the trend to find new uses for existing buildings rather than demolish and rebuild. Issues of conservation, preservation and heritage value of buildings; the role of other interested parties (media, community groups) in determining options for re-use. The course will address such issues as: surveying and assessing buildings for their suitability for adaptive re-use; measuring adaptive re-use in terms of environmentally sustainable design (ESD); assessing building forms and finding suitable compatible new functions; working within the Burra Charter; building conservation techniques; writing a "Heritage Conservation Report". Case studies selected from recent local examples of adaptive re-use. A design exercise involving adaptive re-use.

BENV2106
Landscape Design 9: Integrated Studio
Landscape Architecture Program
UOC6 HPW6
Prerequisite: LAND1302

Mixed studio groups are formed from different years and disciplines. The studio concentrates on significant current issues with an emphasis on design competitions. The studio runs for the first seven weeks of session only.

BENV2107
Landscape Design 10:Elective Studio
Landscape Architecture Program
UOC9 HPW6
Prerequisite: LAND1302 or ARCH1202 or IDES2162

Investigation of the relationship between design and contemporary landscape theory through a series of critical design projects at site planning scale. After the first half of the session, students in programs other than landscape architecture choose to complete this course by joining either LAND1201 or LAND1301.

BENV2112
Landscape Design for Well Being
Landscape Architecture Program
UOC6

This course will explore restorative and therapeutic landscapes for a variety of settings and client groups, eg hospitals, hospices and special care facilities. A design project for a specific site and client will be carried out following lectures and site visits with visiting practitioners.

BENV2117
Visual Resource Analysis & Management
Landscape Architecture Program
UOC3

Understanding the issues related to visual or scenic quality to develop a means to assign them value in the planning and design process. This elective course will be taught in an intensive five-day format combining lectures, discussions, presentations of case studies and site visits with practical exercises. Topics to be covered will include: the aesthetic experience of landscape,inventory and assessment of visual resources aesthetic consideration in the planning/design process, theoretical foundations in visual resource management and visualisation techniques.

BENV2122
Modelling Sustainable Design
Faculty of the Built Environment
UOC6 HPW3

The degree to which a building is 'sustainable' is the subject of much debate. This course contributes to understanding how to best approach issues of sustainability in architectural design. One approach is to set a range of agreed ecological indicators and to assess the design against these and other similar buildings. Conducting such an assessment is increasingly being demanded of architects by local, state and national regulatory authorities and clients prior to development approval and construction. Architects are required to provide an accurate and quantifiable assessment of the environmental credentials of their design proposals. This assessment should be inclusive of the aesthetic intentions of the design without resorting to generic ESD solutions. This course is concerned with exploring opportunities provided by the environmentally sustainable credentials of a design proposal to generate architectural ideas that inform design thinking and practices. This course will allow

students to assess a previous studio design proposal in terms of thermal performance, energy used in manufacturing of materials, the ability of the building to be self sufficient for its resource requirements and waste reduction. Design assessment will be conducted using spreadsheets, the Ecotect simulation program, Airpak, Radiance and/or LCAid, life cycle assessment software. Interaction between the design modifications made as a result of the assessment process and the original design will be explored and documented using CAD. Course material will be presented as lectures (in the computing lab) and on line technical tutorials. Students are expected to undertake the tutorials independently so that allocated lab hours can be used effectively. There will be 3 assessment tasks requiring students to undertake individual and groupwork. This course is open to Architecture students who wish to explore the nexus between environmental sustainability and informed architectural design.

BENV2125
Photovoltaics in the Built Environment
Architecture Program
UOC6 HPW3

The use of PV as an integral part of a building structure is one of the fastest growing PV markets world-wide. This course will examine the architectural and engineering aspects of using PV as a building material. It will include building performance requisites, active and passive solar design principles, planning requirements, co-ordination between electrical and building trades, system maintenance and monitoring. In particular, the course will cover techniques for integration of PV in design (shape, size, orientation, colour), mechanical systems (especially multi-functional elements), electrical systems (grid connection and /or direct use) and building operation, control and maintenance. Students will receive practical experience through field trips and laboratory experments. The course is run jointly with the Photovoltaics Research Centre.

BENV2133
Design Collaboration using a Building Information Model
Architecture Program
UOC6

This course provides a unique opportunity to participate in a multidisciplinary collaborative architectural design programme with students from a range of disciplines including architects, engineers, interior architects, builders, planners and landscape architects. The course will engage with three major learning contexts: the process of design resolution and refinement, commencing with a real concept design (a building that is at an advanced stage of design on a real site in Sydney) and working through a teamwork process to arrive at a set of well resolved design propositions; participation in a genuine collaborative design process, working as part of a multidisciplinary design team and gaining insights into the way other design professionals work; the use of a shared server-based building information model with a corresponding set of design simulation tools. An international expert in the development and use of shared building modelling technology will lead the studio, supported by a local design professional who will guide the design resolution process. Students work as part of a small multidisciplinary design team, each having equal input to the design process, but responsible for bringing to the table their own area of expertise. There will be regular reviews where guest critics will visit the studio with particular expertise to guide the deliberations of each team. The course is run in a studio format with weekly lectures and associated seminars, critique sessions and group workshops. Assessment is based on both individual and group projects, including a group design presentation at the end of the semester.

BENV2201
Twentieth-century Australian Architecture
Architecture Program
UOC3 HPW2

Detailed study of the theories and work of selected Australian architects. Issues of nationality and nationalism will be addressed as well as those of criticism in the architectural presses. Readings will be selected related to various twentieth century architects. They will include works of criticism as well as explanatory texts. One architect will be studied each week and readings will address one particular issue relevant to the architect's theoretical position. Material is presented as lectures or seminars.

BENV2203
Introduction to 20th - century Japanese Architecture
Architecture Program
UOC6 HPW3

The course examines a cross-section of significant movements and practitioners in contemporary Japanese architecture. Material is considered from the point of view of "interaction", and the cross-fertilization which takes place in a global setting. The intention of the course is to present this material from a Japanese critical perspective with an eye to gaining an understanding of different modes of cross-cultural encounter. The course offers an introduction to relevant and contemporary work, and promotes critical engagement with the implications of globalization and difference. Architects studied include Ando, Seijima, Yamamoto, Takasaki, Takamatsu and others. Material is presented as electronic seminars.

BENV2204
Architecture and Consumer Society
Architecture Program
UOC6 HPW3

In this course students will study the interaction between architecture and consumer society. The main focus will be on how the ethos of consumerism relates to the design of urban spaces, cities and the buildings within them. Consumerism will be examined not only in terms of shopping, but also as a way of relating to culture and cultural education. We will consider the explosion of "themed" environments over the last thirty years, from shopping malls to whole cities such as Las Vegas. Themed environments are usually designed to stimulate consumer spending by amalgamating spaces for retail activity with those of entertainment and amusement. By drawing on the work of cultural and architectural theorists, as well as site visits to places within Sydney, the subject will examine three types of consumer-orientated space: shopping malls, casinos and new 'interactive' museums. Students will be encouraged to develop critical attitudes toward the influences consumerism has on contemporary architecture. Material will be presented in lectures and seminars.

BENV2205
Classical Architecture
Architecture Program
UOC3 HPW2

Exploring the origins, vocabulary and grammar of the Classical Orders and their application in Greek and Roman architecture, in the Renaissance and the Baroque periods, through Academism and Neo-Classicism to the resurgence of Classical ideals in the twentieth century. Material is presented in both lecture and seminar format.

BENV2206
Theory of Form
Architecture Program
UOC3 HPW2

The ontological basis and the antinomical qualities of form in the causal sense, reflected in nature, art and architecture. Practical investigation of the antinomical qualities of form with special emphasis on the brief and on the built fabric of contemporary architecture, and practical; attempts to identify shortcomings and develop corrective measures. Material is presented mainly as two-hour lectures and occasional tutorials comprising practical projects focusing on selected case studies.

BENV2208
Spirit in Architecture
Architecture Program
UOC3 HPW2

Spatial symbolism and intellectual intuition, principles, and methods of sacred architecture. Spiritual doctrine reflected in the layout of Judaeo-Christian architecture with reference to the architecture of sacred traditions. Material is presented mainly as two-hour lectures with occasional tutorials comprising practical projects focusing on selected case studies.

BENV2212
Architecture and Culture
Architecture Program
UOC6 HPW3
Prerequisite: ARCH1221.

Many architects and architectural theorists today are engaged in a critical questioning of widely held yet inadequate beliefs and processes, including unrestrained progress, instrumental reason and social control. These driving social forces have brought about a devaluing of human work and nature that courts ecological disaster and a degrading of our physical environment. Architects may formulate a resistance through careful reflection on: the role of the human faculties of imagination and memory in design and construction; the significance of decorum, of public and private realms and of boundaries in out buildings and cities; and the limits of the architectural profession's intrusion into all dimensions of life.

The course will focus on several cultural critics, both writers and architects, assessing the value and limitation of their contributions. Investigation will be guided by a vigorous tradition of thought (extending through the nineteenth century to the present) which has defined the word 'culture' as an idea of a whole way of life (and conflict) for individuals in a community. This is formulated as a challenge to the dominant values of society. Material is presented as two-hour lectures.

BENV2213
Critical Perspectives on Twentieth Century Art and Design
Architecture Program
UOC3 HPW2

This course introduces some of the key interpretive strategies used in art history and cultural studies over the last hundred years, with an emphasis on current lively debates. The classes will explore and question some of the layers of interpretation of artists works from the time they were made to the present. European, North American and Australian art and design will be examined through various filters such as modernism, post modernism, internationalism, nationalism, regionalism, gender and identity. In visual and cultural studies there is no single correct interpretation of a particular artwork or movement. This course has been designed to enable you to become aware of the plurality of interpretations and to appreciate if not always to endorse or adopt) the arguments for contesting interpretations of objects and events. Material is presented as two-hour lectures. Assessment will include individual and group work.

BENV2214
History, Theory and Interpretation: Art and Architecture
Architecture Program
UOC6 HPW3

This course aims to deepen an understanding of basic theoretical concepts in the history of art and design; to gain familiarity with some key writings by artists, art historians and art critics; to develop strategies for evaluating theoretical arguments against appropriate visual works; and to develop competence and confidence in evaluating works of art/design and interpretive strategies developed for our understanding of them. Key concepts to be investigated are: style, connoisseurship, formalism, iconography, sociological perspectives, semiotics, gender, sexuality, cultural studies, modernity and post modernity. The course has been developed around a seminar structure which will encourage students to learn through looking, reading, thinking, and informed arguing. All students will be required to purchase a reader. Material is presented as a mix of lectures and occasional tutorials.

BENV2216
Interior Theory
Interior Architecture Program
UOC6 HPW3

A detailed exploration of the way we experience space. A study of how and to what extent this experience may be modified manipulated and determined by the application of various spatial, surface and lighting devices. The psychological implications of a range of different ways of designing interior space. Language of line; balance, visual weight, placement of objects; focal points; scale, shape and proportion. A series of lectures and studies/projects using drawings and simple models.

BENV2217
Contemporary Interior Design
Interior Architecture Program
UOC6 HPW3

A review of the history of interior design concentrating upon the period since the second world war. The course will draw upon significant practitioners to highlight trends in design. Students will be asked to select case studies to research the theoretical basis for design. Aspects to be discussed include the evolving nature of the relationship between interior designers and other design fields. Relationship between interior architecture and the media.

BENV2218
The Vernacular Landscape
Landscape Architecture Program
UOC3 HPW2

This course critically examines everyday landscapes of the modern world, with an emphasis on the Australian vernacular landscape. Contemporary theories of place and landscape as text are reviewed. Students are introduced to the theory and practice of cultural landscape assessment and their skills in landscape documentation, critical analysis and essay writing are extended.

BENV2219
History of Australian Landscape Architecture
Landscape Architecture Program
UOC3 HPW2

The history of landscape architecture and garden art in Australia since European settlement is reviewed. Students develop a knowledge of planting design traditions in Australia. The history of plant introductions is analysed and the design qualities of Australian plants as the fundamental elements of landscape architectural expression in Australia. The inter-relationships between Australian landscape architecture, Australian architecture and the urban design of Australian cities are studied. Students are introduced to the theory and practice of heritage conservation for gardens, public parks and public spaces. Skills in historical, essay and report writing are extended.

BENV2220
The Culture of Nature
Landscape Architecture Program
UOC3 HPW2

This course traces the myriad perceptions of nature in the history of western civilization, and provides an understanding of the evolution of ecological thought. Readings and lectures explore the ways in which aspects of culture foster ideas about "Nature". Particular attention is given to representation of ideas toward Nature in the arts and the built environment. The intent is to provide students in landscape architecture and related disciplines with a framework for understanding and articulating the complex relationship between nature and culture, and a foundation for integrating this understanding into their own work as designers. Skills in critical thinking, essay writing and discussion are extended and evaluated. The course is based I a cross-disciplinary approach and considers a wide range of perspectives on the topic.

BENV2221
State of the Art: Contemporary Landscape Design
Landscape Architecture Program
UOC3 HPW2

To develop knowledge in depth of contemporary landscape design through a detailed review of current projects, built works and writings. Students will investigate and test current theories of design in landscape architecture, through the critical analysis of recent work. Current concerns in landscape design will be reviewed against the trajectory of twentieth century modernism. Skills in project review, critical thinking and critical writing are extended.

BENV2222
Architectural Studies 1
Architecture Program
UOC2 HPW0

An elective designed for students wishing to pursue an independent course of study in a field of architecture not falling within the domain of any existing elective. It requires the gathering of data, analysis of that material and reaching a conclusion. Descriptive summaries of published material are not an acceptable alternative to a well argued critical essay. Students are required to present a detailed program of study for approval by the Head of Program by the Friday of the first week of the session in which it is intended to enrol in this elective. For special conditions consult the Head of Program. The work must be written in concise and clear English, apply a consistent and acceptable referencing system, include an up-to-date bibliography, include only relevant and properly referenced illustrations, and be word processed in A4 format. Submissions will normally be about 2,000 words and be submitted by Friday of Week 13.

BENV2223
Architectural Studies 2
Architecture Program
UOC3 HPW0

The intellectual and procedural requirements for this course are as described in BENV2222. The work must be written in concise and clear English, apply a consistent and acceptable referencing system, include an up-to-date bibliography, include only relevant and properly referenced illustrations, and be word processed in A4 format. Submissions will normally be about 3,500.

BENV2224
Architectural Studies 3
Architecture Program
UOC6

The intellectual and procedural requirements for this course are as described in BENV2222. The work must be written in concise and clear English, apply a consistent and acceptable referencing system, include an up-to-date bibliography, include only relevant and properly referenced illustrations, and be word-processed in A4 format. Submissions will normally be about 7,500.

BENV2226
Chinese Gardens
Architecture Program
UOC6 HPW3

Introduction to the study of Chinese gardens focussing on key documents and some extant gardens. Lecture topics include: key notions of design, concepts of space/time, role of designers and visitors, movement and the experience of landscape, the relationship between pictorial space, garden design and literary tradition, and imaginary gardens. There are two key concerns: (1) cross-cultural relevance (what can the study of Chinese gardens offer to a cross-cultural dialogue in architecture and landscape architecture?) and (2) interdisciplinary perspective (how is the study of Chinese gardens related to recent work in some other fields such as geography, cultural studies, philosophy and the visual arts?). The main assignment is an exercise in spatial composition developed from a 17th-century Chinese handscroll.

BENV2228
20th Century Architecture : Modernity to Deconstruction
Architecture Program
UOC6 HPW3

This course is a study of key moments in twentieth-century architecture through the examination of selected buildings and the writings of architects. Among sources to be discussed are works by architects such as Le Corbusier, Mies van der Rohe, Walter Gropius, and cultural theorists and philosophers such as Theodor Adorno, Gaston Bachelard, and Gianni Vattimo. Material is presented as electronic seminars.

BENV2230
Principles and Philosophy of Design
Interior Architecture Program
UOC3 HPW2

The currently popular pseudo-elitist view of art and design is rejected in favour of the proposition that the artist is not a special kind of person but that every person is a special kind of artist. Design is not something which is practiced by the elite few who call themselves designers but by all of us all of the time. This course looks closely at the principles which underpin design in its broadest meaning and application, from the most simple, seemingly intuitive to the most complex of decision-making processes. These principles are studied within a philosophical framework strongly linked to the 'perennial philosophy' which may be found in all cultures and at all times and which has been particularly championed in our age by such writers as A.K. Coomaraswamy, Frithjof Schuon and Rene Guenon, and based heavily upon the work of the late Visiting-Professor Peter Kollar. Students who have completed INTA2101 or INTA2102 cannot enrol in this course.

BENV2231
Process in Architecture and Landscape
Faculty of the Built Environment
UOC6 HPW3

This elective deals with ideas of process in architectural and landscape architectural writings. Recent developments on the east coast of the United States and in the Netherlands are the focus of this elective. (E.g. projects by Adriaan Geuze, MVRDV and West 8; writings by James Corner, Stan Allen, and Sanford Kwinter, etc.) The elective will explore the idea that these recent developments have, more than at any other time in this century, opened possibilities for fruitful engagement with Chinese cultural interests. Four weeks of the programme will be devoted to comparative work.

BENV2232
Thinking Through Drawings 1
Architecture Program
UOC6 HPW3
Prerequisite: ARCH1202 or (LAND1142, LAND1152).

This elective helps students develop a more focussed reading of architectural drawings and photographs through case studies from the 20th century. Emphasis is placed on reading in detail, reading for discrepancies, reading for temporal specifics, reading images in relation to what is written about them, reading for the students' current design projects. The architects to be studied include: Rem Koolhaas, Ben van Berkel, MVRDV, Enric Miralles, Herzog and de Meuron, Kazuyo Seijima and Tadao Ando.

BENV2233
Architectural Images
Architecture Program
UOC6 HPW3

This elective takes as its subject the current fascination in architectural discourse and practice with 'the image'. Each year the elective will focus on a different aspect of architecture's engagement with the image. Previous topics have included: the relation of the discourse on the image to the discourse on ornament; urban advertising images and urban experience; journal publishing in architecture; the media of cross-cultural interaction in architecture; the interlinking of domesticity and urbanism in the representation of architecture. Students will engage with the techniques of presenting images graphically, as well as framing and resourcing critical discussions of topics through research and writing.

BENV2237
Thinking Through Drawings 2
Architecture Program
UOC6 HPW3
Prerequisite: ARCH1202 or (LAND1142, LAND1152).

This elective helps students develop a more focussed reading of architectural drawings and photographs through case studies from the 20th century. Emphasis is placed on reading in detail, reading for discrepancies, reading for temporal specifics, reading images in relation to what is written about them, reading for the students' current design projects. The architects to be studied include: Enric Miralles, Peter Wilson, Rafael Moneo, Alvaro Siza and Peter Zumthor.

Note: Subject to approval

BENV2238
Modern Architecture in India & Middle East
Architecture Program
UOC6 HPW3

This course will explore the role and significance of 'modern' architecture in the making of nation states. Seminars and selected readings will explore topics such as: Spatial strategies for asserting nationhood such as maps, boundaries, government buildings, monuments, museums, domestic architecture, events in public space, stylistic hegemony, etc; cultural borrowings and architectural exchange between 'East' and 'West'; and the tension and overlaps between the ideals of Internationalisation and the construction of a local identity. While the seminar's focus on India and Bangladesh will situate the discussion within the politics of post-colonial independence, selected themes will be discussed as they relate to other sites of investigation including the birth of Israel and the post war re-construction in Lebanon.

BENV2239
Cultural Pluralism in Modern European Architecture
Architecture Program
UOC6 HPW3

This course promotes an understanding of 20th-century architecture interms of cultural pluralism and questions the homogeneous nature of the "International Style". It highlights the diversity in architectural debates and situates them in the context of different political agendas, multicultural histories and cultural traditions. The class will discuss the modernists' increasing interest in the "Orient" and its impact on architectural production, as well as the search for modern architecture that would reflect "national" identity. Examples to be studied include Le Corbusier's Journey to the East (a record of his travels from Vienna, Budapest, Belgrade to Istanbul and Athens), which demonstrates how Le Corbusier's encounters of the "East" and Islam had a formative influence on some of his most famous works. The architectural and landscape designs of the Slovenian architect Joze Plecnik, including Prague Castle and the urban designs for the Slovenian capitol Ljubljana, will show how his interest in the "roots of Western civilization" and Roman architecture suggested an alternative path in modernism. Architecture in the cities of Sarajevo, Vienna and Istanbul will also be studied. Assessment is based on a textual and visual study of a selected architectural, landscape or design project.

BENV2240
Domestic Architecture in Islam and the Poetics of Space
Architecture Program
UOC6 HPW3

This course investigates the domestic sphere in an Islamic context. Students will become familiar with the history, structure, and social use of residential forms in areas that are now a part of Arabia, North Africa and Egypt, Greater Syria, Iran, Iraq, Turkey and the Ottoman Balkans. They also will be introduced to the ways these spaces have been imaged and imagined in art, novels, memoirs, films, and scholarly texts. By considering residences as they are built and as they are described, students will learn both how architecture is historically specific and how it is invested with public and private meanings. Material is presented as electronic seminars.

BENV2241
The Culture of Materials
Architecture Program
UOC6 HPW3

This course looks at the relation between some of the common materials of building construction as they exits in different cultural regimes and ecologies-in particular, timber, steel, concrete and plastic. The course will then introduce a number of perspectives on these materials that show them to be constantly in the process of being given different meanings, values and applications by both different national and trans-national cultures. The course will also examine topics such as: connections between design and materials, how the material world is viewed, making, cultural change, the past and the future. The last part of this course explores cultures of use and value. Although not employing a materials science approach, some technical detail will be presented.

Note: Subject to approval

BENV2244
Materials and Their Symbolism
Interior Architecture Program
UOC3 HPW3
Prerequisite: INTA2202 or equivalent Year 2 Design Studio; Excluded: INTA1311.

The role of material as medium and message in architecture. The symbolic language of materials. The relationship between material and idea in the works of significant designers and architects. Research project(s) investigating the sources, manufacture, properties, characteristics and uses of a wide variety of materials.

BENV2245
Colour and Light in Environmental Design
Interior Architecture Program
UOC6 HPW3
Prerequisite: INTA2102 or equivalent Year 1 Design Studio; Excluded: INTA1342.

A series of lectures and projects examining the history, practice and theories of colour and light. Practical experience to enable students to: precisely identify and exactly recreate any hue; develop an understanding of the subjective nature of colour vision; develop an awareness of the difference between the additive and subtractive systems of light-projected and physical colour.

BENV2247
Design Approaches in Italian Architectural History
Architecture Program
UOC6 HPW0

This course investigates the architectural and architectural/theoretical work of Italian theorists from Leon Battista Alberti to the early 1600 with reference to Vitruvius's writings and the work of Italian Architects from Sant'Elia to the present. Architects to be studied will include Francesco di Giorgio, Filarete, Palladio, Scamozzi, Piacentini, Terragni and Libera.The course will focus on the differences in approach to the various interpretations of ancient sources and to the many uses of the Roman architectural prototypes. The course will assist students to recognise how the interpretation of the ancient sources involves the relationship between the city's urban structure and the design process of the building.

BENV2250
Glass in 20th-century Architecture
Architecture Program
UOC6

This elective deals with the introduction of glass into architectural design as a modern material. The use of glass will be studied in experimental buildings by modern architects such as Mies van der Rohe, Le Corbusier and Pierre Chareau. The concepts of transparency, opacity, translucency and "light architecture" will offer students a useful vantage point to consider the re-emergence of glass in recent works of architects such as Rem Koolhaas, Herzog & de Meuron and Peter Zumthor. Assignments will include discussions on readings and short essays on some exemplary buildings. This course will be offered in electronic seminar format.

BENV2252
Chinese Architecture
Architecture Program
UOC6 HPW3

Introduction to studies of traditional Chinese architecture and city planning. The lectures cover a series of selected topics, such as the maturation and principles of the trabeated system of timber buildings, the patterning of spatial sequence, symbolism in the construction of buildings and cities, medieval urban transition, urban land use, and public space, each centred on a prominent architectural or urban feature that is representative of a specific historic period. Emphasis will be placed on treating the Chinese experience as an axiomatic part in world civilization, rather than as an exotic and mysterious heritage of the past. Such an emphasis implies two primary concerns: (1) cross-cultural dialogue in architectural and urban history, and (2) the relevance of the studies to contemporary issues in architectural design and city planning. Assessment is based on in-class discussion, a series of short literature reviews, and one major assignment

BENV2302
Painting and Design: Hybridity
Architecture Program
UOC6 HPW2

This is a practical course in acrylic painting techniques in relationship to design and architecture. The course concentrates on color theory and the technical aspects of painting by working through a series of both 2D and 3D visual, spatial and design problems that attempt to awaken new avenues of design thinking by juxtaposing different painting techniques, styles, images and ways of thinking about visuality and aesthetics. This course aims to expand each student's visual consciousness through practical painting exercises allowing personal insights (on color, shape, form, surface or texture) to seep into their consciousness flowing in the slow-time of painting with the beat of the heart, and the integrated sensuality of hand and mind. This is a studio-based subject involving intensive, practical, hands-on exercises taught simultaneously with design theory requiring and developing lateral thinking and creativity.

BENV2303
Drawing and Design: Seeing, Thinking, Understanding
Architecture Program
UOC6 HPW3

This course involves investigation into the basic technical, aesthetic and conceptual aspects of drawing. The philosophy of the course is that drawing is a skill that is both visual and experiential, which evokes through practice - insights, associations and resonances - indicating each student's individual understanding of both the objective world and the world of their imagination. The course teaches basic drawing skills - how to see, think and respond through drawing to a variety of visual problems. This is a studio-based subject involving intensive, practical, hands-on exercises taught simultaneously with visual theory. Ultimately I seek to expand each student's visual vocabulary, aesthetic consciousness and creativity through an interwoven series of exercises based on important moments in 20th century architectural, design and visual history.

BENV2304
Colour Theory in Architecture and its Environs
Interior Architecture Program
UOC3 HPW2

This course aims to develop a practical knowledge of the theories of colour, its historic antecedents and possible future applications including investigations of light and colour as natural phenomena. A series of studio-based exercises, lectures and discussions create a basic understanding of the nature of personal colour perception and bias. Analysis of the relationships colours create with other colours and the nature of colours within their surrounding architectural and environmental context.

BENV2305
Graphic Design for Architects, Interior Architects, Landscape Architects and Industrial Designers
Interior Architecture Program
UOC6 HPW3

This elective is open to students in the Architecture. Interior Architecture, Landscape Architecture and Industrial Design Programs. The seamless integration of the products of graphic design into commercial and urban spaces, at both the intimate and public scales, is expected of architects and designers. This course aims to give students the skills to attempt a basic level of graphic design and to become familiar with the wide range of graphic techniques and materials available. At the end of the course the student should understand techniques for integrating graphic materials into buildings and be able to brief a graphic designer for the most complex of tasks. Material covered in the course would include the basics of typography, layout design and illustration. Techniques for printing, including those for incorporating images into a range of building materials would be introduced. In addition topics such as: digital reproduction technologies, digital and analogue colour systems, paper engineering and three-dimensional graphic representation will be included. Concepts of corporate imaging and marketing within the context of the retail/hospitality/corporate environment will be dealt with. Discussion in class will include topics such as Venturi's "Building as Duck". Students will be expected to undertake a range of activities including exercises in preparing graphic material and the presentation of case studies of successful graphic packaging .

BENV2309
Combined Exhibition
Architecture Program
UOC3 HPW0

Architecture as a discipline and profession is undertaken in the public realm of Communities. Exhibitions and presentations of architectural projects contribute to enhancing public debate about architecture. This course provides an opportunity for students to engage in the creation, planning, organisation, management and documentation of the Architecture Program Graduation Exhibition. Students will be required to liaison with Faculty, Program staff and students, Architectural profession and Industry. Enrolled students will be required to identify areas in which they can contribute. Assignment tasks will be negotiated with enrolled students.

BENV2311
Digital Drawing Body Sculpture
Architecture Program
UOC6 HPW0

Life drawing is an ancient and powerful exercise in increasing our ability to perceive and communicate form. The course provides an opportunity for students to represent and explore the human body, examine concepts of form, structure, skin and cladding and the body's relationship to physical and virtual space. Students will explore digital methods of sculpting the human figure using quick computer modelling techniques as well as the more traditional techniques of drawing the clothed, partially clothed and unclothed human figure.

The course involves group based drawing and computer lab sessions, and independent work. It is open to Faculty students who have successfully completed Year 2 of their program, enjoy drawing from life models, can work and learn independently and who enjoy working with others in the setting of the Studio and Lab.

BENV2312
Model-Making as an Interpretive Practice
Architecture Program
UOC6

This elective provides an opportunity for students to engage with physical model making as an interpretative, conceptual, design practice, one that mediates our understanding of spaces and places in the natural and urban landscape. It encourages students to persue a purposeful, considered, strategic approach to designing spaces that are informed by personal observation, experiences and reflections of place. Improving and extending student capability in the making and crafting of models is a key aspect of this course.

Students will be required to undertake a range of investigations of a space in the landscape. Using a variety of materials, model making techniques and scales students will construct a series of models that are evocative of the particularities of that space, and its place in the landscape. In improving their model making skills and techniques students will investigate the potential relationships between material choice, site, representation and craft technique.

Involving field and studio work this studio will focus on process development and encourages students to be observant and systematic in undertaking investigations, creative in exploring and experimenting with materials, assemblies and interpretive possibilities, reflective about their decision making, diligent and economic in their craft technique in the making of the models. Assessment in this course will be based on both process and product work. There will be two assessable tasks. An economic selection of materials and tools will be made available.

BENV2313
Introduction to Architectural Photography
Architecture Program
UOC6
Prerequisite: ARCH1201 or ARCH1202

This elective provides an opportunity for students to understand and practice basic principles and techniques of traditional and digital photography when applied to architectural photography. This will assist students in firstly, the photographic recording of artwork, models and building structures, secondly, presentation of those images as a portfolio of work and thirdly, inform their working relationship with professional photographers in the industry. The course involves lectures and workshops.

Assessment in this course will be based on process and product work. There will be four assessable tasks. Three involve photographic work (artwork image, project model image and building image) and students will be required to maintain a process journal. Student work will be exhibited at the conclusion of this course.

BENV2314
Photography, Society, and the Built Environment
Interior Architecture Program
UOC3 HPW3

This elective will give students an individual opportunity to use a camera as a visual research tool in the exploration of society and the built environment. The course involves theory and practice. A series of lectures covering different aspects of social documentary: a brief history of this genre, photojournalism, the photo-essay, street photography, oral history, the family album; and an introduction to some contemporary photographers detailing the urban environment through pattern or landscape.

In Photography there is an intimate link between the image and the original. Light acting on and transforming emulsion still seems magical, or thousands of pixels transferred digitally to catch a moment in time is extraordinary. The ability to freeze frame movement in space, hold still light in time, document our communities today for tomorrow, record our visual reality is a powerful tool. With this power comes certain responsibility.

BENV2318
Landscape Photography
Faculty of the Built Environment
UOC3

This course, offered as an intensive elective over two weeks, will introduce students to the potential for using photography as a tool for analysing, documenting and communicating about landscape. Course content will include: different applications of photography for landscape architecture; composition theory and how information is conveyed through a photography; use of light and contrast; principles of film-based and digital photography; and techniques for preparing photos for exhibition. Students must provide their own camera and cover the course associated with film developing and printing.

BENV2402
Design Modelling - Time Based Visualisation
Architecture Program
UOC6 HPW3
Prerequisite: BENV1341 or BENV2401 or IDES3231.

This elective will align design techniques with time based 3D digital environments. It will extend digital visualisation skills by introducing sequencing and storyboards into 3D digital environments. Computer Lab based exercises will cover 3D composition, time based form generation and narrative in digital 3D. Development of presentation techniques such as video editing, QuickTime VR, and VRML will be included in the final presentation. Assessment will be based on earlier staged learning exercises and one major design presentation project.

BENV2403
Information Technology in Design and Construction
Faculty of the Built Environment
UOC3 HPW2
Prerequisite: BENV1141.

This course introduces the issues, problems and solutions relating to the creation and distribution of information within the building industry. It includes topics such as: database systems; interaction with CAD system graphics databases; transmission of data; networking and communication technologies; shared technical databases; establishment of product information standards; conceptual modelling techniques; and design information systems. Assessment is by means of projects and student seminars.

BENV2404
CAD Management for Architects
Architecture Program
UOC3 HPW2

This course raises the issues relating to the implementation and management of CAD systems in architectural practices. Topics will include: CAD system selection and installation; cost issues (purchase, maintenance, upgrades); political implications within practices; software customization; resource management; office standards; and training. Assessment is by means of projects and student seminars.

BENV2405
Computer Graphics Programming
Architecture Program
UOC6 HPW3
Prerequisite: BENV1141.

This course introduces the fundamentals of interactive computer graphics programming within the context of a typical architectural CAD system. Specifically, students will be introduced to the process of developing GDL scripts within ArchiCAD for the purpose of creating what in the industry have become known as 'smart objects'. This is a process and technology that is being used increasingly in architectural practices where ArchiCAD is used to produce complex 3D component building models. Topics to be covered: concepts of building modelling with ArchiCAD; types of smart objects; parametric library objects; object intelligence; GDL scripting; program planning, design and debugging. Assessment will be project-based involving the development of GDL library parts with a range of complexity.

BENV2406
Design and Computation
Architecture Program
UOC3 HPW2
Prerequisite: BENV1141.

This course is based on extensive reading and group discussion, exploring a range of theoretical approaches to the use of computation techniques in support of the act and processes of architectural design. Topics include: traditional approaches to architectural computing including space planning, facilities management, building performance analysis, information systems and operations research; knowledge-based systems and knowledge representation techniques; shape grammars; expert systems; and design information systems. Assessment is based on participation in discussion, the preparation of regular reports on readings and one major essay task.

BENV2408
Building Information Systems
Building Construction Management Program
UOC6 HPW3

The specification, development and use of computer based information systems in the management of building construction projects. Current networking and communication technologies; digital document formats and environments; information system lifecycle; relational database structures; shared information databases through project intranets; computer programs for cost management; and CAD product modelling standards for interoperability with other applications.

BENV2409
Advanced Multimedia
Architecture Program
UOC6 HPW3
Prerequisite: BENV1043

Web Page: http://www.fbe.unsw.edu.au/courses/benv/2409/. This course explores a range of advanced multimedia concepts and issues. This will include creating interactive 3D environments, exporting information created on the fly, controlling video and animation, and programming. Students are expected to be adept at the material covered in the prerequisite course.

BENV2410
Advanced Webpage Design
Architecture Program
UOC6 HPW3
Prerequisite: BENV1042

Web Page: http://www.fbe.unsw.edu.au/courses/benv/2410/. This course explores a range of issues and technologies relating to the creation and maintenance of websites. Topics will include: an analysis of web Search Engines; Cascading Style Sheets (CSS); Dynamic HTML (DHTML); and Active Server Pages (ASP). Students are expected to be adept at the material covered in the prerequisite course.

BENV2412
Modelling Sustainable Design
Faculty of the Built Environment
UOC6

Whether a building is truly 'sustainable' is almost impossible to define. It is possible, however, to determine a range of ecological impacts and to benchmark one building against another. Conducting such an assessment isincreasingly being demanded of architects by regulatory authorities and clients prior to construction. Dwellings in NSW are subject to a minimum House Energy Rating assessment as condition of Council approval. Similarly,certain commercial buildings must provide an Energy Performance Report; and energy and environmental impacts must now included in Statements of Environmental Effects for Development Approval. Architects must have the tools and skills to provide an accurate and quantifiable assessment of the environmental credentials of their designs.All this, and without compromising the aesthetic integrity of the building or resorting to textbook ESD solutions. As with all other constraints placed on architects, there exist myriad opportunities to use the environmentally sustainable aspects of the building as a generator of theoretical and aesthetic ideas. This course will allow students to assess previous studio designs in terms of thermal performance, energy used in manufacturing of materials, the ability of the building to be self sufficient for its resource requirements, and waste reduction. This will be conducted using both spreadsheet and simulation tools. The design will then be modified to improve its environmental credentials. The interaction of these changes with the original design will be explored using CAD tools. This course will be based in the Computer Lab and students are required to have completed BENV1242 or another CAD based subject. It is open to Architecture students who have successfully completed or been exempted from the first session of Year 3 and have confidence using spreadsheet software packages such as Excel in Microsoft Office. This course provides committed students an opportunity to explore the nexus between environmental sustainability and good design.

BENV2414
Advanced Digital Graphic Communications
Landscape Architecture Program
UOC6

This course will introduce students to digital media and its use as a mode of representation for design ideas. Digital media is becoming the most common form of design communication for landscape architects and other design professions. It is a representation method that can and should be used to inform designs and not only as a presentation tool The course will educate students in the use and application of digital media. It will equip students with skills in digital photographic enhancement and composition of images that will help to communicate design ideas through graphic representation and montage. The course will be run in a predominately digital format.

BENV2417
Digital Production and Design of Poster Presentations
Architecture Program
UOC3 HPW3

This course provides an opportunity for students to develop capabilities in the use of image editing techniques for the production of A4 to A1 format poster presentations. The course also addresses graphic design and composition techniques and tactics, as well as the technical issues associated with colour printing of digitally generated presentation work. At the completion of the course students should be confident in using the tools of the software program, 'photoshop', be able to compose and design for digital production, effective image/text presentation posters and formats.

BENV2420
Building Modelling, Rendition and Presentation
Architecture Program
UOC6 HPW3
Prerequisite: BENV1242.

This course assumes a working knowledge of 3D object-based CAD modelling and the process of extracting and producing traditional orthogonal drawings directly from a 3D building model. This elective builds on that base knowledge to develop an understanding of the range of techniques and strategies of design documentation and representation that can flow from the use of a 3D building model. The emphasis of the course will be on the smooth movement of data between a range of software tools to achieve quality, precision and clarity in 2D paper-based presentation of design concepts. Lectures are used to discuss a range of communication strategies and the tools available to achieve those. Practical and explorative experience is achieved through a series of graded exercises culminating in a major project to demonstrate the level of knowledge and skill achieved.

BENV2603
Lightweight Structural Design
Architecture Program
UOC6 HPW3

Integrated architectural/structural/constructional/environmental design of cable, cable-net, membrane, tensegrity, shell and folded surface structures in lightweight materials (concrete, timber, metals and composites). Current issues related to on-going research and development. Structural ideologies. Seminar and project(s). Model and computer laboratory work and occasional construction workshop.

BENV2604
Structural Systems: Basic
Architecture Program
UOC6 HPW3

Building upon a typical introductory structures course (such as Technology 1) this course deals in depths with basic systems such as arch, beam, cable, frame, truss, slab/plate, membrane, shell and several of their many variations. The course is a useful basis for further elective study in structures and for design and construction: The fundamental requirement for any architectural designer embarking upon the structural design of buildings and objects is a basic understanding of structural systems and their structural behaviour under load. Equipped with such understanding the student/designer gains the necessary confidence to distinguish between different structural possibilities for any particular design and choose the appropriate one. Subsequently she/he is able to approach structural material choice and structural detailing of connections on a sound basis of proven structural relevance. The teaching approach to this subject is predominantly visual with only limited numerics. Basic structural systems will be discussed by means of readily understood graphical diagrams and will be illustrated with cases of typical structural applications. Short exercises accompany the lectures with typical solutions presented in class. Student learning occurs during exercise completion combined with study of practical examples and the relevant literature, peer discussion and feedback from the lecturer. Assessment will be by student engagement in class as witnessed by timely and successful completion of exercises, active participation in discussion and by attendance.

BENV2701
Advanced Building Materials (Ceramics)
Architecture Program
UOC6 HPW3

Ceramic materials; the nature of cements, concrete, glass and similar products. Building products and techniques using these materials and their implications including construction, maintenance and deterioration. Examination of the environmental impacts and life cycle analyses of these materials. Industrial and site visits.

BENV2702
Advanced Building Materials (Organics)
Architecture Program
UOC6 HPW3

Organic materials; the nature of wood and synthetic polymers. Building products and techniques using these materials and their implications including construction, maintenance and deterioration. Examination of the environmental impacts and life cycle analyses of these materials. Industrial and site visits.

BENV2703
Advanced Building Materials (Metals)
Architecture Program
UOC6 HPW3

Metals, ferrous and non-ferrous, their nature and use. Building products and techniques using these materials and their implications including construction, maintenance and deterioration. Examination of the environmental impacts and life cycle analyses of these materials. Industrial and site visits.

BENV2704
Advanced Construction Systems
Architecture Program
UOC3 HPW2

A review of recent developments, current trends and possible future directions in building design, construction systems, detailing and documentation. Case studies, projects, seminars.

BENV2707
Advanced Landscape Engineering
Landscape Architecture Program
UOC3 HPW2

More complex landscape engineering problems are undertaken, particularly in relation to sustainable landscape engineering solutions, as well as projects that integrate, eg public art, constructed wetlands, specialty paving, water features, specialty lighting.

BENV2708
Interior Detailing
Interior Architecture Program
UOC6 HPW3
Prerequisite: INTA2202 or equivalent Year 2 Design Studio.

Design resolution at a fine scale highlighting issues of quality and the central role of detailing in achieving buildings and interiors which are original and coherent examples of good design. The practice and technology of detailing interiors seeking to enhance the designer9s critical capacity when assessing options and extending their design vocabulary. The discipline of extending design concepts from the overall to the specific and planning strategies for detailing while at an early stage of the design process. Tutorials based upon recent examples of detailing will be supplemented by lectures dealing with techniques of documentation, structuring building contracts to support successful outcomes in building procurement. Lectures will cover material related to building methods and technologies: included will be detailing stainless steel, timber veneer, plastic laminates, timber joinery, specifying finishes such as polyurethane, epoxy, stains and coatings. The program will be centred about guest lecturers presenting examples of their work as case studies of successful detailing.

BENV2709
Construction 6 (Industrialisation and Technological Change)
Building Construction Management Program
UOC3 HPW3

Concept of industrialisation; historical trends. International experience. Effect of demand on construction technology. Tolerance in building; quality management, modular coordination. New technologies in manufacture and construction. Government policy. Internationalisation and future trends.

BENV2710
International House Practice
Building Construction Management Program
UOC3 HPW2

Focuses on procurement and production processes relating to housing development. Factors of interest include: government housing policy, design, development approval process, land subdivision, property titling, construction, financing and marketing. Case studies are used to portray how these factors compete within a market system. Australian and overseas contexts are studied.

BENV2712
Technology for Tropical Architecture
Architecture Program
UOC6

Outline: To study tropical architecture in context. Those undertaking this elective will develop an understanding of influences on tropical architectural practice: including climatic, cultural, environmental and

sustainability issues. There will also be an opportunity to study historical contemporary tropical architecture. This elective is open to Architecture students. There will be a field trip cost attached to this course. Any student intending to take this course must contact Graham Bell prior to enrolling.

BENV2713
Furniture Design 1
Interior Architecture Program
UOC3 HPW3

Through a series of lectures, tutorials, demonstrations and practical design projects, this course addresses issues of design philosophy, ecology, scale, context, spatial relationships, materials, technologies and resources appropriate to the design of furniture and fittings - the decorative arts for interiors.

BENV2714
Furniture Design 2
Interior Architecture Program
UOC3 HPW3

A guided research-based course concerned with the design and manufacture of furniture and fitments for mainly commercial applications. A research project and practical design assignment will focus on specific case studies.

BENV2715
Textiles in Interior Architecture
Interior Architecture Program
UOC3 HPW3
Prerequisite: INTA2102 or equivalent Year 1 Design Studio. Excluded: INTA1312.

A study of textiles and fabrics and their applications in interior architecture. The course will examine in some detail origins, structures, properties and manufacturing processes dealing with fibres, yarns and materials: woven, non-woven and knitted materials. Patterning, including structural and non-structural ornamentation. Further treatments and applications of materials. Standards of use and durability. New directions, concepts and future implications.

BENV2716
Design and Technology-Timber
Architecture Program
UOC6
Prerequisite: ARCH1371

This course aims to develop students appreciation and understanding of the potential of engineered timber and prefabrication in the context of a simple design accommodation brief. While resolving the design as a whole the emphasis will be on the resolution and documenting of the timber structure, construction and detailing of the project.

It is recommended that students speak with Peter Murray prior to enrolling.

BENV2718
Construction Technology 4 (Industrialisation & Technological Change)
Building Construction Management Program
UOC3 HPW2

Concept of industrialisation; historical trends. International experience. Effect of demand on construction technology. Tolerance in building; quality management, modular coordination. New technologies in manufacture and construction. Government policy. Internationalisation and future trends.

BENV2719
Housing Delivery Systems
Building Construction Management Program
UOC3 HPW2

High, medium and low density housing development in terms of the entire procurement production process. Factors directly involved in the process and other issues that impact on it including government housing policy, regulatory instruments, the commercial and social environment, land subdivision, property titling, urban planning, construction, financing and marketing. Current practices and future trends in various countries. International approaches to housing procurement. Quality in housing.

BENV2720
Introduction to Lighting and Acoustics
Architecture Program
UOC4 HPW2

Lighting: Natural and artificial lighting. Quantitative and qualitative aspects of lighting design. Electric light sources, light control and prediction methods.Acoustics: Acoustics and noise control: design of rooms, basic shape and volume, acceptable ambient levels. Acoustic performance: properties and behaviour of sound, sound transmission loss, external noise levels, structural borne and impact sound, reverberation times, selection of building envelope elements, selection of interior building materials and elements.

BENV2721
Lightweight Tropical Construction Project
Architecture Program
UOC6

Sttudents will apply their understanding of construction and Occupational Health & Safety Issues in the construction on campus of Simon Scally's Love Shack (Darwin).It is envisaged that under the leadership of a project manager the students will work in agreed teams to assemble and then construct the Love Shack. The construction will take some time and the timetable for which will be determined by the respective teams. It is envisaged therefore that the final erection will be in the last week of the mid year break.

The desired outcomes are: an application of construction knowledge, an understanding of the importance of team work in any project, appreciation of common building materials their jointing and fitting and the pleasure in the completion of a Love Shack which is for Sydney and client-based on Simon Scally's in Darwin.

BENV2722
Advanced Constuction Systems
Architecture Program
UOC6 HPW2

A review of recent developments, current trends and possible future directions in building design, construction systems, detailing and documentation. Case studies, projects, seminars.

BENV2802
The Architect and the Law
Architecture Program
UOC6 HPW2

This course will cover contract law, tort law, consumer protection law, professional practice and ethics, design law, construction law, valuation, financing, resource and land law, development and building control, dispute resolution and evidence and expert witness..

BENV2804
Construction Planning and Management
Faculty of the Built Environment
UOC3 HPW2

The role of the Architect and Builder in the traditional building procurement process. Construction management and coordination of the building process. New management directions for improved performance and coordination in the building industry. The role of the Developer and Project Manager in the procurement of buildings. Building economics and property evaluation. Principles of scientific management and organization, individual group behaviour, motivation techniques, planning, organising, directing and control.

BENV2805
Project Management and The Design Process
Faculty of the Built Environment
UOC6 HPW3

The nature of projects. Definition of project phases. The impact of procurement process on project outcomes. Project risk analysis and project organizational design. Client needs determination and managing the design process. Scope management.

BENV2806
Organisational Behaviour
Building Construction Management Program
UOC3 HPW3

Organizational design. Types of organizations and fitting organizational structure to environment. Leadership. Reward processes. Expectancy Theory. Organizational change.

BENV2807
Management 7 (Marketing)
Building Construction Management Program
UOC3 HPW3

Marketing for builders and developers in the Australian and Pacific environment with particular emphasis on the marketing mix, the relationship between a marketing system and its environment, development of marketing, tactics and strategy, market segmentation and the buyer decision process. Listing, selling and the auction process.

BENV2812
Documentation Techniques for Major Buildings
Architecture Program
UOC6 HPW2

Students will learn what is involved in completing a comprehensive set of documents comprising Working Drawings, Details, Specification and Schedules required for tender and successful completion of the construction of major buildings. Students will also learn about construction design details and many aspects of the legal and technical implication in the documentation.

BENV2813
Construction Marketing
Building Construction Management Program
UOC3 HPW2

Marketing for builders and developers in the Australian and Pacific environment with particular emphasis on the marketing mix, the relationship between a marketing system and its environment, development of marketing, tactics and strategy, market segmentation and the buyer decision process. Listing, selling and the auction process. Market Research.

BENV2814
Property Law
Building Construction Management Program
UOC6 HPW3

Recognition of the significance of different land titles, tenures and interests in land; understand the construction and content of contracts, leases and other forms of agreement required for property dealings and use; develop a familiarity with public and private controls and restrictions on land use and development; appreciate the relationship between planning policies at all levels and the valuation process; a knowledge of the valuation review and determination processes of the Land and Environment Court and similar tribunals; appreciate the requirements for presentation of evidence as an expert witness; acquire a familiarity with major court cases, relevant to the valuer, which establish valuation principles; understand the major objectives of principal New South Wales Acts dealing with real estate or interests therein. Judicial valuation, legal precedent, land titles and rights.

BENV2815
Construction Management 4A (Project Management & Design Process)
Building Construction Management Program
UOC6 HPW3

The nature of projects. Definition of project phases. The impact of the procurement process on project outcomes. Project risk analysis and project organisational design. Client needs determination and managing the design process. Scope management.

BENV2816
Construction Organisational Behaviour
Building Construction Management Program
UOC6 HPW3
All management courses from years 1 - 3 of the BBCM.

A study of the following topics from a construction industry perspective: Organisational design. Types of organisations and fitting organisational structure to the environment. Leadership. Reward processes. Expectancy theory. Organisational change.

BENV2901
City Planning Today
Planning and Urban Development
UOC3 HPW2
Excluded: Program 3360.

The way our cities look and operate, their cultural and community life are all considered by town planners. The course deals with the fundamentals of urban planning, its language. its rules and regulations; its controversial nature and the way it operates in practice. It looks at how and why urban planning came into being; how the legal and administrative system works; how the political system operates; and how planners deal with issues - from designing the city to balancing the many conflicts which arise over development projects. Lectures are given by staff of the Faculty of the Built Environment as well as planning practitioners. This course will give you the skills, the understanding and the enthusiasm to play an active role in shaping your city.

BENV2902
The City: Sydney
Landscape Architecture Program
UOC3 HPW2

This course critically examines the pace, scale and dynamic transformation of Sydney at the beginning of the twenty-first century. The physical form of the city, its environmental qualities and social patterns will be examined in terms of the theoretical literature on the culture of cities and techniques of reading the urban landscape. The study of Sydney's urban form and urban life will be based on a series of lectures, seminars and city walks.

BENV2903
Urban Design
Architecture Program
UOC6 HPW3

Design studies in the integration of buildings and groups of buildings in their urban context, and of spaces between buildings, accommodation of pedestrian and vehicular movement, micro-climate. Material is presented by students every week supported by instructor's lectures with a final tutorial completing the course requirement.

BENV2904
Public Art
Architecture Program
UOC6 HPW3

This course examines recent Australian and overseas art that addresses ideas of place and context and that is situated in the public domain. Public art can be an individualistic exercise but more often it results from professional collaboration between artists, designers of the built environment, and the community. Art in public places provides opportunities for design professionals to grapple with historical, social, cultural, environmental and other issues in the creative process. Increasingly state and local governments are developing policies to encourage public art: in some overseas countries a fixed percentage of the costs of a public building must be spent on providing site/place-specific art. This elective has two **Objectives:** one is to examine aspects of the current theoretical discourse on public art, and to debate these ideas in student-led seminars; the other objective is to enable students to conduct research into local recent public art and to write a critical appraisal of a particular work. It is hoped that the research will be incorporated (and acknowledged) in a wider Department-based project on public art, architecture and urban design in Sydney. Material is presented as a mix of lectures and seminars.

BENV2923
Images of Sydney
Planning and Urban Development
UOC6 HPW3

This course explores how an understanding of cities and how they are appreciated by those who live in them can be communicated visually. 'Images of Sydney' encourages students to capture the flavour and variety of living in Sydney on film. The course includes lectures on aspects of urban design and social documentary photography. Participants, using disposable cameras, take images which are critiqued and reviewed by the class. Students compile course journals covering not only reflections on the student's particular topic, but also photographic exhibitions visited, lectures attended, and relevant articles and books read during the semester. The major outcome is an end-of-session exhibition. Each student is responsible for presenting a collection of the photos they have taken with suitable captions and commentary conveying how the photographs help interpret the experience of the city.

BENV2937
Urban and Regional Design: Critique and Innovation
Planning and Urban Development
UOC6 HPW3

This course reviews the principles of urban design and guides students through urban design methodology via a series of small design projects. Teaching is through "enquiry by design" whereby lectures, site visits and case studies assist students' learning and development through the exploration of design projects of varying scales and contexts (e.g. town

centres, concept designs for specific sites, structure plans). Specific aims of the course include developing an awareness of the scope of urban design projects, an appreciation of the physical structure of places, an understanding of shaping built form, a familiarity with a range of building typologies, and an appreciation of current urban design issues and debates. Particular skills to be reviewed include site analysis methodology, establishing robust planning and design principles, mapping and spatial understanding, design review criteria and mechanisms of development control.

BENV2938
Transport Planning
Planning and Urban Development
UOC6 HPW3

This course aims to provide an introductory understanding of the role of transport planning as a planning tool that can be used to achieve positive planning outcomes in the urban built form. It provides an introduction to the theoretical, applied and policy aspects of transportation planning with special reference to public transport issues in Sydney. It covers introductory elements of transport planning and forecasting and their place in the planning process, specific elements of transport planning theory, and case studies through lectures, guest lectures and site visits. The course is underpinned by notions of transport-land use planning integration and sustainability.

BENV2942
Rural Planning
Planning and Urban Development
UOC6 HPW3

This course has been designed specifically to give students an appreciation of the issues associated with planning for rural areas, a vital component of land use management in Australia. Rural areas include the agricultural land, natural areas and urban settlements of regional Australia. It introduces students to a range of practical planning documents and instruments, including rural lands studies, rural strategies, Local Environmental Plans and Development Control Plans. Students will also learn about the various policy mechanisms used both in Australia and overseas. The course utilises fieldbased learning and usually involves a fieldtrip to a rural NSW location during which students undertake a rural planning exercise with practical application for a local council.

BENV2943
Heritage Planning
Planning and Urban Development
UOC6 HPW0
Prerequisite: PLAN3031.

This course for senior students provides an advanced overview of the theoretical, practical and policy aspects of issues concerning the conservation of environmental, heritage, both cultural and natural. The course deals with the objectives and purpose of heritage conservation, the definitions of heritage at international, national, state and local level: methods by which planners work to balance the demand for heritage conservation with the other needs of the urban and natural environment. The course deals with both the conceptual and pragmatic aspects of heritage conservation, dealing with heritage in an inclusive sense: biophysical, indigenous, cultural and built. The aim of the course is to ensure that built environment professionals have a full understanding of the theoretical, legislative and administrative aspects of the conservation of heritage.

BENV2944
Auckland Planning Elective
Planning and Urban Development
UOC6 HPW0
Prerequisite: PLAN1011 or permission of course authority

The general aim of this elective is to enhance the experience of students through exposure to new and different planning ideas, systems, planning projects and urban management processes. It will involve an intensive, guided field investigation of planning issues in Auckland with a major focus on approaches to growth management, heritage, sustainability and contemporary redevelopment and renewal projects. The elective will entail visits to or inputs from state agencies, local authorities, developers and planning consultants including the Auckland City Council and the Auckland Regional Council. Among specific sites to be studied would be the Auckland CBD, the Aqueduct Basin, Waitakere, Arataki and Waiheke Island.

BENV2945
Planning Travel Elective
Planning and Urban Development
UOC6 HPW4

The general aim of the elective is to enhance the experience of students in a small group context through exposure to new and different urban contexts, planning ideas, systems, planning projects and urban management processes. The course will involve an intensive, intensive guided field investigation of planning issues variously in international, interstate or non-metropolitan settlements with a focus on issues such as growth management, heritage, sustainability, urban design, transportation, strategic planning, and contemporary redevelopment and renewal projects. The elective will entail visits to or inputs from government agencies, local authorities, developers and planning consultants. Students will be required to pay costs of transport from and to Sydney, accommodation, meals, and incidental costs. Affordable motel or college-style accommodation would be negotiated. Students would be engaged individually and collectively in a major research and/or design project, the preparation for which would commence in the session preceding the trip with additional post-trip research, writing and presentation. Courses would be run subject to resources and student demand.

BENV2984
World Case Studies in Urban Design
Architecture Program
UOC6 HPW3

This course looks at some diverse 20century cities from an Urban Design perspective. It touches on the socio/political, economical and cultural influences of the built environment, the structure of physical components, strategic policies and recent historic influences. The focus is the fascination of urban design interventions and the ability to affect change as part of the dynamic process of cities. An urban design definition will be debated and the symbolic, memorable aspects of cities discussed. Students personal experience of their city locales will form a valuable contribution to the course.

BENV2985
Land Economics & Valuation
Building Construction Management Program
UOC6 HPW0
Prerequisite: 96 units of credit

The building process; market research; establishing the client's needs; site selection and analysis; feasibility studies and financing methods. Introduction to valuation. Time value of money and equivalence. Methods and philosophies of determining market valuations. Valuation techniques; knowledge of efficient property management techniques; identification of a range of unusual property types which require specialised valuation skills and knowledge and the means of developing such skills and knowledge; knowledge to develop novel valuation techniques for application to specific property types; ability to determine the highest and best use for nominated property types; the application of inspection techniques for broad property types; competency in the use of property valuation and inspection aids; familiarity with resource materials and information sources required to undertake specific types of valuation.

BENV2986
Property Management & Development
Faculty of the Built Environment
UOC6 HPW3

Introduction to property asset management. Lease and tenancy management. Residential, Commercial, Industrial and Retail property management. Total Costs concept. Building maintenance and maintenance economics. Building maintenance cycles. Strata title management. Taxation in property management. Overview of the property market and investment analysis. Property development process. Feasibility study of development project.

BENV6000
The Dean's Honours Seminar
Faculty of the Built Environment
UOC6 HPW2

The Seminar draws on advanced students from undergraduate programs to provide an interdisciplinary setting in which to investigate contemporary issues related to globalisation and development, and the built environment. The seminar will encourage, in particular, the study of policy and opportunities for change. To undertake this elective students must have been a member of the Dean's List (or equivalent) in one or

more sessions prior to enrolment, and must be in Stage 3 or later of their degree program.

BINF1001
Bioinformatics 1
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: BIOS1201,COMP1011 or COMP1711.

The course surveys the major areas of bioinformatics at an introductory level, exploring the history of bioinformatics in relation to advances in computing hardware and software; the biological problems currently being addressed using bioinformatics; and future applications of bioinformatics. Major topics include genomics; genome sequencing projects; proteomics; structural genomics; phylogeny; population biology; ecological modelling; medical informatics; and commercial applications of bioinformatics. The general nature of the data, computational problems and the approaches employed will be discussed in each case. Role of bioinformatics in the biotechnology industry. Structure of biotechnology industry stressing commercial, regulatory, and intellectual property areas. Diversity of industry sector and commercial case studies including biopharmaceuticals and gene therapy, use of transgenic plants and animals. Lectures are supplemented by practical exposure to public and commercial bioinformatics web sites.

Further Information: CSE class page **www.bioinformatics.unsw.edu.au/course/**

BINF2001
Bioinformatics 2
School of Computer Science and Engineering
UOC6 HPW6
Prerequisite: BINF1001

This course covers bioinformatics approaches that have become fundamental to genomic and post-genomic biology, with an emphasis on their evolutionary underpinnings. Topics include methods and algorithms for sequence analysis, classification and structure prediction; sequence, family and structure databases; genome project informatics; microarrays; pathways, networks and interactions. Practical work emphasises both use and development of software tools for bioinformatics analysis.

Further Information: CSE class page **www.bioinformatics.unsw.edu.au/course/**

BINF3001
Bioinformatics 3
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: BINF2001, COMP2041, COMP3121 or COMP3821; Excluded: BINF3801.

This course demonstrates the application of computational, mathematical and statistical methods to problems in modern life sciences, through examples in mucleotide and protein structure, function and expression. System design and software development environments for bioinformatics are also explored. Practical work involves implementation and use of the techniques discussed in the course.

Further Information: CSE class page **www.bioinformatics.unsw.edu.au/course/**

BINF4910
Thesis Part A
School of Computer Science and Engineering
UOC3 HPW5
Prerequisite: 126 units of credit, and enrolment in Bioinformatics program 3647, 3755, 3756, or 3715.

Thesis part A and B are done in the last two semesters of the Bioinformatics degree program. For full-time students, a nominal three hours per week in the first semester and fifteen hours per week in the second session are devoted to directed laboratory and research work on an approved course under guidance of members of the academic staff. Usually, the Thesis involves the design and construction of experimental apparatus and/or software, together with appropriate testing and evaluation. For Part A, students are required to present a satisfactory seminar. For Part B, a written thesis must be submitted by the Tuesday of the final week semester.

Further Information: CSE class page **www.cse.unsw.edu.au/thesis**

BINF4911
Thesis Part B
School of Computer Science and Engineering
UOC12 HPW5
Prerequisite: BINF4910.

Thesis part A and B are done in the last two semesters of the Bioinformatics degree program. For full-time students, a nominal three hours per week in the first semester and fifteen hours per week in the second semester are devoted to directed laboratory and research work on an approved course under guidance of members of the academic staff. Usually, the Thesis involves the design and construction of experimental apparatus and/or software, together with appropriate testing and evaluation. For Part A, students are required to present a satisfactory seminar. For Part B, a written thesis must be submitted by the Tuesday of the final week of semester.

Further Information: CSE class page **www.cse.unsw.edu.au/thesis**

BINF4920
Professional Issues and Ethics for Bioinformatics
School of Computer Science and Engineering
UOC3 HPW3
Prerequisite: Enrolment in Bioinformatics program 3647, 3715, 3755, 3756, 3757.

his course will develop a framework on which professional and ethical issues for Bioinformatics can be developed. Topics covered will include team and meeting skills, communication skills, interpersonal skills, software quality and process, in addition to ethics. The course will be delivered using lectures, class discussions, written assignments, reading lists, the Internet, presentations, and invited speakers.

Further Information: CSE class page **www.bioinformatics.unsw.edu.au/course/**

BIOC2101
Principles of Biochemistry (Advanced)
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOS1101 or BIOT1011, BIOS1201, CHEM1011 or CHEM1031, CHEM1021 or CHEM1041; Excluded:BIOC1221, BIOC1319, BIOC2181, GENB1002, GENS6012

Introduces modern biochemistry, covers fundamental aspects of the structure-function relationships of proteins and an overall coverage of intermediary metabolism. Major topics covered include: the nature and function of proteins and enzymes; the metabolic working of cells, tissues and organs; the interrelationships between the pathways of carbohydrate, lipid and amino acid metabolism; the vital role of hormones in metabolic regulation; the energy-trapping mechanisms of animals and plants; interesting variations on the central metabolic pathways in various life forms. Practical work to complement the lectures and to introduce the principles of biochemical analysis.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective part of their program.

BIOC2181
Fundamentals of Biochemistry
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOS1101 or BIOT1011, BIOS1201, CHEM1011 or CHEM1031, CHEM1021 or CHEM1041; Excluded: BIOC1221, BIOC1319, BIOC2101, GENS6012, GENB1002

Introduces modern biochemistry, covers fundamental aspects of the structure-function relationships of proteins and an overall coverage of intermediary metabolism. Major topics covered include: the nature and functions of enzymes; the metabolic working of cells, tissues and organs; the interrelationships between pathways of carbohydrate, lipid and amino acid metabolism; the vital roles of enzymes and hormones in catalysis and metabolic regulation; the energy trapping mechanisms of animals and plants; interesting variations on the central metabolic pathways in various life forms. Practical work to complement the lectures and to introduce the principles of biochemical analysis. This course covers essentially the same material as in BIOC2101 Principles of Biochemistry (Advanced), but in less detail and with more emphasis on the function of organisms and less emphasis on some of the underlying chemical mechanisms.

Note: This course provides a comprehensive introduction to Biochemistry as an alternative to BIOC2101 for students who do not intend to proceed to Level III Biochemistry. It does not fulfill the prerequisite requirements for Level III Biochemistry but the Head of School may give approval for students with a grade of credit to enrol in Level III courses.

BIOC2201
Principles of Molecular Biology (Advanced)
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOS1101 or BIOT1011, BIOS1201, CHEM1011 or CHEM1031, CHEM1021 or CHEM1041; Excluded: BIOC2291, GENB1001, GENS6011

Provides an introduction to modern molecular biology and covers the molecular mechanisms of gene expression and the fundamental aspects of recombinant DNA technology. The major topics covered include: The structure and function of DNA and RNA; the replication and transcription of DNA; translation of the genetic code into an amino acid sequence during protein synthesis; regulation of gene expression; manipulation of DNA including fragmentation by restriction enzymes, cloning of DNA fragments into vectors, hybridization analysis and principles of DNA sequencing; protein structure and function, protein engineering and site-directed mutagenesis; amplification of DNA by the polymerase chain reaction (PCR). Practical work to complement the lectures.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions only apply to students taking this course as an elective part of their plan.

BIOC2291
Fundamentals of Molecular Biology
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOS1101 or BIOT1011, BIOS1201, CHEM1011 or CHEM1031, CHEM1021 or CHEM1041; Excluded: BIOC2201, GENB1001, GENS6011

Provides an introduction to modern molecular biology and covers the molecular mechanisms of gene expression and the fundamental aspects of recombinant DNA technology. The major topics covered include: the structure and function of DNA and RNA; the replication and transcription of DNA; translation of the genetic code into an amino acid sequence during protein synthesis; regulation of gene expression. Manipulation of DNA including: fragmentation by restriction enzymes; cloning of DNA fragments into vectors; hybridization analysis and principles of DNA sequencing. Protein structure and function. Amplification of DNA by the polymerase chain reaction (PCR). Practical work to complement the lectures. This course covers essentially the same material as in BIOC2201 Principles of Molecular Biology (Advanced), but in less detail and with more emphasis on the general applications and less emphasis on some of the underlying mechanisms.

Note: This course provides a comprehensive introduction to Molecular Biology as an alternative to BIOC2201 for students who do not intend to proceed to Level III Biochemistry. It does not fulfill the prerequisite requirements for Level III Biochemistry but the Head of School may give approval for students with a grade of credit to enrol in Level III courses.

BIOC3111
Molecular Biology of Proteins
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisites: BIOC2101 or LIFE2101, BIOC2201

Modern aspects of the structure function relationships of proteins including discussion of the latest techniques of protein characterisation. Topics include: separation and analytical procedures; determination of amino acid sequence data; the nature of protein and protein ligand interactions including aspects of substrate binding, enzyme kinetics and enzyme mechanisms; the molecular architecture of proteins from the standpoint of the relationships among primary, secondary, tertiary and quaternary structures; aspects of protein engineering. Practical work illustrates and complements the lectures and provides experience with modern techniques of protein molecular biology.

BIOC3121
Molecular Biology of Nucleic Acids
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOC2101 or LIFE2101, BIOC2201; Excluded: BIOC3621.

Detailed analysis of gene structure and function including: structure and properties of polynucleotides such as DNA and RNA; structure of chromatin; regulation of gene replication, transcription and translation; recombinant DNA technology, nucleic acid sequencing, DNA-DNA and DNA-RNA hybridisation as important tools of modern molecular biology. Practical work illustrates and complements the lectures and provides experience with contemporary molecular techniques.

BIOC3151
Human Genetics and Variation
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOS2021or BIOS2621

This course develops a student's abilities to use molecular and more traditional data to solve genetic problems that arise in a variety of applications, particularly in the area of human biology. Our genes interact with one another and with the environment to make us what we are. This course presents modern and historical methods for investigating the molecular basis of heritable characteristics from those for appearance to behaviour and disease. Areas of current research and molecular and statistical methods of analysis are explored. Issues such as race, development, genetics of cancer, quantitative traits, genetic disease, gene mapping ethics, eugenics and forensics are also addressed. Lectures are reinforced with discussion groups and computer and other exercises.

BIOC3261
Human Biochemistry
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOC2101, BIOC2201

Covers the aspects of metabolism that are of particular relevance to the human. The major topics covered will be selected from: nutrition, exercise, neurochemistry, xenobiotics, nucleotide and one-carbon metabolism, genetic diseases and molecular aspects of parasitology; the role of triglyceride, cholesterol and lipoprotein metabolism in human health, and other selected areas of human nutrition; specialised aspects of endocrinology and neurochemistry including prostaglandins, leukotrienes, enkephalins and endorphins; the interrelation of purines, pyrimidines, folate and cobalamin metabolism in humans; Xenobiotics: the metabolism of foreign compounds by humans; biochemical aspects of genetic disease including the use of recombinant DNA techniques for prenatal diagnosis and carrier detection; molecular studies of malaria and other parasites of the human; the biochemistry of diabetes; molecular aspects of cancer and its treatment. Practical work amplifies the lectures.

BIOC3271
Molecular Cell Biology
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOC2101, BIOC2201; Excluded: BIOC3671.

Cell biology from a molecular viewpoint; biochemical aspects of cellular organisation; the arrangement of the component molecules of organelles, their function in integrated cellular metabolism and the molecular interactions between the cells of multicellular organisms; the biochemistry of the cytoskeleton, carriers and intracellular transport systems; the regulation of cellular processes at the molecular endocrine level; growth differentiation and development; aspects of cancer metabolism, the biochemistry of cell to cell communication and the structure and function of the extracellular matrix. Practical work amplifies the lectures.

BIOC3281
Recombinant DNA Techniques and Eukaryotic Molecular Biology
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOC3121 or BIOC3621

The organisation of the genomes of higher organisms derived mainly from the application of recombinant DNA technology and related techniques. Methods used for the isolation, identification and characterisation of eukaryotic genomes in terms of the organisation of single copy and repeated sequences and of coding and non-coding sequences and of several gene clusters, e.g. the alpha and beta globin gene cluster. Mechanisms known to operate in the control of eukaryotic gene expression, both at the DNA level and at the level of RNA processing. Review of several specialised genetic systems in plants and animals such as mitochondria, chloroplasts and RNA and DNA tumour viruses.

Practical work provides training in the use of sterile techniques and in working with polynucleotides under nuclease-free conditions, using basic techniques such as hybridisation and DNA sequencing.

BIOC3291
Genes, Genomes and Evolution
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOS2021or BIOS2621

Current concepts and theories in genetics concentrating on eukaryotes including humans; the generation of variation examined at the molecular level for fundamental genetic processes of mutation, recombination and repair; the evolution of the genome, maintenance of variation, the effects of mutations and their relevance to disease; use of comparative genomics to study genome evolution; genetics of cellular division process and developmental genetics; genetics of non-Mendelian characteristics - inheritance of mitochondrial types, imprinting, epigenetics; practical uses of genetics including the use of transposable elements; ecological genetics - natural and sexual selection, population structure; genetics of speciation, molecular evolution and phylogenetics; perspectives on genetics, history and future. Computer exercises and discussion groups to complement the lectures and introduce controversial topics in genetics.

BIOC3301
Biochemistry Laboratory Project (Advanced)
School of Biotechnology and Biomolecular Science
UOC6

The course involves directed reading, laboratory work and use of World Wide Web resources. Students will work on a research project under the supervision of a member of the academic staff. It is designed to introduce students to research methodology, and to stimulate critical and lateral thinking in the context of problem solving. Enrolment in this course is by invitation and is based on academic performance. Interested students should contact the Head of School.

Note: This course is restricted to Advanced Science students enrolled in Biochemistry, Genetics or Molecular Biology Plans.

BIOC3621
Molecular Biology of Nucleic Acids (Advanced)
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOC2101, BIOC2201; Excluded: BIOC3121. Restricted to Advanced Science programs (3985, 3990, 3972, 3973, 3986, 3931, 3936)

This advanced course is designed to suit students who plan to pursue research careers in molecular biology or related disciplines. The syllabus is an enhanced version of that for BIOC3121 and comprises a detailed analysis of gene structure and function which includes: structure and properties of polynucleotides such as DNA and RNA; structure of chromatin; mechanisms and regulation of gene replication, transcription and translation, DNA repair and the molecular biology of cancer induction; recombinant DNA technology; nulceic acid sequencing, DNA-DNA and DNA-RNA hybridisations important tools of modern molecular biology; protein production using recombinant DNA system. Practical work provides extensive experience with contemporary molecular techniques; literature surveys and web-based research are also used to enhance the theoretical and practical aspects of the syllabus.

BIOC3671
Molecular Cell Biology (Advanced)
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOC2101, BIOC2201; Excluded: BIOC3271. Restricted to Advanced Science programs (3985, 3990, 3972, 3973, 3986, 3931, 3936)

A molecular approach to understanding the complex, dynamic interactions that comprise cellular function. Concepts drawn from biochemistry, genetics and molecular biology together with classical cell biology will be integrated to produce a contemporary interpretation of cellular life. Topics to be covered include the structure and function of the cell: membranes, organelles and cytoskeleton; communication within and between cells; the regulation of cell cycling and the differentiation of of cells from single cell to whole organism. The theoretical coverage willl be extended by the addition of self-paced exercises which will require the students to survey the latest developments in this area. Practical work illustrates and complements the lectures, provides extensive experience with contemporary molecular cell techniques and will be enhanced by the inclusion of leading-edge technologies. This advanced course is designed to suit students who plan to pursue research careeers in molecular cell biology or related disciplines.

BIOC4103
Genetics 4 Honours Full-Time
School of Biotechnology and Biomolecular Science
UOC24

BIOC4109
Genetics Honours (PT)
School of Biotechnology and Biomolecular Science
UOC12

BIOC4318
Biochemistry 4 Honours Full-Time
School of Biotechnology and Biomolecular Science
UOC24

Advanced training in selected areas of biochemistry including a supervised research program that places emphasis on the use of specialised techniques relevant to the research area. A written thesis on the research is required. The Honours program includes a formal component of seminars, an essay and participation in discussion groups.

BIOC4428
Molecular Biology 4 Honours Full-Time
School of Biotechnology and Biomolecular Science
UOC24

Advanced training in selected areas of molecular biology including a supervised research program that places emphasis on the use of specialised techniques relevant to the research area. A written thesis on the research is required. The Honours program includes a formal component of seminars, an essay and participation in discussion groups.

BIOM1001
Professional Biomedical Studies
Graduate School of Biomedical Engineering
UOC3 HPW2

Provides an introduction to biomedical engineering; examines the range of professional engineering activities; highlights ethical considerations associated with clinical applications; and develops skill in oral, written and graphical communication.

BIOM2010
Biomedical Engineering Practice
Graduate School of Biomedical Engineering
UOC3 HPW2

Introduction to clinical situations in hospitals. Presentation of guest lectures by eminent people working in the field. Lecture topics include cardiology, neurology, orthopaedics, and rehabilitation.

BIOM5000
Thesis A
Graduate School of Biomedical Engineering
UOC3 HPW6

For BE(Mech)/MBiomedE students only. To be taken in the year of completing the BE(Mech)/MBiomedE degree course.

BIOM5002
Thesis Part B
Graduate School of Biomedical Engineering
UOC9

Thesis topic for BE(Mech)/MBiomedE students only.

BIOM5904
Thesis Part B (SENG)
Graduate School of Biomedical Engineering
UOC12 HPW12

Thesis for students enrolled in BE (SENG)/MBiomedE only.

Further Information: CSE class page **www.cse.unsw.edu.au/thesis**

BIOM5909
Thesis Part A (SENG)
Graduate School of Biomedical Engineering
UOC3

Thesis for students enrolled in BE (SENG)/MBiomedE only.

Further Information: CSE class page **www.cse.unsw.edu.au/thesis**

BIOM5910
Thesis Part A
Graduate School of Biomedical Engineering
UOC6 HPW8

Thesis topic for BE(Elec)/MBiomedE students only.

BIOM5911
Thesis Part B
Graduate School of Biomedical Engineering
UOC6 HPW8

Thesis topic for BE(Elec)/MBiomedE students only.

BIOM5920
Thesis A
Graduate School of Biomedical Engineering
UOC3 HPW7
Prerequisite: Enrolment in Program 3728; Excluded: BINF4910, COMP4910, SENG4910.

Thesis for students enrolled in BE (COMP)/MBiomedE only.

Further Information: CSE class page **www.cse.unsw.edu.au/thesis**

BIOM5921
Thesis B
Graduate School of Biomedical Engineering
UOC15 HPW14
Prerequisite: BIOM5920.

Thesis for students enrolled in BE (COMP)/MBiomedE only.

Further Information: CSE class page **www.cse.unsw.edu.au/thesis**

BIOM5930
Research Project A
Graduate School of Biomedical Engineering
UOC6

Thesis topic for BE(Chem)/MBiomedE students only.

BIOM5931
Research Project B
Graduate School of Biomedical Engineering
UOC9

Thesis topic for BE(Comp)/MBiomedE students only.

BIOM5940
Thesis Part A (BINF)
Graduate School of Biomedical Engineering
UOC3

Thesis for students enrolled in BE (BINF)/MBiomedE only.

Further Information: CSE class page **www.cse.unsw.edu.au/thesis**

BIOM5941
Thesis Part B (BINF)
Graduate School of Biomedical Engineering
UOC12

Thesis for students enrolled in BE (BINF)/MBiomedE only.

Further Information: CSE class page **www.cse.unsw.edu.au/thesis**

BIOM9012
Biomedical Statistics
Graduate School of Biomedical Engineering
UOC6 HPW3

Probability and distributions. Estimation and hypothesis testing. Associations between disease and risk factors. Linear models; analysis of variance, simple and multiple regression, discriminant analysis. Distribution-free methods. Analysis of survival data. Experiment design.

BIOM9021
Research Project B
Graduate School of Biomedical Engineering
UOC6

This is the second part of the research project when taken over two semesters, BIOM5920 being the first part.

Projects are undertaken at the Graduate School of Biomedical Engineering or other relevant institutions towards the end of a student's program. Topics are chosen in collaboration with a supervisor from the Graduate School.

BIOM9027
Medical Imaging
Graduate School of Biomedical Engineering
UOC6 HPW3

Fundamentals of producing a medical image, image collection techniques, image reconstruction algorithms. Detailed examination of the four main areas of medical imaging: Nuclear Medicine and Positron Emission Tomography, Ultrasound, Diagnostic Radiology, Magnetic Resonance. Clinical application of each area.

BIOM9060
Biomedical Systems Analysis
Graduate School of Biomedical Engineering
UOC6 HPW3

Analysis of compartmental systems in biology and medicine. Applications include pharmacology, physiology and nuclear medicine. Topics include the mathematics of linear compartmental systems, non-linear systems, tracer methods, parameter estimation by fitting models to date, the optimum design of experiments, and methods of control.

Note: Mathematics background required.

BIOM9311
Mass Transfer in Medicine
Graduate School of Biomedical Engineering
UOC6 HPW3

Mass transfer in the living organism and in extracorporeal medical devices. Principles of diffusion and convection. Models of gas transfer in the lung. Transfer of solutes at the capillary level. Haemodialysis, haemofiltration, plasma filtration and blood oxygenators. Transfer across the peritoneal membrane-dialysis or drug delivery. Drug delivery across the skin.

BIOM9321
Physiological Fluid Mechanics
Graduate School of Biomedical Engineering
UOC6 HPW3

Fluid mechanics of unsteady flow. Fundamentals of biological fluid flow by way of the governing equations. Kinematics and dynamics, viscous and inertial flow, boundary layers, separation, physiological flows (cardiac, vascular, pulmonary, urinary, etc.) and flow in artificial organs. Emphasis on physical rather than mathematical understanding of the relevant phenomena, to allow realistic appraisal of the nature of flow in a given organ.

BIOM9332
Biocompatibility
Graduate School of Biomedical Engineering
UOC6 HPW3

Interaction of biological fluids and cells with foreign surfaces, in vitro tests to assess biocompatibility and thrombogenicity, current status of biocompatible materials as applied to extracorporeal systems, surgical implants and prosthetic devices.

Students should note that this course will be offered in S1 from 2004.

BIOM9333
Cellular and Tissue Engineering
Graduate School of Biomedical Engineering
UOC6 HPW3

This course outlines concepts underlying development of cell-based products and aims to give students a theoretical and practical understanding of the tools available for producing such "devices" as well as the biological, physical and chemical constraints of these systems. Specific topis that will be covered include introductory cell biology and biochemistry, cellular mechanics, mass transfer in cells and tissue, analysis of cell and tissue functions, regulatory requirements for biological products and tissue engineering applications. Laboratory classes will be used to allow students to gain some practical experience with cell and scaffold manipulations.

BIOM9410
Regulatory Requirements of Biomedical Technology
Graduate School of Biomedical Engineering
UOC6 HPW3

The regulatory requirements of medical devices in Australia, Japan, North America and Europe will be reviewed. Data collation and documentation methods are examined, case studies of medical device registration will be presented.

Students should note that this course is web-based.

BIOM9420
Clinical Laboratory Science
Graduate School of Biomedical Engineering
UOC6 HPW3

The technologies, tests and operation of a variety of clinical laboratory testing systems (biochemistry, haematology, immunology, histology). Engineering solutions to physiological problems, chemical and biochemical assays.

BIOM9430
Electromedical Standards
Graduate School of Biomedical Engineering
UOC6 HPW3

Basic effects of electricity on the human body, threshold of ventricular fibrillation, termination of leakage currents, statistical basis of experimental data used to define limits of leakage currents. Formation of safety standards for electromedical equipment. Mechanisms of approval of electromedical equipment. Acceptance testing procedures. Certification schemes for electromedical equipment. National and international legal requirements.

BIOM9432
Chemistry and Physics of Synthetic and Biological Polymers
Graduate School of Biomedical Engineering
UOC6 HPW3

This course outlines the chemistry and physics of synthetic and natural polymers. It is an introductory level offering that covers polymerisation, synthesis of branched macromolecules and networks and polymer behaviour in solution and solid state. It also covers biological polymers. This includes synthesis and characterisation of biological polymers using proteins, polysaccharides and DNA as examples.

BIOM9440
Biomedical Practical Measurement
Graduate School of Biomedical Engineering
UOC6 HPW3

Hands-on practice in the use and testing of medical transducers and electromedical equipment in common use in hospitals and research laboratories to make measurements of biomedical variables of clinical significance.

Note: Limited number of places - contact School Office.

BIOM9450
Clinical Information Systems
Graduate School of Biomedical Engineering
UOC6 HPW3

An introduction to medical informatics and information systems, evidence-based medicine and clinical decision support. Aspects of database design, normalisation and structured query language (SQL). A previous knowledge of Java is necessary.

Note: Limited number of places - contact School Office.

BIOM9501
Computing for Biomedical Engineers
Graduate School of Biomedical Engineering
UOC6 HPW3

Algorithm design and documentation; programming in Java and in JBuilder; object oriented program design; event driven programming in a graphical environment.

Note: Highly recommended for Strand B students. This course is for students with little or no computing experience or for those students who wish to learn about object oriented programming in a Windows environment.

BIOM9510
Introductory Biomechanics
Graduate School of Biomedical Engineering
UOC6 HPW3

The principles of the mechanics of solid bodies, force systems, kinematics and kinetics of rigid bodies, stress-strain relationships, stress analysis of simple elements application to musculoskeletal system.

BIOM9541
Mechanics of the Human Body
Graduate School of Biomedical Engineering
UOC6 HPW2

Statics and dynamics of the musculoskeletal system: mathematical modelling and computer simulation, analysis of pathological situations.

Assumed Knowledge: BIOM9510 and ANAT2111.

BIOM9551
Biomechanics of Physical Rehabilitation
Graduate School of Biomedical Engineering
UOC6 HPW2

The application of biomechanics principles to the areas of performance testing and assessment, physical therapy, design of rehabilitation equipment, design of internal and external prostheses and orthoses.

Note: This course is not offered on a regular basis.

Assumed Knowledge: BIOM9541.

BIOM9561
Mechanical Properties of Biomaterials
Graduate School of Biomedical Engineering
UOC6 HPW3

The physical properties of materials having significance to biomedical engineering; human tissues; skin; soft tissues; bone; metals; polymers and ceramics. The effects of degradation and corrosion.

BIOM9601
Biomedical Applications of Microcomputers 1
Graduate School of Biomedical Engineering
UOC6 HPW3

Microcomputer architecture; physiological data acquisition systems: input/output signals and devices; assembly language programming; interfacing to higher level languages; the numeric data coprocessor; interrupts; graphics; practical sessions on use of Debug, Assembler, familiarisation with interrupt vector table and I/O ports. Major assignment on specific biomedical application (eg. bedside ECG monitor).

Note: A reasonably advanced background in microprocessors is required. Entry to course is by interview.

Assumed Knowledge: BIOM9040 and BIOM9050 or equivalents.

BIOM9613
Medical Instrumentation
Graduate School of Biomedical Engineering
UOC6

A critical comparative analysis of the theoretical physics and practical applications of medical transducers and electromedical equipment in common use in hospitals and research laboratories. How to choose a measurement device for a given situation.

BIOM9621
Biological Signal Analysis
Graduate School of Biomedical Engineering
UOC6 HPW3

Use of digital computers to extract information from biological signals. Signal processing using filtering, averaging, curve-fitting and related techniques, and analysis using model simulations, correlation, spectral analysis etc.

Note: Basic electronics and mathematics background required.

BIOM9701
Dynamics of the Cardiovascular System
Graduate School of Biomedical Engineering
UOC6 HPW3

Structure of the heart; organisation of the mammalian vasculature; mechanical, electrical and metabolic aspects of cardiac pumping; the solid and fluid mechanics of blood vessels; rheology of blood.

Note: Some mathematics background desirable.

BIOM9913
Project Report
Graduate School of Biomedical Engineering
UOC12

Projects are undertaken at the Graduate School or other relevant institutions towards the end of the program. Topics are chosen in collaboration with a supervisor from the Graduate School.

BIOM9914
Masters Project
Graduate School of Biomedical Engineering
UOC12

This is a 12 UOC one session research project replacing BIOM 9913. If you wish to do a 12 UOC project extending over two sessions, please enrol in BIOM 9020 and BIOM 9021.

Projects are undertaken at the Graduate School of Biomedical Engineering or other relevant institutions towards the end of a student's program. Topics are chosen in collaboration with a supervisor from the Graduate School.

Note: Course offered subject to approval.

BIOS1101
Evolutionary and Functional Biology
School of Biological, Earth and Environmental Sciences
UOC6 HPW5
The course examines the evolutionary history of life on earth from origins to humans and the relationship between environment, adaptation and function. Animal (particularly human) and plant physiology are covered with an emphasis placed on adaptation in the Australian context.

Note: Laboratories commence in Week 1

BIOS1201
Molecules, Cells and Genes
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

The course is concerned with the basic characteristics of all life .The chemistry of life is covered with emphasis on the ways in which living things construct and break down macromolecules. The way in which the genetic code controls these processes depends to a great extent on the structure and function of cell components, and cell biology is a major component of the course. The final topic is genetics - the way in which the genetic code is inherited and the ways in which it can be modified.

Assumed knowledge: HSC Exam Score: Physics 53-100, or Chemistry 53-100, or Earth and Environmental Science 53-100, or Biology 53-100.

Notes: Assumed knowledge for BIOS1201 is minimal. If you believe that your academic background is not appropriate, but would like to do Biology, please consult the Director.

Laboratories commence in Week 1.

BIOS1301
Ecology, sustainability and environmental science
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

This course provides an introduction to ecology, sustainability and environmental science, introducing a range of biological topics and how scientists approach these topics to solve problems. The course develops student skills in critically assessing scientific information, routinely debated by the public and decision-makers. It provides a strong grounding in today's and tomorrow's environmental problems and the role of science in providing solutions.

Assumed knowledge: HSC Exam Scores: Biology 53-100; Chemistry 53-100; Earth and Environmental Sciences 53-100 or Physics 53-100 or 3 Unit Science 90-150, or 4 Unit Science 1-50.

Note: Costs may be incurred for fieldwork. Students should consult the School of Biological, Earth and Environmental Sciences (BEES) website for laboratory registration details.

BIOS2011
Evolutionary and Physiological Ecology
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Introduction to functional relationships between living organisms and the environments in which they live. Emphasis on interactions within and between populations, ecological energetics, ecophysiology, and the theory of evolution by natural selection. Plants, animals and microbes are covered. Also serves as an introduction to the process of scientific enquiry.

Assumed knowledge: BIOS1101 and BIOS1201

BIOS2021
Genetics
School of Biological, Earth and Environmental Sciences
UOC6 HPW5
Excluded: BIOS2621

Genome structure and life cycles in prokaryotes and eukaryotes: DNA, gene mapping, cytogenics; genetic transmission, mutation, recombination; gene regulation, interaction and development; genetic variation and evolution of molecules, populations and species: mating, selection, migration, population size, mutation, environment; applications, including to humans and genetic engineering.

Assumed knowledge: BIOS1101 and BIOS1201 or CHEM1011

BIOS2031
Biology of Invertebrates
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

A study of invertebrate diversity emphasising their evolution, morphology, behaviour, and relationships to marine, freshwater and terrestrial environments. Invertebrate conservation and applied aspects of invertebrate biology are included. Practical work includes examining living and preserved specimens (including dissections) in the laboratory and the field, and techniques for invertebrate identification.

Assumed knowledge: BIOS1101 and BIOS1201.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective. There is a compulsory field camp during the mid session break and personal expenses will be incurred.

BIOS2051
Flowering Plants
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Basic plant biology including cell structure, plant morphology and anatomy, water and sugar transport, seed structure and germination, plant growth and development, leaves and photosynthesis, roots, micro-organisms and nutrition, evolution of land plants and plant taxonomy. A strong emphasis is placed on Australian native flora. Practical work includes light microscopy; plant anatomy and identification.

Assumed knowledge: BIOS1101 and BIOS1201

BIOS2061
Vertebrate Zoology
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Australia has a high diversity of vertebrate species (e.g. platypus, tree frogs, parrots, snakes). This course examines the evolution, diversity and natural history of these animals with a special emphasis on how they cope with Australia's environment. It covers the evolutionary origins and relationships between the major Vertebrate groups and explores their diversity of form, function and behavior. There is a detailed investigation of birds and mammals, particularly their ecology, life history and emerging conservation issues. Practical work involves examining living and preserved specimens (including dissections) and several field trips around Sydney studying vertebrates in the wild.

BIOS2621
Genetics (Advanced Level)
School of Biological, Earth and Environmental Sciences
UOC6 HPW6
Excluded: BIOS2021

Genome structure and life cycles in prokaryotes and eukaryotes: DNA, gene mapping, cytogenics. Genetic transmission, mutation, recombination. Gene regulation, interaction and development, genetic variation and evolution of molecules, populations and species. Mating, selection, migration, population size, mutation environment. Applications, including humans and genetic engineering. The Advanced Level course will involve additional projects, practicals and tutorials.

Assumed knowledge: BIOS1101, BIOS1201, CHEM1011

Note: Available to students in 3972/3990 (Advanced Science, Life Sciences) and, subject to availability of places, to other high performing students.

BIOS3011
Animal Behaviour
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Theory and practice in the biological study of animal behaviour: ethology and behavioural ecology. The observation and description of behaviour along with the development, function and evolution of behaviour in an ecological context are examined as important elements in the analysis of behaviour, particularly social behaviour. Topics include sensory control systems, foraging behaviour, communication, home range, territorial behaviour, aggression and dominance, sexual behaviour, mate choice, mating systems, play and social organisation. Examples are drawn from the Australian fauna and both field and laboratory work are included.

Assumed Knowledge: Animal systematics and morphology with BIOS2031 or BIOS2061 recommended

BIOS3021
Comparative Animal Physiology
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

The physiology of invertebrates and vertebrates including the special features of Australian mammals. The topics examined include reproduction, hormones, nerves, blood, circulation, respiration and kidneys with emphasis on the control and integration of organ systems and body functions.

Assumed Knowledge: Animal systematics and morphology, with BIOS2031 or BIOS2061 recommended

BIOS3061
Plant Ecosystem Processes
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Interactions of plants with their soil and atmospheric environments. Plant growth and decomposition processes. Cycling of carbon, water and nutrients in plant ecosystems. Role of fungi in ecosystems. Mineral nutrition and water uptake in plants. Root systems. Plant strategies for improving mineral nutrition. The role of symbiosis in mineral nutrition. Impacts of global change on vegetation. Role of terrestrial ecosystems in the global carbon budget. Relating vegetation to climate.

Assumed Knowledge: BIOS2051

BIOS3071
Conservation Biology and Biodiversity
School of Biological, Earth and Environmental Sciences
UOC6 HPW5
Excluded: BIOS3671

Applications of community biology, population ecology and genetics to management of environmental problems in nature and artificial ecosystems, including Australian examples; nature and importance of global diversity; management and design of programs for the conservation of species and ecosystems, including reserves, off-site conservation, and computer simulations.

Assumed knowledge: BIOS1101 and BIOS1201

Note: Field excursions are compulsory and will involve expense to individual students.

BIOS3081
Ocean Biology and Fisheries
School of Biological, Earth and Environmental Sciences
UOC6 HPW5
Excluded: BIOS3681

Marine pelagic and estuarine habitats. The practical application of theory to the ocean environment and its effect on the life of marine organisms. Emphasis is on the biology of phytoplankton, zooplankton and fish, together with the study of fisheries. Includes management, marine technology, computer simulations, conservation, other marine vertebrates, aquaculture and environmental concerns. Technical skills, taxonomy and sampling design.

Assumed knowledge: BIOS2031 and BEES2041

Note: A compulsory field trip will be held during the mid-session break, and will involve personal expense to individual students.

BIOS3091
Marine and Aquatic Ecology
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Ecology of marine and freshwater systems, emphasising benthic communities. Population and community dynamics of these systems. Evolution of life histories in the light of constraints of aquatic systems. Emphasis on experimental approaches to aquatic ecology. Special topics considered include chemical ecology, plant/herbivore ecology, and applied aspects of the topic such as mariculture. A section on the biology and taxonomy of marine algae (seaweeds) is included. Fieldwork is an important component of the course.

Assumed Knowledge: BIOS2011 or BEES2041

BIOS3111
Population and Community Ecology
School of Biological, Earth and Environmental Sciences
UOC6 HPW5
Excluded: BIOS3611

Factors regulating dynamics of interacting populations, renewable resource management, ecosystem stability, cycles and chaos, simulation modelling in ecology, niche theory, competition, habitat selection, community structure, species diversity, island biogeography, ecological gradients. Succession following disturbance (fire, mining, or logging). Practical work is essential and may involve a field component.

Assumed Knowledge: BIOS1101 and BIOS2011 and MATH1041 (or higher level of statistics)

BIOS3161
Life in Arid Lands
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Forty-four percent of Australia is desert and a further 37% is semi-arid grassland or shrub communities. These arid lands contribute much to our unique biodiversity. We examine the history of the formation of the Australian arid lands, their characteristics relative to other arid parts of the world, the evolutionary history of the flora and fauna, adaptations of plants and animals to arid environments, the major arid lands ecosystems and conservation of biodiversity. We apply biological knowledge to issues of land degradation, salinisation of soils, dryland farming, feral animal control and wildlife management for a sustainable future. A field trip to Western NSW is an essential part of the course and students will incur expenses.

Assumed knowledge: BIOS2051 and BIOS2031 or BIOS2061 or equivalent knowledge of the systematics and morphology of animals and plants.

Note: A compulsory field trip will be held during the mid-session break and personal expenses will be incurred.

BIOS3301
Population and Community Ecology for Environmental Engineers
School of Biological, Earth and Environmental Sciences
UOC3 HPW3

Factors regulating dynamics of interacting populations, renewable resource management, ecosystem stability, cycles and chaos, simulation modelling in ecology, niche theory, competition, habitat selection, community structure, species diversity. Plant and animal succession following disturbances such as fire, mining and logging. Rehabilitation and restoration procedures following disturbance. Appropriate tutorial topics.

Note: Restricted to Environmental Engineering Programs.

BIOS3601
Advanced Field Biology
School of Biological, Earth and Environmental Sciences
UOC6 HPW45

An advanced practical training in diversity, systematics, biology and identification of terrestrial animals and plants. The course is run principally as an intensive one (1) week course at Smiths Lake Field Station during the Easter break. Students will receive theoretical and practical training in current methods of trapping, collecting and identifying animals and plants, estimation of population size, biodiversity, the conduct of animal surveys, and data analyses. The course coverage will include both vertebrate and invertebrate animals and plants.

Assumed knowledge: BEES2041 and familiarity with principles of systematics

Note: Available to students in Advanced Science, with unfilled places available to students in Environmental Science, Biological Science and Ecology Majors with a credit average.

BIOS3671
Conservation Biology and Biodiversity (Advanced Level)
School of Biological, Earth and Environmental Sciences
UOC6 HPW6
Excluded: BIOS3071

Applications of community biology, population ecology and genetics to management of environmental problems in nature and artificial ecosystems, including Australian examples. Nature and importance of global diversity, management and design of programs for the conservation

of species and ecosystems, including reserves, off-site conservation, and computer simulations. Field excursions are compulsory and will involve expense to individual students. Current conservation issues will be addressed in small group projects.

Assumed knowledge: BIOS1101 and BIOS1201

Note: Available to students in 3990 (Advanced Science, Life Sciences) and, subject to availability of places, to other high performing students.

BIOS3681
Ocean Biology and Fisheries (Advanced Level)
School of Biological, Earth and Environmental Sciences
UOC6 HPW6
Excluded: BIOS3081

Marine pelagic and estuarine habitats. The practical application of theory to the ocean environment and its effect on the life of marine organisms. Emphasis on the biology of phytoplankton, zooplankton and fish, together with the study of fisheries. Includes management, marine technology, computer simulations, conservation, other marine vertebrates, aquaculture and environmental concerns. Technical skills, taxonomy and sampling design. Personal expenses will be incurred. The Advanced Level has fewer laboratories, but includes a tutorial, use of specialised equipment, as well as a seminar series.

Assumed knowledge: BIOS2031, BEES2041

Note: Available to students in Advanced Science- Life Sciences and, subject to the availability of places, to students in BEnvironSci (Biology and Marine) and in 3970 (Biological Science, Ecology, and Biological Oceanography Majors with a credit average or better in BIOS courses). A compulsory field trip will be held during the mid-session break.

BIOS4514
Biological Science Honours B
School of Biological, Earth and Environmental Sciences
UOC24

A 24UOC research project in Biological Science, to be completed within a single session.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4515
Biological Science Honours B
School of Biological, Earth and Environmental Sciences
UOC18

A 18UOC research project in Biological Science, to be taken in combination with BIOS4518, to total 24UOC over 2 sessions.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4516
Biological Science Honours B
School of Biological, Earth and Environmental Sciences
UOC12

A 12UOC research project in Biological Science taken for two sessions to total 24UOC.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4518
Biological Science Honours B
School of Biological, Earth and Environmental Sciences
UOC6

A 6UOC research project in Biological Science, taken in each of four sessions to total 24UOC, or completed in fewer sessions by combination with BIOS4515 or BIOS4516.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4524
Botany Honours B
School of Biological, Earth and Environmental Sciences
UOC24

A 24UOC research project in Botany, to be completed within a single session.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4525
Botany Honours B
School of Biological, Earth and Environmental Sciences
UOC18

A 18UOC research project in Botany, to be taken in combination with BIOS4528, to total 24UOC over 2 sessions.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4526
Botany Honours B
School of Biological, Earth and Environmental Sciences
UOC12

A 12UOC research project in Botany taken over two sessions to total 24UOC.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4528
Botany Honours B
School of Biological, Earth and Environmental Sciences
UOC6

A 6UOC research project in Botany taken in each of 4 sessions to total 24UOC, or completed in fewer sessions by combination with BIOS4525 or BIOS4526.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4534
Zoology Honours B
School of Biological, Earth and Environmental Sciences
UOC24

A 24UOC research project in Zoology, to be completed within a single session.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4535
Zoology Honours B
School of Biological, Earth and Environmental Sciences
UOC18

A 18UOC research project in Zoology, to be taken in combination with BIOS4538, to total 24UOC over 2 sessions.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4536
Zoology Honours B
School of Biological, Earth and Environmental Sciences
UOC12

A 12UOC research project in Zoology taken for two sessions to total 24UOC.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4538
Zoology Honours B
School of Biological, Earth and Environmental Sciences
UOC6

A 6UOC research project in Zoology taken in each of 4 sessions to total 24UOC, or completed in fewer sessions by combination with BIOS4535 or BIOS4536.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4544
Ecology Honours B
School of Biological, Earth and Environmental Sciences
UOC24

A 24UOC research project in Ecology, to be completed within a single session.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4545
Ecology Honours B
School of Biological, Earth and Environmental Sciences
UOC18

A 18UOC research project in Ecology, to be taken in combination with BIOS4548, to total 24UOC over 2 sessions.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4546
Ecology Honours B
School of Biological, Earth and Environmental Sciences
UOC12

A 12UOC research project in Ecology, taken for two sessions to total 24UOC.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOS4548
Ecology Honours B
School of Biological, Earth and Environmental Sciences
UOC6

A 6UOC research project in Ecology, taken in each of 4 sessions to total 24UOC, or completed in fewer sessions by combination with BIOS4545 or BIOS4546.

Note: Plus BIOS4511, BIOS4521 and 12UOC science courses at Stage 3 (that have not been completed previously), or other science courses approved by the Honours Coordinator. Entry requires the completion of Stages 1-3 of the Advanced Science Plan in Ecology or Biological Science, or a Major in Ecology or Biological Science with 36 Units of Credit in Stage 3 courses at a credit average or better.

BIOT1011
Introductory Biotechnology
School of Biotechnology and Biomolecular Science
UOC6 HPW5

This course provides an overview of the impact of biotechnology in the achievement of contemporary objectives in the field of medicine, plant and animal science, and in food, marine and environmental sciences, and draws comparisons with conventional technologies. The concepts of bioethics, patenting and other regulatory issues are also introduced. The course is intended to cover the broad concept of biotechnology - its historical and contemporary relevance.

BIOT3011
Biotechnology A
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOC2101 or LIFE2101, BIOC2201; Excluded: BIOT3611.

The basic principles involved in the operation of microbial processes on an industrial scale. Includes: the isolation of commercially useful organisms; the selection, maintenance and improvement of microorganisms using conventional and recombinant genetics; the influence of physical and chemical factors on the microbial environment; the control of environmental factors; extremophile biotechnology; the effects of operational patterns on batch and continuous flow cultivation; air and media sterilisation; the harvesting, purification and standardisation of products; the principles involved in microbial processes for chemical, pharmaceutical and food production. The laboratory component includes manipulation of industrially important microorganisms and isolation of novel microorganisms. Industrial and other invited speakers will cover issues related to animal and plant transgenics; the human genome project and medicine; advances in food biotechnology; and commercialization issues.

BIOT3021
Biotechnology B
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOT3011 or BIOT3611; Excluded: BIOT3621.

Application of principles of biotechnology to the analysis and design of microbial processes of industrial relevance (ethanol, single cell protein, fermented foods and beverages, amino acids and vitamins, microbial polysaccharides, microbial enzymes, secondary metabolites including antobiotics, recombinant proteins, products of mammalian cell culture, waste treatment processes, microbial leaching and metal recovery from low grade minerals). Emphasis on quantitative approach: mass and heat balance calculations, kinetic and thermodynamic analysis, equipment selection and specification, process modelling and application of optimisation techniques. The economics of microbial processes are considered, as well as a series of case studies on the technical and economic feasibility of modern biotechnology-based processes. Patent and regulatory issues are also reviewed.

Laboratory experiments, tutorials and a small design project complement the lecture program.

BIOT3061
Biopharmaceuticals
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisites: BIOC2101 or LIFE2101, BIOC2201

The human health care industry is entering an exciting new era, with a wide range of biopharmaceuticals now approved for human use. The sequencing of the human genome, the evolution of new methods for the

production of recombinant biopharmaceuticals, the ability to produce human antibodies and recent developments in gene therapy have seen biopharmaceutical discovery and production become a major global focus of research activity. The course is designed to give students a detailed insight into techniques in biopharmaceutical discovery, isolation and characterization. The practical work includes production of a model recombinant biopharmaceutical by cell culture, including downstream processing and characterization using modern techniques analytical biotechnology including mass spectrometry. On-line bioinformatics tutorials and assignments associated with model biopharmaceuticals are included in the practical program.

BIOT3071
Commercial Biotechnology
School of Biotechnology and Biomolecular Science
UOC6 HPW4
Corequisite BIOT4053 (for program 3052 only), or prerequisite 48UOC for other programs.

This course covers aspects important to the commercialisation of biotechnology and related industries and includes: the definition, generation and protection of intellectual property (IP), issue and protection of patents in Australia and overseas, trademarks and copyright, role of confidentiality in protecting non-patentable IP; licencing arrangements and trading in IP. Innovation Management, planning and management of R&D programs, preparation and assessment of business plans. Sources of funding for biotechnology R&D, both corporate and government, establishment of business ventures, joint ventures and strategic alliances. Regulatory and legislative aspects of genetically modified organisms (GMOs) and environmental considerations and concerns, policies in Australia, USA and Europe regarding their use in agricultural, food and pharmaceutical industries. Introduction to the concepts of good manufacturing practice (GMP) for theraputic goods; regulatory procedures for biotechnology derived therapeutics, process validation. Marketing, licencing and business studies.

BIOT3081
Environmental Biotechnology
School of Biotechnology and Biomolecular Science
UOC6 HPW5
Prerequisite: 48 units of credit

This course discusses the commercial applications of bioprocesses to environmental problems. The principles of microbial sensing and adaption to extreme environments, as discussed in Environmental Microbiology (MICR3071), are expanded in the bioremediation of polluted environments and the recovery of important minerals and precious metals. Similarly, the application of microorganisms in other key environmental areas of biodeterioration, biomineralogy, biosensors, biofuels, biodegradable plastics, waste and water treatment and biocontrol are also discussed in this course.

BIOT3091
Professional Issues in Biotechnology
School of Biotechnology and Biomolecular Science
UOC6 HPW4
Corequisite BIOT4053 (for program 3052 only), or prerequisite 48UOC for other programs.

This course builds on the framework provided in BIOT3071, Commercial Biotechnology, in providing material necessary for the commercialisation of biotechnology products and training students in professional issues important for their careers. The grounding in IP provided in BIOT3071 will be augmented with material and case studies which cover the developments in IP relevant to the biotech industry. Planning and control of R&D projects, project management. Review of the Australian biotech industry including analysis of sources of capital and comparisons with the situation existing in the USA. Specific treatment of the regulatory approval process for biopharmaceuticals, with specific material on GMP and process validation for r-DNA derived therapeutics and gene therapy products. The practical/tutorial component in the course will involve the students in small group as well as individual assignments, where presentations will be made to the class. Assignments will cover such areas as drafting of provisional and PCT patent applications; business plans for biotech companies; case studies analysing specific companies and products; requirements for regulatory approval. The course will be carried out in association with staff and conjoint appointments in the School as well as visiting lecturers.

BIOT3100
Fundamentals of Biotechnology
School of Biotechnology and Biomolecular Science
UOC3 HPW2

This course introduces important fundamental principles of biotechnology including fermentation and biocatalysis, protein synthesis and engineering and recombinant DNA technology. The applications of these principles are then explored in a series of lectures focusing on environmental biotechnology, drug recovery and production, plant biotechnology, bioresources and the economics of bioprocesses. The course is designed to provide an understanding of the principles and applications of biotechnology both in its own and as alternatives to chemical synthesis.

Note: Restricted to programs 3055, 3100 and 3040.

BIOT3611
Biotechnology A (Advanced)
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOC2101, BIOC2201; Excluded: BIOT3011

This course is available to Advance Science students or as an advanced option to students in other appropriate science programs. The advanced course differs to Biotechnology A (BIOT3011) by providing greater opportunities for self-directed learning, separate laboratory practicals, and for research planning under the guidance of mentors from the academic or research staff. The lecture component of the course differs from that in BIOT3011 in the number and content of lecture and laboratory exams.

The goal of the course is to build on the fundamentals acquired in previous courses and develop an understanding of the commercial applications of biological systems. The course will consider the principles involved in microbial processes for chemical, pharmaceutical and food production on a commercial scale. The lecture component will address the nature of the genetic tools used to optimise product formation; the influence of environmental factors on microbial productivity; biodiversity issues; bioprocesses; the nature of industrially important cell types from prokaryotic to higher eukaryotic cells; and the commercial and marketing issues inherent in biotechnological processes. Lectures are supplemented by industrial presentations. The laboratory component includes manipulation of industrially important microorganisms. The development of team skills in a critical review of current research areas is a feature of the course. The course is intended for students interested in the commercial and multidiscplinary perspectives of processes using microbial and other cell types.

BIOT3621
Biotechnology B (Advanced)
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOT3011 or BIOT3611; Excluded: BIOT3021

The course covers the bioprocessing and economic principles involved in the operation, development and design of large scale biotechnology-based processes. It includes analysis of fermentation kinetics, batch and continuous modes of operation, bioprocess optimisation, principles of fermentor scale up, downstream processing and bioprocess design as well as principles of economic feasibility analysis. Selected bioprocesses will be examined in detail, including ethanol from renewable resources, amino acid production, antibiotics, large scale manufacture of plasmid DNA, production of viral vectors for gene therapy and the manufacture of therapeutic recombinant proteins from bacterial, yeast and mammalian hosts. Laboratory sessions and case studies will supplement lecture material.

The advanced course in Biotechnology B will cover the same core material as Biotechnology B (BIOT3021), but will have a more extensive laboratory/ research component integrated with a technical/ economic feasibility evaluation and business plan for a new recombinant product.

BIOT4053
Research Project - Biotechnology
School of Biotechnology and Biomolecular Science
UOC18 HPW18
Prerequisite: 144 units of credit

The experimental investigation of some aspects of biotechnology.

Note: Restricted to programs 3052.

BIOT4073
Biotechnology Honours Full-Time
School of Biotechnology and Biomolecular Science
UOC24

Advanced formal training in selected areas of biotechnology and participation in one of the School's research projects. Students will be required to attend and participate in the Graduate Seminar program. In addition, students may be required to undertake a reading list and/or essay, at the discretion of the school.

Note: Restricted to program 3990/3972.

BLDG1050
Structures 1
Building Construction Management Program
UOC6 HPW4

An introduction to structural appreciation; external and internal forces; free body diagrams; static force equilibrium for statically determinate structures; member forces in pin-jointed trusses; beam section properties; bending moment, shear force and deflection diagrams for beams; beam stresses in bending and shear; design of steel beams for bending, shear and deflection. Case studies to illustrate how structures of various types support vertical and lateral loads.

BLDG1121
Construction Science
Building Construction Management Program
UOC6 HPW4

Properties of materials; plasticity, elasticity, density, porosity, hardness. Optical, electrical, thermal and acoustic properties. Deterioration. Properties and manufacture of building materials; wood, wood products, bricks, fibre cement, ceramics, plastics, sealants and mastics, stones. Concrete technology: cement, aggregates, water and admixtures; properties of fresh concrete; strength considerations; durability, shrinkage and creep; special concretes; nondestructive testing; mix design. Metals in buildings: structural ferrous alloys; corrosion and protection; welding; types of failure, brittle fracture, fatigue, creep; impact resistance; tensile properties; hardness; strain hardening. Fire: behaviour of building materials and structures.

BLDG1211
Construction Technology 1A (Domestic Construction)
Building Construction Management Program
UOC6 HPW4

Introduction to the use of drawing instruments. Basic architectural drafting skills. Functional requirements and methods of building single storey family dwellings: brick, brick veneer and timber frame; domestic joinery; staircase construction; finishes; plumbing, drainage and electrical services; methods of setting out and supervision, on site observation and a report on house construction.

BLDG1212
Construction Technology 1B (Low Rise Residential)
Building Construction Management Program
UOC6 HPW4
Prerequisite: BLDG1211.

Small multistorey buildings from the functional and construction operation viewpoints. Quality control and supervision. Basement, ground floor and upper floor construction; methods of roofing, waterproofing; joinery; internal finishes; minor construction plant, formwork. Construction drafting, onsite observation and report on home unit building.

BLDG1260
Construction Management 1 (Management Principles)
Building Construction Management Program
UOC6 HPW3

Library usage. Accessing information: reading, summarising, referencing, report writing and oral presentations. Organisation of and participation in meetings, seminars and lectures. Basic management principles, functions of management, scientific management, management objectives. Structure of the construction industry; benchmarking; total quality management; constructability; partnering and strategic alliance; re-engineering. Development process and statutory controls.

BLDG1281
Construction Law 1A
Building Construction Management Program
UOC3 HPW2

Law, including a brief outline of sources of law in New South Wales and the system of judicial precedent. General principles of law of contracts. Contractual rights and obligations. Court structures; Sale of goods; a general introduction to the law of bankruptcy. General principles of law of agency. Law of partnership.

BLDG1282
Construction Law 1B
Building Construction Management Program
UOC3 HPW2
Prerequisite: BLDG1281.

Commercial Law; Corporations; Trade Practices; Consumer Protection; Torts; Remedies; Succession; Local Government; Real Property; Administrative Law.

BLDG1302
Construction Economics
Building Construction Management Program
UOC6 HPW3

The economic structure and function of the building and construction industry, illustrated with examples. Macroeconomic policy and its impact on the building and construction industry. The role of the Australian economy in the world.

BLDG2052
Structures 2
Building Construction Management Program
UOC6 HPW4

Principles of structural design for strength, stability and serviceability; design of steel and concrete structures using limit state design; load transfer mechanisms and failure modes in beams and columns; design of beams and columns in steel; bolted joints and welded joints in steel frame; design of reinforced concrete beams and slabs for bending, shear and deflection; reinforcement in columns, footings and other elements; reinforcement detailing; concrete bond and anchorage; durability and concrete cover; case studies of structural failures.

BLDG2101
Construction Technology 2A (Framed Buildings)
Building Construction Management Program
UOC6 HPW4
Prerequisite: BLDG1211, BLDG1212

Study of framed industrial buildings with emphasis on steel frames: framing systems including connection methods; roofing systems; cladding systems including precast concrete walling, metal and glass walling, masonry walling; flooring systems; building access and egress; fire requirements; environmental considerations; site establishment; on site observation and report on construction of industrial buildings.

BLDG2212
Construction Technology 2B (Building Services)
Building Construction Management Program
UOC6 HPW4
Prerequisite: BLDG2101, BLDG1212, BLDG1211

Hydraulic services pertaining to small and medium size projects; hot and cold water reticulation; sewer and storm water drainage; sanitary plumbing, introduction to fire fighting equipment and services; regulatory authorities and requirements. Ventilation theory; ventilation systems and equipment; refrigeration theory; air-conditioning equipment; electrical equipment; telephones and security; lifts and escalators; detection and fire protection; garbage and incinerators.

BLDG2280
Construction Management 2A (Occupational Psychology, Health and Safety)
Building Construction Management Program
UOC6 HPW4
Prerequisite: BLDG1260.

History of Industrial Relations in Australia. Enterprise agreements. Restructuring Federal and New South Wales Government policies. State and Federal awards. EEO and OH&S. Proactive site safety management. Statutory safety requirements. Analysis of the operating environment of the construction enterprise; establishment of construction enterprise corporate objectives; development of construction sector corporate plans and strategies; construction enterprise organisation and structures.

BLDG2282
Construction Management 2B (People & Process Management)
Building Construction Management Program
UOC6 HPW4
Prerequisite: BLDG1260.

Definition of Personnel Management and Human Resources Management. Stages in the development of human resources management. The leadership/management dialectic. Interpersonal skill development. Team building. Performance management and continuous improvement. Construction project management, concept and application. Role and functions of the project manager; management of all phases of construction projects. Construction strategy, planning and control. Project process management to reliably achieve the project goals; quality, waste, safety and progress management in design and construction including from a TQM perspective. Application of process management tools.

BLDG2332
Measurement & Documentation
Building Construction Management Program
UOC6 HPW4
Prerequisite: BLDG1212.

Quantity surveying; historical background; functions of the quantity surveyor; introduction to the Australian Standard Method of Measurement of Building Works, its importance and application; methods of recording dimensions, checking and correlating plans and specifications; principles of measurement and billing; Bill of Quantities format; elementary billing and measurement of basic trades including finishes, brickwork, woodwork, roofing, concrete and groundwork.

BLDG2482
Computer Applications in Construction
Building Construction Management Program
UOC3 HPW3
Prerequisite: BENV1141.

This course discusses computer applications for construction project management, and the creation and distribution of information within the building industry. It includes such topics as: networking and communication technologies; digital document formats and environments; spreadsheets; database systems; computer programs for project planning, cost estimating and cost management; shared project information databases; and CAD product modelling standards for interoperability with estimating and planning applications. This course involves practical use of spreadsheet, database, and project planning programs, with a focus on developing good skills with the Excel spreadsheet program.

BLDG3101
Construction Technology 3A (Tall Buildings)
Building Construction Management Program
UOC6 HPW5
Prerequisite: BLDG2212, BLDG2101, BLDG1212, BLDG1211

Functional requirements and building techniques of tall buildings: foundation systems; structural systems including structural steel construction and reinforced concrete construction; enclosure systems including metal and glass cladding; ceiling and partition systems; various methods and materials commonly used to solve functional demands; comparison of systems of construction and their interrelationship; material handling and management including selection of cranes, hoists, and concrete pumps; principles of fire protection in tall building; on site observation and report on tall building construction.

BLDG3102
Construction Technology 3B (Techniques)
Building Construction Management Program
UOC6 HPW5
Prerequisite: BLDG3101, BLDG2212, BLDG2101, BLDG1212, BLDG1211

Specialised construction techniques employed on major projects including the selection of plant, equipment and various construction systems: excavation; shoring; ground anchorage; underpinning; piling; formwork; cranage; material handling. Pre-stressed and pre-cast concrete construction. Construction methods with minimal impact on the environment; Building Code of Australia and code requirements; integration and coordination of services; demolition; site establishment; advanced construction techniques; basic geological considerations for building foundations; on-site studies and report.

BLDG3281
Construction Management 3A (Contracts)
Building Construction Management Program
UOC6 HPW3
Prerequisite: BLDG1282.

Introduction to Contracts management. Project Life Cycle. Options for project delivery and contract price. Competitive tendering. Subcontracting. Analysis of standard forms of contract. Contract disputes, litigation, arbitration and mediation. Contract Insurance. Restitution. An introduction to the principles and application of Value Management and Facilities Management.

BLDG3284
Construction Management 3B (Planning & Control)
Building Construction Management Program
UOC6 HPW3

Operation research techniques and their relevance to building, concept of planning and control, CPM, PERT, Line of Balance, Multi-activity Chart, computer applications of CPM. Principles and application of Work Study. Risk analysis, decision making process. An integrated project that draws together material covered in previous courses of the program. Simulation of construction conditions including technical, management, business and social aspects that have to be considered by the construction professional.

BLDG3301
Advanced Measurement & Documentation
Building Construction Management Program
UOC6 HPW4
Prerequisite: BLDG2332.

Advanced billing and measurement of substructure, structure and services and preliminaries in accordance with the Australian Standard Method of Measurement. Introduction to computerised measurement and billing. Introduction to elemental cost planning.

BLDG3332
Construction Cost Estimating
Building Construction Management Program
UOC6 HPW3
Prerequisite: BLDG2332.

Introduction to construction cost estimating including terminology, types of estimates and the tendering process. Analysis of material, plant and labour costs, and the estimation of selected unit rates; preliminaries, supplier and subcontract quotations, general and site overheads. Preliminary estimates. Preparation of contract variations.

BLDG3402
Research Skills
Building Construction Management Program
UOC3 HPW2

An introduction to research methods, analytical techniques and presentation. Theories and philosophies of science and research. Research topics; collecting, generating and evaluating information. Structuring the study and presenting results. Probability: sample spaces and probabilities; probability trees; distribution of random variables; expected value and decision analysis. Statistics: mean, mode, median, standard deviation and variance; normal and binomial distributions; linear regression.

BLDG4275
Dispute Avoidance and Resolution
Building Construction Management Program
UOC3 HPW2

Nature of claims, remedies, alternative dispute resolution, mediation, expert appraisal, litigation, moot arbitration.

BLDG4285
Professional Practice & Procedure
Building Construction Management Program
UOC6 HPW3

Professional Institutes: Roles, Codes of Conduct; Fee Scales; Professional Indemnity Insurance; The Consultant/Client Agreement; Contract Administration: Variation Orders, Interim Payments and Final Accounts; Tax Depreciation Schedules; Office Management.

BLDG4304
Forecasting, Bidding & Cost Control
Building Construction Management Program
UOC6 HPW3
Prerequisite: BLDG3301, BLDG3332.

Advanced estimating techniques, competitive tendering, contract cost adjustment; computer techniques applied to estimating. Practical exercises in the preparation of construction project tenders.

BLDG4305
Design Evaluation
Building Construction Management Program
UOC6 HPW3
Prerequisite: BLDG3301, BLDG3332.

Cost Modelling; Accuracy in estimating; Area Rate Estimates; Functional Area Estimates; Cost Planning: typical cost plan, cost planning techniques, cost planning measurement and pricing; Feasibility Studies; Value Management. Cost planning practical exercise.

BLDG4315
Business & Financial Control
Building Construction Management Program
UOC6 HPW3
Prerequisite: BLDG1302.

The business environment; business structures; taxation and depreciation; operating costs; economics of building plant and materials handling systems; financial control in the erection, management and demolition of buildings. Investment Analysis: demand for housing, demand for construction.

BLDG4492
Property Development and Valuation
Building Construction Management Program
UOC3 HPW3

A total approach to the building process through the four stages of pre-design, design, construction and post-construction. Market research, establishing client's needs, site selection and analysis, feasibility studies and financing methods. General principles of valuation. Judicial valuation, legal precedent, land titles and rights. Depreciation assessment. Building maintenance cycles. Time value of money and equivalence. Methods and philosophies of determining market valuations. Preparation of development applications cost value analysis, value management LCC and services integration.

BLDG4501
Thesis Foundation
Building Construction Management Program
UOC6
Prerequisite: BLDG3402.

This course is preparation for BLDG4502 Thesis and must be satisfactorily completed before enrolment in that course. Students are required to submit a developed thesis outline on an approved topic, including a full literature review and a justification of the proposed research methodology.

BLDG4502
Thesis
Building Construction Management Program
UOC12
Prerequisite: BLDG4501.

Using the thesis outline developed in BLDG4501 Thesis Foundation, the preparation of a thesis that exhibits the following properties: a clearly stated aim or purpose, a review of relevant literature, and the adoption of an appropriate research method demonstrating analysis and synthesis with a justifiable conclusion. The thesis to have a clear structure and development and to be properly referenced with suitable bibliography.

BLDG9998
Quantity Surveying Industry Program
Building Construction Management Program
UOC12

Students proposing to apply for membership in the A.I.Q.S., B.Q.S.M. or R.I.C.S. after graduation should enrol in this course rather than BLDG9999. It must be completed before the start of the final year of the program. The Quantity Surveying Industry Program is to be taken as a six months continuous employment with a professional Quantity Surveying firm or with a firm or building company where Quantity Surveying activities are undertaken. Students should be under the direct supervision of a corporate member of the Australian Institute of Quantity Surveyors or, where this is not possible, under the guidance of a mentor appointed by the Institute. Submission requirements are a daily dairy, report and a completed form from the employer.

BLDG9999
Building Industry Program
Building Construction Management Program
UOC12

Eighty days of approved building industry experience at any time to the start of the final year of the Program. Submission requirements are a weekly diary, report and a completed form from the employer.

CEIC0010
Mass Transfer and Material Balances
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CHEM1011 or CHEM1301, CHEM1201 or CVEN1531

Mechanisms and models of mass transfer at fixed and free interfaces. Diffusion. Convection. Adsorption. Phase equilibria. Calculation of mass transfer rates at surfaces with simple geometry. Mass transfer in dispersions. Applications of material balances to process calculations in chemical operations. Conventions in methods of analysis and measurement. Stoichiometry. Process calculations associated with gases and liquids. Problems involving bypass, recycle and purge. Differential material balances. Energy balances. Environmental engineering applications.

Note: Servicing Course ie. a course taught within courses offered by other Faculties.

CEIC0050
Atmospheric Process Chemistry
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CHEM1011 or CHEM1031, CHEM1201 or CVEN1531

Provides essential chemistry for understanding the processes which are responsible for air pollution. Composition and structure of the atmosphere. Natural gas chemistry. Free-radical gas-phase chemistry. Sources, transformation and sinks for atmospheric gases. Combustion processes. Smog chemistry. Radiochemistry. Biochemistry of toxic chemicals. Chemistry of polluting processes.

CEIC2011
Instrumental Analysis - Theory
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3

Data treatment, error analysis, sampling. Basic principles of volumetric analysis. Solubility and pH calculations. Electronic analysis: potentiometric, voltametric and coulometric. Spectrophotometric analysis: UV/visible, atomic emission, atomic absorption, X ray diffraction and fluorescence. Chromatographic analysis: gas chromatography, high performance liquid chromatography, and ion chromatography.

CEIC2012
Instrumental Analysis - Practical
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC2011

Development of laboratory skills with a range of analytical instruments which includes: Selective ion electrode, polarography, potentiometric titrations, UV/Visible spectrophotometery, X-Ray Fluorescence and Diffraction, Gas and Ion chromatography.

CEIC2020
Introduction to Numerical Methods
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC1020, MATH1231 or MATH1241, PHYS1169 or PHYS1111.

Computing for scientific and chemical engineering applications. Brief review of basic computer concepts. The Visual Basic language.

Applications in chemical engineering and industrial chemistry such as the solution of heat transfer and chemical reaction problems.

CEIC2110
Material & Energy Balances
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC1020

Solution strategies for material and energy balance problems. Material Balances: Component, elemental and differential material balances. Problems involving bypass, recycle, purge and chemical reaction. Energy Balances: Thermodynamic background: first law; general equation for open and closed systems; shaft work and enthalpy; reference states. Application of energy balances: enthalpy data including steam tables and psychometric charts; heat capacity data; phase change; mixing;

heat of solution; enthalpy-concentration diagrams; heats of formation, combustion and reaction. Integrated material and energy balance problems.

CEIC2120
Fluid Flow
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC1020, PHYS1169 or PHYS1111.

Dimensional Analysis. Fundamental concepts of Fluids. Simplification of the Navier-Stokes Equation. Fluid Statics. Integral Equations; continuity, Bernoulli s equation, momentum and energy equations. Flow in closed conduits, including laminar and turbulent flow and losses due to friction. Boundary layer theory. Measurement in Fluid mechanics; viscosity, pressure, velocity, flow rate. Pumps and pumping; blowers, compressors, pipes and fittings. Introduction to Boundary Layer Theory.

CEIC2130
Heat Transfer
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3

Introduction to various modes and mechanisms of heat transfer. Physical origins and rate equations. Conductivity. Diffusional heat transfer based on shell balances approach for one-dimensional steady state and transient transfer with heat generation and chemical reactions. Composite walls, contact resistance and extended surfaces. Introduction to heat exchangers; log-mean temperature difference, effectiveness - NTU methods.

CEIC3010
Reaction Engineering
School of Chemical Engineering and Industrial Chemistry
UOC4 HPW3
Prerequisite: CEIC2110, (CHEN2061 OR INDC2040).

Introduction to reactor design: ideal batch, steady state mixed flow, steady state plug flow, size comparisons of ideal reactors, optimisation of operating conditions. Multiple reactor systems: reactors series and parallel, mixed flow reactors of different sizes in series, recycle reactors, autocatalytic reactions. Multiple reactions: reactor design for reaction in parallel and reactions in series, series-parallel reactions. Temperature effects: heat of reaction, equilibrium constants, optimum temperature progression, adiabatic and non-adiabatic operation, product distribution and temperature. Kinetics of rate processes: Significance of the rate laws and models for distributed and lumped parameter systems. Experimental measurement and correlation of process rates.

CEIC3070
Process Control
School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4
Prerequisite: CEIC2011, CEIC2020, MATH2030

Concepts of process control, including: dynamic modelling of processes, linearization, Laplace transforms, transfer functions, open loop response of first and higher order systems, approximation by first order plus dead time models, concept of control for process regulation and safety, feedback control, block diagrams, PID controllers and tuning methods, closed loop response, stability analysis, single input-single output control loop design, cascade control, feed forward control, control valve characteristics and sizing, as well as introduction to some advanced control concepts. Process control laboratory experiments.

CEIC3110
Thermodynamics
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC2110, (CHEN2061 OR INDC2040).

Review of first law of thermodynamics; second law of thermodynamics. Auxiliary functions and conditions of equilibrium. Thermodynamic properties of fluids; thermodynamic properties of homogeneous mixtures. Chemical reaction equilibria; calculation of equilibrium compositions for single reactions. Phase equilibria; the phase rule, equilibrium. Engineering applications of thermodynamics. Heat engines, refrigeration.

CEIC4070
Laboratory Automation Science
School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4
Prerequisite: CEIC3070

The application of computers, to real-time data acquisition and process control in chemical laboratories and selected processes of interest to industrial chemists. Introduction to real-time digital operations and data manipulation. Organisation of a process control computer. Hardware considerations. The process computer interface. Sequential and programmable logic control of batch processes. Data acquisition and process monitoring techniques. Digital process control PID controller tuning. Graphics in process monitoring and control. Direct Digital Control.

CEIC4095
Special Research Project Practice
School of Chemical Engineering and Industrial Chemistry
UOC9

ENROLMENT REQUIRES SCHOOL APPROVAL

The experimental investigation of some aspect of an elected topic area in Chemical Engineering

CEIC4096
Research Project Theory Extended
School of Chemical Engineering and Industrial Chemistry
UOC6

ENROLMENT REQUIRES SCHOOL APPROVAL

The experimental investigation of some aspect of an elected topic area in Industrial Chemistry/Chemical Engineering.

CEIC4101
Professional Electives Advanced
School of Chemical Engineering and Industrial Chemistry
UOC3
Prerequisite: 132 units of credit

To be chosen from offerings in: CEIC6101 Advanced Reaction Engineering; CEIC6102 Advanced Process Control; CEIC6103 Advanced Particle and Separation Processes; CEIC6104 Advanced Polymers.

STUDENTS ENROL IN CEIC6*** NOT CEIC4101. Not all courses run at any one time.

CEIC4102
Professional Electives Extended
School of Chemical Engineering and Industrial Chemistry
UOC3
Prerequisite: 132 units of credit

To be chosen from offerings in: CEIC6201 Minerals Engineering (Graduates may qualify for membership for of the Australian Institute of Mining and Metallurgy); CEIC6202 Biochemical Processing 1; CEIC6203 Environmental Management 2A; CEIC6204 Business Management in Chemical Engineering A; CEIC6205 Fuel & Energy 1 (Graduates may qualify for membership of the Australian Institute of Energy). STUDENTS ENROL IN SUBJECT CEIC6*** NOT CEIC4102. Not all courses are offered at any one time.

CEIC4103
Professional Electives
School of Chemical Engineering and Industrial Chemistry
UOC3
Prerequisite: 132 units of credit

To be chosen from offerings in: CEIC6201 Minerals Engineering (Graduates may qualify for membership for of the Australian Institute of Mining and Metallurgy); CEIC6202 Biochemical Processing 1; CEIC6203 Environmental Management 2A; CEIC6204 Business Management in Chemical Engineering A; CEIC6205 Fuel & Energy 1 (Graduates may qualify for membership of the Australian Institute of Energy). STUDENTS ENROL IN SUBJECT CEIC6*** NOT CEIC4102. Not all courses are offered at any one time.

CEIC4104
Professional Electives
School of Chemical Engineering and Industrial Chemistry
UOC3
Prerequisite: 132 units of credit

To be chosen from offerings in: CEIC6201 Minerals Engineering (Graduates may qualify for membership for of the Australian Institute of Mining and Metallurgy); CEIC6202 Biochemical Processing 1; CEIC6203 Environmental Management 2A; CEIC6204 Business Management in Chemical Engineering A; CEIC6205 Fuel & Energy 1 (Graduates may qualify for membership of the Australian Institute of Energy). STUDENTS

ENROL IN SUBJECT CEIC6*** NOT CEIC4102. Not all courses are offered at any one time.

CEIC4105
Professional Electives
School of Chemical Engineering and Industrial Chemistry
UOC3
Prerequisite: 132 units of credit

To be chosen from offering in: CEIC6101 Advanced Reaction Engineering; CEIC6102 Advanced Process Control; CEIC6104; Advanced Polymers; CEIC6206 Minerals Engineering - Practice; CEIC6207 Environmental Management 2B; CEIC6208 Business Management in Chemical Engineering B. STUDENTS ENROL IN SUBJECT CEIC6*** NOT CEIC4105. Not all subjects are offered at any one time.

CEIC4106
Professional Electives
School of Chemical Engineering and Industrial Chemistry
UOC3
Prerequisite: 132 units of credit

To be chosen from offerings in: CEIC6206 Minerals Engineering - Practice; CEIC6209 Fuel & Energy 2; CEIC6210 Biochemical Processing 2; CEIC6207 Environmental Management 2B; CEIC6208 Business Management in Chemical Engineering B. STUDENTS ENROL IN SUBJECT CEIC6*** NOT CEIC4106. Not all courses are offered at any one time.

CEIC4110
Plant Management and Operation (3041 Program Students only)
School of Chemical Engineering and Industrial Chemistry
UOC4
Prerequisite: CEIC3010

A series of lectures designed to introduce the students to appropriate management techniques. Topics will include: business strategies, leadership, total quality management, safety management. Sixty days of approved Industrial Training are part of the requirements for the satisfactory completion of this subject. The objectives of the industrial training are (1) to develop an appreciation of the structure and operation of industrial organisations, (2) to understand the role of the engineer and engineering in industry, (3) to appreciate the importance of good communications and interpersonal skills and to develop these skills, and(4) to appreciate the ethical basis of engineering practice in industry. Students are required to submit to the school evidence from their employers of each period of training, confirming the work performed, together with a report (2000 words) which should summarise the technical work performed, and the extent to which the Industrial training objectives have been fulfilled.

The subject also includes SESC3310: This is an objective 5 subject which covers social issues arising from future scientific and technological developments and the role that the professional scientist can play in influencing future directions. The subject is taught by a combination of group activities, case studies, projects and seminars, The subject will cover four major topic areas, which are: professional ethics, environmental related issues, safety and liability and controls of future technology.

CEIC4120
Management and Plant Operation
School of Chemical Engineering and Industrial Chemistry
UOC6
Prerequisite: CEIC3010

A series of lectures designed to introduce the students to appropriate management techniques. Topics will include: business strategies, leadership, total quality management, safety management. Students will be required to operate a computer controlled chemical plant. Sixty days of approved Industrial Training are part of the requirements for the satisfactory completion of this subject. The objectives of the Industrial Training are (1) to develop an appreciation of the structure and operation of industrial organisations, (2) to understand the role of the engineer and engineering in industry, (3) to appreciate the importance of good communications and interpersonal skills and to develop these skills, and (4) to appreciate the ethical basis of engineering practice in industry. Students are required to submit to the school evidence from their employers of each period of training, confirming the work performed, together with a report (2000 words) which should summarise the technical work performed, and the extent to which the Industrial Training objectives have been fulfilled.The course also includes SESC3310, an objective 5 course which covers social issues arising from future scientific and technological developments and the role that the professional scientist can play in influencing future directions. The course is taught by a combination of group activities, case studies, projects and seminars. It will cover four major topic areas: professional ethics, environmental related issues, safety and liability and controls of future technology.

CEIC4130
Plant Operation (BE/MBio Med Program students only)
School of Chemical Engineering and Industrial Chemistry
UOC3
Prerequisite: CEIC3010

Sixty days of approved Industrial Training are part of the requirements for the satisfactory completion of this subject. The objectives of the Industrial Training are (1) to develop an appreciation of the structure and operation of industrial organisations, (2) to understand the role of the engineer and engineering in industry, (3) to appreciate the importance of good communications and interpersonal skills and to develop these skills, and (4) to appreciate the ethical basis of engineering practice in industry. Students are required to submit to the school evidence from their employers of each period of training, confirming the work performed, together with a report (2000 words) which should summarise the technical work performed, and the extent to which the Industrial training objectives have been fulfilled.The course also includes SESC3310, an objective 5 course which covers social issues arising from future scientific and technological developments and the role that the professional scientist can play in influencing future directions.The subject is taught by a combination of group activities, case studies, projects and seminars.The subject will cover four major topic areas: professional ethics, environmental related issues, safety and liability and controls of future technology.

CEIC4200
Industrial Experience
School of Chemical Engineering and Industrial Chemistry
UOC18

CEIC4201
Industrial Experience
School of Chemical Engineering and Industrial Chemistry
UOC18

CEIC6101
Advanced Reaction Engineering
School of Chemical Engineering and Industrial Chemistry
UOC3

This course covers in-depth considerations of the analysis and design of non-isothermal reactors, treatment of variable-density systems, non-catalytic gas-solid reactions (application to minerals processing, pharmaceutics and microelectronic processing), kinetics of heterogenous reactions, diffusion and raction in porous crystals, design of fixed bed reactors, trickle-bed and slurry bed reactors.

CEIC6102
Advanced Process Control
School of Chemical Engineering and Industrial Chemistry
UOC3

Concepts of linear Multi-Input Multi-Output (MIMO) systems, state-space representation of process systems, linear spaces and linear operators, controllability and observability analysis, Lyapunov stability analysis, stability of interconnected systems, linear optimal control, frequency-domain analysis and controller synthesis for MIMO process systems. Introduction to model predictive control, system identification, robus control, decentralised control.

CEIC6103
Advanced Particle & Serparation Process
School of Chemical Engineering and Industrial Chemistry
UOC3

The course covers lectures and demonstrations on: Particle characterisation and preparation using the latest techniques, floc characterisation and its relevance in separation techniques. There will also be relevant lectures on other aspects of separation technologies, theory and practice, novel applications to industry and environment management.

CEIC6104
Advanced Polymers
School of Chemical Engineering and Industrial Chemistry
UOC3

We will explore exciting macromolecular chemistry in a range of selected cutting edge research fields. The course is given by four experts in their

respective fields and has segments on reversible addition fragmentation chain transfer (RAFT) polymerization, atom transfer radical polymerization (ATRP), Ziegler-Natta Polymerization as well as the application of well-defined polymers for drug delivery and biomedical applications. The course is designed as an interactive discourse between students and lecturer. The students are actively engaged in judging current scientific research papers as well as developing new research strategies. If you are undertaking honours, Masters or PhD research in the field of polymer science, this course is highly recommended.

CEIC6201
Minerals Engineering
School of Chemical Engineering and Industrial Chemistry
UOC3

Principles and applications of physical mineral processing, hydrometallurgy and electrometallurgy covering comminution, flotation, solid/liquid separation, dewatering, leaching, solvent extraction, purification and separation processes, electrowinning/refining and waste processing. Emphasis is placed on throughput and process calculations for the design of mineral processing plants.

CEIC6202
Biochemical Processing 1
School of Chemical Engineering and Industrial Chemistry
UOC3

CEIC6203
Environmental Management 2A
School of Chemical Engineering and Industrial Chemistry
UOC3

CEIC6204
Business Mangement in Chemical Engineering A
School of Chemical Engineering and Industrial Chemistry
UOC3

The aims of this course are to introduce issues which affect business decisions encountered by management in the chemical industry. Topics include domestic and export markets, market growth, the lemming effect and product life cycles. The distinction between issues and problems using PVC and the chlorine debate is discussed. Factors affecting plant life: scale up, retrofitting, competing technologies etc. Environmental and compliance issues including green chemistry. The petrochemical industry and in particular the polymer manufacturing industry is used to illustrate the main areas. Industry speakers and site visits are used to maintain relevance and topicality.

CEIC6205
Fuel & Energy 1
School of Chemical Engineering and Industrial Chemistry
UOC3
Enrolment requires school approval

Current energy resources and alternatives for the future. Basic princples of fuel conversion processes: gasification, carbonisation, oil refining etc. Introduction to combustion of solid, liquid and gaseous (fossil) fuels.

CEIC6207
Environmental Management 2B
School of Chemical Engineering and Industrial Chemistry
UOC3

CEIC6208
Business Managementin CE B
School of Chemical Engineering and Industrial Chemistry
UOC3

This course considers the skills required to manage world class manufacturing plants. Topics covered include: features of the world's best manufacturing plants; manufacturing as an integral part of the business; human resource management; reliability management; quality management systems; risk management; information technology management; supply and stock management; customer service; and, bench-marking.

CEIC6210
Biochemical Processing 2
School of Chemical Engineering and Industrial Chemistry
UOC3

This subject will focus on pharmaceutical processing for chemical engineers and industrial chemists. Planned topics include an overview of the pharmaceutical industry, process engineering in the pharmaceutical industry, good manufacturing practices, pharmacokinetics, regulatory aspects, clinical trials, drug delivery systems/formulations, occupational health and safety aspects in the industry, and marketing. This course may be supplemented by site visits and industry speakers.

CEIC6211
Polymer Chemistry for Chem Eng
School of Chemical Engineering and Industrial Chemistry
UOC3

This subject is designed for chemical engineering students who wish to gaina general understanding of polymerization processes. Particular emphasis is given to free-radical (co)polymerization processes, their reactions, basic kinetics and industrial applications. The course will also address polymer characterization techniques ranging from chromatography to mass spectrometry. In addition, novel living methods of free-radical polymerization will be discussed. The material may be augmented with lab visits, demonstrations, and industry visits.

CHEM1000
Chemistry at the Cutting Edge
School of Chemistry
UOC3 HPW2

Just what are the big issues in contemporary chemistry? This course takes an investigative approach to thinking about some of the challenging issues and frontiers in chemistry such as molecular machines, the chemical basis of memory, green chemistry, smart materials and the chemical origins of life.

Note: Restricted to Advanced Science students.

CHEM1011
Fundamentals of Chemistry 1A
School of Chemistry
UOC6 HPW6
Excluded: CHEM1031

Elements, compounds and stoichiometry. Basic atomic structure and periodicity. Properties of gases. Thermodynamics (1st Law). Reactions classes. Equilibrium. Acids and bases. Behaviour of oxides, hydroxides, halides. Reactions of organic compounds. Chemical kinetics.

Assumed Knowledge: a basic knowledge of chemistry (equivalent to one year of high school chemistry)

CHEM1021
Fundamentals of Chemistry 1B
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM1011, Excluded: CHEM1041

Atomic and molecular structure. Properties of solutions. Solids and solubilities. Aqueous chemistry. Thermodynamics (2nd Law, entropy and free energy). Electrochemistry. Mechanisms in organic chemistry.

CHEM1031
Higher Chemistry 1C
School of Chemistry
UOC6 HPW6
Excluded: CHEM1011

Atomic structure and periodicity. Structure and shapes of molecules. Chemical reactions, rates and mechanisms. Reactions of organic compounds. Includes advanced laboratory work.

Assumed knowledge: Equivalent to a good standard in high school chemistry (HSC 2 unit chemistry [75 - 100] or equivalent)

CHEM1041
Higher Chemistry 1D
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM1031, Excluded: CHEM1021

Properties of gases. Atmospheric chemistry. Properties of liquids and solids. Solubility and properties of solutions. Thermodynamics and equilibrium. Aqueous chemistry. Electrochemistry. Includes advanced laboratory work.

CHEM1819
Biological Chemistry for Optometry Students A
School of Chemistry
UOC6 HPW6

Atomic structure and periodicity. Structure and shapes of molecules. States of matter. Thermodynamics - First and Second laws. Equilibrium; acid-base chemistry and solubility. Electrochemistry; redox chemistry. Chemical reactions, rates and mechanisms.

Assumed knowledge: A good knowledge of chemistry (corresponding to HSC 2Unit chemistry 65-100)

Note: Restricted to program 3950.

CHEM1829
Biological Chemistry for Optometry Students B
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM1819

Carbon compounds and their reactions. Amino acids, proteins, carbohydrates, nucleic acids and lipids. Biological organic chemistry. Enzymology. Bioenergetics, Carbohydrate metabolism; oxidative phosphorylation. Metabolism and hormone function.

Note: Restricted to program 3950.

CHEM1831
Chemistry for Health, Exercise and Medical Science
School of Chemistry
UOC6 HPW6
Excluded: CHEM1031, CHEM1011, CHEM1819.

Designed for students in Health and Exercise Science and related areas, this course covers the chemistry required to understand atomic and molecular structure, states of matter, thermodynamics, equilibrium chemistry in aqueous solution and introductory kinetics, the chemistry of organic compounds, stereochemistry, functional groups and their reactions especially amines, amides, acids and esters, redox chemistry of oxygen. Case studies and experiments relevant to health and exercise science are also included. The chemistry in the course will prepare students for the Level II Biochemistry and Anatomy components of their programs.

Assumed knowledge: A basic knowledge of Chemistry equivalent to the NSW Year 11 Chemistry syllabus. It is also recommended that BIOS1201 be taken concurrently.

CHEM2011
Physical Chemistry
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041, MATH1021 or MATH1031 or MATH1231 or MATH1241.

First, second and third laws of thermodynamics. Applications of thermodynamics. Chemical and phase equilibria. Principles and applications of electrochemistry. Colloid, interface and surface chemistry. Reaction kinetics, temperature and concentration dependence of reaction rates, reaction mechanisms.

Note: Alternative courses are available to avoid timetable clashes. Please consult with the School.

CHEM2021
Organic Chemistry
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041

Applications of spectroscopy in structure elucidation. Reactive intermediates, addition and rearrangement reactions, carbonyl group chemistry. Chemistry of aromatic compounds.

CHEM2031
Inorganic Chemistry and Structure
School of Chemistry
UOC6 HPW6
Prerequisite:CHEM 1011 or CHEM1031, CHEM1021 or CHEM1041; Excluded: CHEM2839, CHEM2828

Concepts and consequences of quantum theory. Electronic and geometric structure of atoms and molecules. Solid state chemistry. Coordination chemistry. Transition and post-transition metal chemistry. Chemistry of non-transition elements.

Note: Alternative courses are available to avoid timetable clashes. Please consult with the School.

CHEM2041
Chemical and Spectroscopic Analysis
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041, MATH1021 or MATH1031 or MATH1231 or MATH1241

Principles and applications of chemical and analytical spectroscopy. Statistical treatment of data. Titrimetric and potentiometric analysis. Separation techniques.

CHEM2718
Physical Chemistry for Materials Science and Engineering
School of Chemistry
UOC3
Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041, MATH1231 or MATH1241 or MATH1021; Excluded: CHEM2011, CHEM2818.

Thermodynamics; first, second and third laws. Chemical Equilibria. Electrochemistry, electrochemical cells. Chemical kinetics.

CHEM2828
Organic and Inorganic Chemistry for Nanotechnology
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041
Excluded: CHEM2021, CHEM2031, CHEM2839

Reactive intermediates, addition and rearrangement reactions, carbonyl group chemistry. Chemistry of aromatic compounds. Electronic and geometric structure of inorganic compounds. Coordination chemistry. Transition and non-transition metal chemistry

CHEM2839
Inorganic Chemistry
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041; Excluded: CHEM2031, CHEM2828

Electronic structure of atoms and molecules structure, energetics and banding in the solid state. Principles of coordination chemistry. Occurrence, preparation, properties and reactions of selected compounds of transition and main group elements.

CHEM2921
Food Chemistry 1
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM1011 or CHEM1031, CHEM1021 or CHEM1041

Introduction to food chemistry. Alcohol and Carbonyl chemistry. Carbohydrates. Lipids, amino acids and proteins. Enzyme reactions and applications in food chemistry. Vitamins, pigments, flavours and food addititves.

CHEM3011
Physical Chemistry
School of Chemistry
UOC6 HPW6
Prerequisite: 6 units of credit in Level 1 Physics, CHEM2031 or CHEM2041.

Elements of symmetry and group theory appropriate to molecular structure and spectroscopy. Quantum chemistry; atomic and molecular spectroscopy - principles and applications.

CHEM3021
Organic Chemistry
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM2021

Synthesis and reactions of the principal types of aromatic heterocyclic systems. Stereochemistry. Synthesis and reactions of carbocyclic systems. Application of spectroscopic methods, eg nuclear magnetic resonance, mass spectrometry, to determination of organic structures.

CHEM3031
Inorganic Chemistry
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM2031 or CHEM2839

This course provides students with an understanding of the structure and function of metal complexes, with a particular emphasis on recent developments and applications of these complexes in industry and

research. The course has four major components: (a) Metal complexes – fundamental theory, strucure, spectroscopy and magnetism (b) Mechanisms in inorganic reactions, (c) An introduction to organometallic chemistry and catalysis and (d) Bioinorganic chemistry – the reaction chemistry of metalloenzymes.

CHEM3041
Analytical Chemistry
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM2041

This course builds on students' existing background in analytical chemistry to develop both theory and practice relating to the latest analytical techniques used in industry and research. The course covers method development, method validation and measurement uncertainty; theory, operation, instrumentation and applications for the major techniques in instrumental analysis, including separation techniques, mass spectrometry, hyphenated chromatography-mass spectrometry techniques, elemental atomic spectroscopy and mass spectrometry and electroanalytical techniques. There is a strong emphasis on practical experience.

CHEM3101
Project Laboratory in Chemistry
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM3011 or CHEM3021 or CHEM3031 or CHEM3041

Group projects in instrumental and synthetc chemistry. Students choose two 7-week projects, one in each area. The course includes familiarisation with literature and database searching, project planning and risk assessment, preparation of oral and written project reports.

CHEM3201
Topics in Contemporary Chemistry A
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM3011 or CHEM3021 or CHEM3031 or CHEM3041

An interdisciplinary course emphasising the latest advances in chemistry. A diverse range of topics will be offered each year from which students will select four. Topics will vary depending on availability and interest. Indicative Topics: supramolecular chemistry and molecular recognition; synthetic strategies in organic chemistry; molecular modelling and drug design; organometallic chemistry; surface chemistry and analysis; solid-state chemistry; polymer structure and characterisation; introduction to chemometrics; mass spectrometry.

Note: Re CHEM3201 and CHEM3202 Topics in Contemporary Chemistry: A wide range of topics will be offered each year (8 - 12 depending on availability and interest). Students can select 4 topics (6UOC) or 8 topics (12UOC).

CHEM3202
Topics in Contemporary Chemistry B
School of Chemistry
UOC12 HPW12
Prerequisite: CHEM3011 or CHEM3021 or CHEM3031 or CHEM3041

An interdisciplinary course emphasising the latest advances in chemistry. A diverse range of topics will be offered each year from which students will select eight. Topics will vary depending on availability and interest. Indicative Topics: supramolecular chemistry and molecular recognition; synthetic strategies in organic chemistry; molecular modelling and drug design; organometallic chemistry; surface chemistry and analysis; solid-state chemistry; polymer structure and characterisation; introduction to chemometrics; mass spectrometry.

Note: Re CHEM3201 and CHEM3202 Topics in Contemporary Chemistry: A wide range of topics will be offered each year (8 - 12 depending on availability and interest). Students can select 4 topics (6UOC) or 8 topics (12UOC).

CHEM3301
Chemistry in Biological Systems
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM3021

Covers: aspects of bioorganic, bioinorganic and bioanalytical chemistry including natural products chemistry, antibiotics and drugs, herbicides and pesticides; The occurance, coordination and role of metals in biology, enzyme and immunoassays in chemical analysis, biosensors.

CHEM3311
Environmental Chemistry
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM3041

Selected topics in advanced environmental chemistry. Topics will be offered from a list including: heavy metals, detoxification mechanisms and inorganic speciation; sampling and strategies for environmental analytical chemistry; atmospheric chemistry and pollution mechanisms; case studies of organic pollutants and remediation mechanisms.

The laboratory component includes environmental project work and an introduction to regulatory requirements.

CHEM3811
Food Chemistry 2
School of Chemistry
UOC6

Water in food. Dispersed systems; colloids and gels. Chemistry of colours and flavours in food. Food additives. Minerals. Food toxicants; pesticide residues. Theory and practice of modern methods of food analysis. Analytical principles. Official methods of anaylsis. Major instrumental techniques and their applications. Choice of an analytical method.

CHEM3829
Organic Chemistry
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM2021

The spectroscopic identification of organic compounds, free radical chemistry and electroorganic processes, various aspects of the organic industrial processes such as industrial synthesis based on petrochemicals, and organometallic reactions of industrial interest. Selected topics from the dyestuff, pharmaceutical and agricultural industries.

CHEM3901
Environmental Toxicology
School of Chemistry
UOC6 HPW6
Prerequisite: CHEM1011 or CHEM1031.

Classification and properties of toxic substances. Biological properties of important classes of chemical compounds. Fate of xenobiotics in the human body, including detoxification and bioactivation. Chemical transformations of pollutants in the environment; air, water and soil pollution. Analysis of environmental pollutants at trace levels.

CHEM3997
Special Project in Chemistry 3
School of Chemistry
UOC12 HPW12

Short theoretical or experimental research project, supervised by a member of academic staff. project planning, literature review, project development, oral and written reporting.

CHEM3998
Special Project in Chemistry 2
School of Chemistry
UOC6 HPW6

Short theoretical or experimental research project, supervised by a member of academic staff. Project planning, literature review, project development, oral and written and reporting.

CHEM4003
Advanced Chemistry 4 Honours
School of Chemistry
UOC24

Designed for those with a higher level of preparedness in Chemistry. A multifaceted course that will give students a high level of basic research skills, especially in critical evaluation of data and communication of results, but with a specialised focus on Chemistry. Consists of a selection of lectures and seminars on advanced topics in Chemistry and a research project.

CHEM4004
Advanced Chemistry 4 Honours (Mid-Year Start)
School of Chemistry
UOC24

Designed for those with a higher level of preparedness in Chemistry. A multifaceted course that will give students a high level of basic research skills, especially in critical evaluation of data and communication of results, but with a specialised focus on Chemistry. Consists of a selection of lectures and seminars on advanced topics in Chemistry and a research project.

CHEM4005
Chemical Sciences 4 (Honours)
School of Chemistry
UOC24

Designed for those with broad interests in Science but with a wish to specialise in Chemistry. A varied program that will give students a high level of basic research skills, with emphasis on the critical evaluation of data and communication of results. Consists of a limited series of lectures and and seminars on advanced topics in Chemistry, a literature review and research project on a major topic outside the review area.

CHEN2050
Chemical Engineering Laboratory 1
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC1020

An introduction to laboratory work in chemical engineering including technical report writing, flow sheet preparation, information retrieving and data processing techniques. Experiments in this subject are designed to demonstrate principles of industrial processes. Industrial operations are also analysed via reports from literature or multimedia, including videos.

CHEN2061
Introduction to Process Chemistry 1
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6
Prerequisite: CHEM1021 or CHEM1041

Definitions of classical thermodynamics. Pressure-volume -temperature properties of industrially important fluids. Applications of thermochemistry in industry. Conversion of heat into work. Concept of lost work. Heat engines and refrigeration cycles. General properties of solutions. Maximum conversion of reactants in batch and flow reactors. Reactor design and chemical kinetics. Reaction rates in industrial batch and flow reactors. Electrochemical principles in the context of important industrial electrochemical processes. Properties and applications of electrolytes. Industrial electrochemical processes, electrodes and cells. Surface phenomena. An integrated laboratory incorporating experiments designed to demonstrate the principles covered in the lecture material.

CHEN2062
Introduction to Process Chemistry 2
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CHEN2061.

An introduction to and survey of the organic and inorganic chemistry of industrially important products.

CHEN2140
Mass Transfer
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3

Introduction to various modes and mechanisms mass transfer. Physical origins and rate equations. Diffusivity. Diffusional mass transfer based on shell balances approach for one-dimensional steady state and transient transfer. Analogies between Heat and Mass Transfer Applications.

CHEN3021
Systems Modelling & Analysis
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW2
Prerequisite: CEIC2020, CEIC2110, CEIC2130, MATH2030

Mathematical tools used in the modelling and analysis of chemical, mineral, and environmental processes. Fundamental modelling of chemical, mineral, and environmental systems, based on physical laws, including modelling of lumped systems, discrete systems, multivariable systems, and distributed parameter processes. Application of mathematical analysis tools including: matrix and vector operators, solution of ordinary and partial differential equations, linearization methods, and functional analysis to the solution of problems in the chemical, mineral and environmental engineering fields. Statistical applications including parameter estimation, empirical modelling.

CHEN3022
Process Modelling & Optimisation
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC2020, MATH2030

Techniques to solve models of chemical and mineral processes, and process optimisation with respect to financial and environmental objectives. The concepts of solution to process models covered include solution of single and multi-variable linear and nonlinear equations, numerical solution of ordinary differential equations, and parameter estimation from process data. The concepts of process optimisation covered include single and multi-dimensional nonlinear optimisation, linear programming, and dynamic programming. The methods are taught using examples of common applications of the presented concepts in the chemical and mineral processing industries.

CHEN3031
Advanced Transport Phenomena
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC2120, CEIC2130, CHEN2140, MATH2030

Review of the analogy between mass, momentum and thermal transport. Derivation of the equations of change for: Isothermal systems - continuity and equation of motion, Non-isothermal systems - forced and free convection. Multicomponent systems. Case studies: Cone-and-plate viscometer, Vortex prediction in a stirred tank, Transpiration cooling, Free convection heat transfer from a vertical plate; simultaneous heat and mass transfer; drying. Mass transfer with chemical reaction. Transient analysis of transport phenomena: Viscous laminar flow, Heat conduction in solids. Diffusion - Evaporation and unsteady-state diffusion with chemical reaction. Two-dimensional transport problems. Power law fluids - momentum and thermal transport.

Note: This course is an extension of material given in CEIC2120 Fluid Flow, CEIC2130 Heat Transfer and CHEN2140 Mass Transfer.

CHEN3040
Separation Processes 1
School of Chemical Engineering and Industrial Chemistry
UOC4

CHEN3050
Particle Mechanics
School of Chemical Engineering and Industrial Chemistry
UOC3

CHEN3062
Particles, Separation, Heat Exchangers and Pressure Vessels
School of Chemical Engineering and Industrial Chemistry
UOC6

Stage wise separation processes: binary distillation, liquid-liquid extraction, solid-liquid extraction and absorption. HTU/NTU methods for the design and analysis of packed columns. Surface separation processes. Phase equilibria for multicomponent systems. Procedures for selection, design, specification and representation of pressure vessels and heat exchangers according to engineering standards and procedures. Particle size analysis. Fluid-particle interactions: drag coefficient, effect of Reynolds number. Terminal velocity, effect of shape and concentration. Drops and bubbles. Particle-particle interactions including flocculation. Flow through porous media. Darcy, Carman-Kozeny, Ergun equations. Application of fluid-particle systems: Sedimentation and thickening. Elutriation. Cyclones. Packed beds. Single phase flow. Filtration: constant pressure theory, specific resistance, equipment filter aids, centrifugal. Fluidisation: minimum fluidisation velocity, two-phase theory, bubble properties, applications. Spouting. Pneumatic and hydraulic conveying. Solids handling. Properties of granular solids and powders affecting storage and movement. Stockpiles, silos and hoppers: Feeders, convey or belts and elevators.

CHEN3065
Plant and Equipment Design
School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4
Prerequisite: CEIC2110, CEIC2130, MATH2030.

Procedures for the selection, design, specification, construction and representation of process equipment according to engineering standards and procedures: Heat exchanger networks. Absorption, distillation, liquid-liquid extraction and adsorption involving stagewise and differential

contact. Membrane and other surface separation processes. Cooling towers. Drying. Multi-component separation: graphical methods, shortcut methods and rigorous computer techniques for the design and analysis of stagewise separation processes. Azeotropic and extractive distillation. Synthesis of separation sequences. Energy conservation in separation systems.

CHEN3067
Process Design & Economics
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC2110, CEIC2130, MATH2030

Process development: All activities required from the conception of the idea to produce a product through to the finalisation of the process flow diagram including process selection and evaluation, process design and process representation. Process economics: Capital and operating costs of a process plants. Fixed and variable costs. Break-even analysis. Cost estimation methods. Project financing. Process materials: The use, performance limits and selection of metals, plastics, refractories, ceramics and glass in construction of process plants. Corrosion, strength of materials, use of codes and standards.

CHEN3068
Process Design & Safety
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC2110, CEIC2130, MATH2030.

Process simulation: steady state and dynamic simulation of process plants including the use of industrial simulation packages. Process control: Development and representation of control schemes for process plant. Process safety: Techniques for assessing safety and risk of existing and proposed process plants. Systems reliability, HAZOP and HAZAN. Pressure and explosion relief. Laboratory safety.

CHEN3080
Chemical Engineering Practice 2
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CEIC2110, CEIC2120, CEIC2130, CHEN2050, CHEN2062, CHEN2140

An integrated chemical engineering laboratory incorporating experiments in fluid flow, heat/mass transfer, thermodynamics and kinetics, mineral processing and fuel technology. The objectives of the experiments are to demonstrate, reinforce and extend the principles of chemical engineering which are used in the investigation of chemical engineering problems and to develop an interest in experimentation and efficiency in writing technical reports and presenting technical seminars.

CHEN4031
Environmental Management 1
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3

This course deals with conventional and advanced separation processes for water and air pollution control, effluent treatment and waste minimisation in the Process Industries. Topic areas covered will be selected from: Gravity Separations, Filtration Processes, Sorption Processes, Extraction Processes, Membrane Technology, Biological Processes, Design, Control and Monitoring, Clean Production Technologies.

Management Issues: Sustainability, decision making, environmental management system (ISO14001), life cycle analysis, material and flux analysis.

CHEN4081
Design Project
School of Chemical Engineering and Industrial Chemistry
UOC8 HPW6
Prerequisite: 132 units of credit

The project covers the engineering of all or part of a process plant. It requires the application of material covered in the entire undergraduate Chemical Engineering Degree program. The minimum requirements of the project are specified by the relevant engineering institutions accreditation standards. The project includes: selection and evaluation of the process flow sheet; design of facilities for processing, transport and storage of materials within the plant; plant sizing; equipment selection and cost estimation including utility requirements; plant location and layout; evaluation of the economic viability of the plant; control scheme development; hazard and risk assessment; preparation of an environmental impact statement; preparation of a piping and instrumentation diagram. All aspects of the design are completed with regard to statutory requirements. Students develop skills in team work, interpersonal relationships, decision making and technical capabilities.

CHEN4091
Research Project Theory
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: 132 units of credit

The course requires that the student elect a topic in Chemical Engineering, undertake a literature survey on that topic and produce a report.

CHEN4092
Research Project Practice
School of Chemical Engineering and Industrial Chemistry
UOC12 HPW10
Prerequisite: CHEN4091

The experimental investigation of some aspect of an elected topic area in Chemical Engineering.

CHEN4093
Small Research Project Theory
School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4
Prerequisite: 132 units of credit

The course requires that the student elect a topic in Chemical Engineering, undertake a literature survey on that topic and produce a report.

CHEN4094
Small Research Project Practice
School of Chemical Engineering and Industrial Chemistry
UOC8 HPW8
Prerequisite: CHEN4093

The experimental investigation of some aspect of an elected topic area in Chemical Engineering.

CHIN1006
Introductory Chinese 1 (Complete Beginners)
Department of Chinese & Indonesian Studies
UOC6 HPW6
Excluded: CHIN1000, CHIN1106, HSC Chinese, native speakers of Mandarin Chinese, GENT0436, GENT0437

This is an integrated Standard Modern Chinese language skills program for beginners without any knowledge of Chinese and for background (dialect) speakers with no previous character knowledge. Students are taught in different groups according to their language background. The program combines listening, speaking and reading. The emphasis is on the development of communicative language competence. It includes an introduction to Chinese culture and civilisation.

CHIN1007
Introductory Chinese 2
Department of Chinese & Indonesian Studies
UOC6 HPW6
Prerequisite: CHIN1006 or equivalent; Excluded: CHIN1000, CHIN1107, HSC Chinese, native speakers of Mandarin Chinese

Further consolidation and development of language skills acquired in CHIN1006.

CHIN2006
Intermediate Chinese Language 1
Department of Chinese & Indonesian Studies
UOC6 HPW5
Prerequisite: CHIN1000 or CHIN1007 or CHIN1107 or equivalent; Excluded: CHIN2000, CHIN2001, CHIN2005, CHIN2010, CHIN2105, CHIN2106

Designed for students who have acquired a basic level of spoken Chinese and a working knowledge of up to six hundred characters in their first year of study as well as for those students who enter the Chinese language program with an equivalent knowledge of Chinese characters. The language component combines thought provoking conversation topics with a communicative approach and consolidates writing skills. A cultural component and a component for background speakers complement the program.

Note: Excluded HSC Chinese. Students are grouped according to their language ability.

CHIN2007
Intermediate Chinese Language 2
Department of Chinese & Indonesian Studies
UOC6 HPW5
Prerequisite: CHIN2006 or CHIN2106 or equivalent; Excluded: CHIN2000, CHIN2001, CHIN2005, CHIN2010, CHIN2105, CHIN2107

A continuation of CHIN2006. The language component of 4 hours per week is complemented by the cultural component of 1 hour per week.

Note: Excluded HSC Chinese.

CHIN2210
Chinese English Translation
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: CHIN1100 or CHIN1207; Excluded: CHIN2100

Uses authentic texts to help students acquire advanced skills of translating from Chinese into English and vice versa. Techniques for analysing and rendering texts of different styles and degrees of complexity will also be examined.

CHIN2211
Interpreting between Chinese and English
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: CHIN1100 or CHIN1207; Excluded: CHIN3100

Specialises in two-way interpreting in various contexts including business, law, social welfare, health and public relations. The emphasis is on enhancing linguistic competence and cultural awareness while at the same time conveying professional knowledge and skills.

CHIN2220
Contemporary Chinese Literature
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: CHIN1100 or CHIN1207; Excluded: CHIN3020

Offers an overview of contemporary Chinese literature from 1949 to the present. Covers different genres such as short stories, prose and poetry as well as literary criticism.

CHIN2221
Classical Chinese Literature
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: CHIN1100 or CHIN1207

The ability to read classical Chinese or wenyan is essential for a thorough understanding of Chinese language, history and culture because, after all, the main corpus of literature on these topics is written in classical Chinese. Presents an overview of China's literary tradition focussing, in particular, on literary techniques used in a variety of text types such as poetry, essays, fiction and drama.

CHIN2222
The Chinese Lyric Journey: Classical Poetry and Painting
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: CHIN1100 or CHIN1207 or CHIN3107

Examines the interrelationship between classical Chinese poetry and painting in a broad context of Chinese poetics and aesthetics from an interdisciplinary perspective. A comparative approach will also be adopted to explore the similarities and differences between Chinese and European aesthetics - such as Chinese literati artists and French impressionists - paying particular attention to the philosophical and cultural milieu of their times. In addition to theoretical writings, the class will read and analyse classical Chinese literary and artistic works which will be treated both as artistic creations and objects of aesthetic appreciation.

CHIN2301
Chinese Social and Cultural Change through Visual Art
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Traces and analyses Chinese social and cultural change through visual art. In this course, art is considered a significant sociocultural text and is examined and analysed as such. While mainly following anthropological approaches, this study is, to a large extent, interdisciplinary. Development and transformation of visual art in China are examined with the aim of understanding social and cultural change in contemporary China. Students also gain a knowledge of relevant and current anthropological and cultural theories and their application to the study of Chinese culture and art.

Note: The course will be taught in English.

CHIN2302
Chinese Cinema
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GENT0421

Since the mid-1980s, films from China have received critical acclaim in many circles and substantial scholarly response, both from within and outside Chinese Studies. Analyses significant feature and documentary films from China, beginning with examples of the cinema of the 1930s and 1940s, and highlights from the cinema of the hard-line Communist period. Examines examples from the ideological thaw in the late 1970s, the New Wave films of the 1980s and several avant-garde films from the 1990s.

CHIN2303
Gender in Contemporary China
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Aims at gaining insights into the situation of gender among China's Han majority and its many ethnic minorities. Examines gender in various contexts such as politics, religion, economy, the arts, ethnicity, Westernisation and globalisation. Specific topics include ideology of gender relations, sexual division of labour, gender representation in theatre and visual arts, gendered roles in religious practices, marriage customs, and morality and sexuality. Students learn relevant cultural theory and its application to the study of gender in contemporary China. Study materials include relevant academic writings and multimedia sources.

CHIN2310
Along the Silk Road: Conquerors, Traders and Explorers
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GENT0420

Introduces students to the many cultural influences, which contributed to the formation of the ancient world along the 'Silk Road'. The 'Silk Road' has been the link between the great civilisations of Europe and Asia. Travelled by conquerors, missionaries, traders and explorers, the 'Silk Road' carried ideas, religion, arts, technologies, cuisines and diseases, as well as silk and trade goods of all descriptions.

CHIN2313
Introduction to Chinese Performing Arts
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Offers insights into various forms of Chinese performing arts and their origins, historical development, contemporary situation and interactions beyond China. Learning materials include relevant academic writings and multimedia sources. Students learn contemporary cultural theory through examining live cases of Chinese performing arts.

CHIN2314
Introduction to Chinese Musical Culture
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 36 units of credit

A systematic introduction to traditional and contemporary Chinese musical culture. Students learn contemporary theories in ethnomusicology, anthropology and cultural studies and their application in Chinese studies and the study of musical culture. Study materials include relevant academic writings, multimedia sources, and live performance.

CHIN2400
China Imagined and Perceived
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Through texts of literature, philosophy, literary and cultural criticism and theory, supplemented by films of both Chinese and Western origin, this course examines how the Chinese depict themselves and how they are imagined/portrayed by other cultures.

CHIN2500
Advanced Chinese Business Language
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: CHIN1207

Introduces students to the language requirements for business and management in China through project work on Chinese language management case studies. Discusses and analyses a number of case studies and students will do project work and prepare presentations based on these cases.

CHIN2501
Chinese Business Enterprise
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 48 units of credit; Excluded: IBUS2105, MGMT2105

An introduction to business and management in the People's Republic of China. Covers China's macro-economic and micro-economic environment, including enterprise reform, enterprise finance and stock markets, accounting and taxation, foreign trade and internationalisation, and the management of foreign invested enterprises. The nature of Chinese business enterprises and management practices will be covered in detail, as well as Australian-Chinese business relations, including trade and investment links.

CHIN2502
Commercial Chinese
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: CHIN1207

Introduces students to the language requirements for foreign investment in China through project work on Sino-foreign joint venture enterprises and wholly owned foreign enterprises. We will study the application and approval process and the related forms and documents. Students will develop their own projects and prepare Chinese language documentation.

CHIN3004
Advanced Chinese (In-Country)
Department of Chinese & Indonesian Studies
UOC6 HPW5
Prerequisite: CHIN2000 or CHIN2005 or CHIN2007 or CHIN2107 or equivalent; Excluded: CHIN1206, CHIN3000, CHIN3106

Designed to combine in-country cultural experience with intensive language training at an advanced level. This summer course develops students' communicative competence in a Chinese university setting. Aims to expand knowledge of Chinese characters and general language competence in a variety of areas. Prepares students to enter CHIN3006 at a higher level from where they can proceed to Professional Electives and Chinese Studies courses.

CHIN3006
Advanced Chinese 1
Department of Chinese & Indonesian Studies
UOC6 HPW5
Prerequisite: CHIN2000 or CHIN2005 or CHIN2007 or CHIN2107 or equivalent; Excluded: CHIN1206, CHIN3000, CHIN3106

Aims to further develop students communicative competence in Chinese to a level at which they can discuss contemporary social, cultural and intellectual issues. A wide range of texts and authentic materials from Chinese media are studied. This course is open to native speakers who require remedial teaching before proceeding to the Professional Electives in Chinese language and the Chinese Studies courses.

CHIN3007
Advanced Chinese 2
Department of Chinese & Indonesian Studies
UOC6 HPW5
Prerequisite: CHIN3006 or CHIN3106 or equivalent; Excluded: CHIN1207, CHIN3000, CHIN3107

Further consolidation and development of language skills acquired in CHIN3006.

CHIN3030
Professional Communication Skills in Chinese 1
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: CHIN3007 or CHIN3107 or equivalent

Aims to provide students with Chinese communication skills at a level beyond Advanced Chinese Language, with particular focus on communication skills needed in professional settings, such as writing professional letters, reading newspaper editorials and technical documents, public speaking, and understanding topics of a more technical nature.

CHIN3031
Professional Communication Skills in Chinese 2
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: CHIN3030 or equivalent

Further consolidation and development of professional communication skills acquired in CHIN3030.

CHIN3900
Advanced Chinese Studies
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 36 units of credit including 12 units of Chinese at credit level; Excluded: CHIN3300

Examines the major issues and questions that have informed research on China by classical sinologists and contemporary China scholars. Topics include Chinese Literature, Cultural and Gender Studies, Chinese Linguistics, Provincial Studies and Socio-economical issues. Students will become acquainted with the major authors and their contributions to the field. This is one of two courses designed primarily for intending Honours students who want to prepare themselves for the research work involved in an Honours degree in Chinese or Asian Studies.

CHIN3901
Research Methods in Chinese Studies
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 36 units of credit including 12 units of Chinese at credit level; Excluded: CHIN3301

Familiarises students with the research tools and methods available for research in Chinese Studies, including Chinese Literature, Cultural and Gender Studies, Chinese Linguistics, Provincial Studies and Socio-economical issues. This is one of two courses designed primarily for intending Honours students who want to prepare themselves for the research work involved in an Honours degree in Chinese or Asian Studies.

CHIN4000
Chinese Honours Research Full-Time
Department of Chinese & Indonesian Studies
UOC24 HPW5
Prerequisite: 54 units of credit in Chinese Studies at an average of 70%, CHIN3900 or CHIN3300, CHIN3901 or CHIN3301

Students will complete two coursework components and write an Honours research thesis of between 15,000 and 20,000 words.

Note: Intending Honours students are recommended to contact the Head of Department at an early stage in their undergraduate studies to discuss their selection of courses and their proposal for the Honours research project.

CHIN4050
Chinese Honours Research Part-Time
Department of Chinese & Indonesian Studies
UOC12 HPW3
Prerequisite: 54 units of credit in Chinese Studies at an average of 70%, CHIN3900 or CHIN3300, CHIN3901 or CHIN3301

Students will complete two coursework components and write an Honours research thesis of between 15,000 and 20,000 words.

Note: Intending Honours students are recommended to contact the Head of Department at an early stage in their undergraduate studies to discuss their selection of courses and their proposal for the Honours research project.

CHIN4500
Combined Chinese Honours Research Full-Time
Department of Chinese & Indonesian Studies
UOC12 HPW2
Prerequisite: 48 units of credit in Chinese Studies at an average of 70%, CHIN3901 or CHIN3301

For Combined Honours, students are required to present a thesis and complete a coursework program as approved by the Heads of the two participating Schools/Departments.

Note: Combined Honours programs require coordination between the two schools/departments involved.

CHIN4550
Combined Chinese Honours Research Part-Time
Department of Chinese & Indonesian Studies
UOC6 HPW2
Prerequisite: 48 units of credit in Chinese Studies at an average of 70%, CHIN3901 or CHIN3301

For Combined Honours, students are required to present a thesis and complete a coursework program as approved by the Heads of the two participating Schools/Departments.

Note: Combined Honours programs require coordination between the two schools/departments involved.

COFA0201
Graphics, Global Communication and Society
College of Fine Arts
UOC6 HPW3

Online Elective Course

Graphics, Global Communication and Society (GGCS) concerns meaning-making in graphic design within global and national contexts, and complements theoretical and practical studies in art and design. During the last two decades of the 20th century computers, digitisation and information technology have contributed to significant changes in graphic design. Parallel to these changes are the cultural, socio-economic and political perspectives on graphics and the representation of national experience. These profound changes affect the way knowledge is produced and consumed just as the invention of printing transformed the dissemination of information in Renaissance Europe. Although the digital revolution has transformed the roles, working methods, project management and production processes for designers and printers, the digitisation of text and pictures has also exerted a compelling influence on the aesthetics and designing of the graphic image in print and electronic media for a global audience.

Graphic design is a social activity in which the digital reconfiguration of the image engenders new forms of visual experiences. The course content addresses theoretical and methodological issues in the production and consumption of graphics, in particular cross-cultural significance in contemporary society, including form and function in global communication design; pictorial and narrative structures in visual communication; systems of icons and symbols as a global visual language, and the influence of technology on aesthetics and visual experience.

This fully online course comprises a series of lectures, learning activities and assessment tasks delivered via the Internet using an engaging interface that specifically supports textual and visual communication. Your assessment tasks will include individual and team projects to encourage group participation and collaboration, complemented by regular tutor and peer student feedback to enhance your understanding and critical analysis of graphics within global and social contexts.

Excluded: GEND0201.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COFA0202
Collaboration & Play in Interactive Design
College of Fine Arts
UOC6 HPW3

Online Elective Course

Over recent decades we have witnessed a massive influx of interactive environments, many of which form a significant part of our culture and daily lives. These take many forms such as entertainment, communications, business and surveillance devices to name but a few. Many of these new forms are poorly understood, however this poses exciting new opportunities for future designers and artists to explore uncharted territory. Collaboration and play are essential forms of research and production, both facilitated by and responsible for these emerging media forms. This fully online course examines the underlying features of interactivity combining theories of new media and play with collaborative art and design practice.

This online course comprises a series of six lectures plus learning activities and assessment tasks that seek to discover and understand the underlying 'language' of interactivity and extend into practical approaches to creating interactive experiences within collaborative environments. The content includes the study of interactive media (from non-computer interactions to wireless devices), questions existing conventions of interactivity, explores the notions of play and iterative design (in which new ideas are 'found' by generating successive versions of a project) and culminates in the production of interactive works.

Assessment tasks will include individual participation and online team projects to encourage group interaction and collaborative processes, which are essential to discovering and defining this new and exciting paradigm.

Excluded: GEND0202.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COFA0203
Collaboration & Visual Communication in Graphic Design
College of Fine Arts
UOC6 HPW3

Online Elective Course

The activity of *designing* has witnessed a definitive shift in attitude over the past decade. More and more designers, from a variety of disciplines, are choosing to adopt collaborative working approaches when undertaking commercial and experimental projects. Design theorists now acknowledge that designing is fundamentally a collaborative, interdisciplinary, geographically distributed and multimedia activity; thus supporting the notion of an evolution in contemporary design methodology. This significantly challenges the traditional paradigm of *designing* being a personal activity and contradicts opinion that collaboration hinders, rather than enhances, a designer's thought process. The traditional design process, seen as an individual's reflective dialogue with their work, no longer seems solely applicable in contemporary design practice.

This online course specifically recognises the emergence of 'collaborative design' in contemporary graphic and visual communication. It responds by utilising a specifically designed interface, allowing you to engage in peer collaboration, visual exchange and conceptual dialogue via the Internet. By working in small teams (where your fellow participants are often in different locations) you will take part in a unique and dynamic online design process. You will examine creative and conceptual approaches to graphic design by engaging in theoretical and visual research, abstraction of ideas and resolution of collective design proposals. Both individual and group assessment/feedback will be given throughout the course to enhance your experience of creative collaboration in graphic design.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COFA0207
Textile Design: Tradition & Contemporary Technology
College of Fine Arts
UOC6 HPW3

Online Elective Course

In 20 years time, will clothes be intelligent, self cleansing, or grown from a living layer of tissue?

This fully online course will look at the exciting possibilities of the future of textile design in relationship to the body including wearable fabrics, clothing, extensions and accessories. Developments in textile technology are evolving at a rapid pace, with innovations that will allow you to reassess what textiles for the body can be. The course will look at textile design in relationship to both the surface and structure of a 'fabric'.

The topics will look at the interdependence and relationship between traditional techniques and contemporary technology and how developments across both areas have revolutionised textiles. The course will also look at how these advancements are impacting how we dress today, the materials being used for clothing now, the future potential for wearable fabrics and what these may mean in the future. The course will explore these developments with reference to artists, designers and companies.

You will learn how to analyse the development of textile design from fundamental theoretical and historical viewpoints. You will also be able to identify how contemporary textile design for clothing and the body has been influenced by the interrelationship between traditional and technological processes. By experimenting with your own individual projects you will examine the influence of traditional processes on technology and how traditional techniques utilise new technology. Through collaborative projects you will explore the innovative potential of the characteristics and functions clothing may have in the future. You will learn how to appreciate the scope of textile design for the body.

Excluded: GEND0207.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COFA0208
Fashion in Contemporary Culture
College of Fine Arts
UOC6 HPW3

Online Elective Course

Why do high-heeled shoes feature in the television series Sex and the City? How are fashion, gender and sexuality linked? Why can women now wear a cheongsam dress and trainers? Fashion history and theory is one of the most rapidly developing areas of humanities research, drawing upon new theories of the body, social space, surfaces, ephemerality and popular culture.

This course examines fashion as a vehicle of self-fashioning since the 1980s. It will present a variety of theoretical methods to interpret the fashion choices of post-modern society.

You will study themes including fashion and identity politics; the 'post-subculturalist'; fashion design and the street; gender and consumerism; cross-cultural dressing. You will examine topics including music and dress; dress and sexuality; vintage, retro and second-hand clothing; 'anti-fashion'; 'costume play' and Japanese 'cuteness' (kawaii); and the spectacle of the contemporary fashion parade.

The course will include topics and collaborative assessment in which 'net society' plays a role. Your tasks may range from online diaries to role-plays as a fashion victim having to defend your stance.

Excluded: GEND0208, SAHT2227.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COFA0209
Cross Cultural Installation Art
College of Fine Arts
UOC6 HPW3

Online Elective Course

The course focuses on the increasing globalisation of contemporary art practice, in particular installation art, as an outcome of the outreach of international media, communications, migration, cultural commerce, international cultural events, cultural exchange and tourism.

It addresses the culturally diverse backgrounds of COFA's, and UNSW's, students as both a creative resource and entry point for concept based, intra subjective research in the studio.

The project work emphasises the creative application of students' existing technical skills and aims to enhance the student's ability to manipulate spatiality, imagery, objects and materials to create installed artworks. A high level of engagement with aesthetics is encouraged to amplify the students' perceptual awareness of their artwork and everyday environment, along with reflection upon their subjective world. Through the analytical and critical interpretation of each other's work and current exhibitions, an appreciation of contemporary installation art will be fostered. The development of the artworks' conceptual content in concert with methods to represent these individual ideas and insights is integral to the course's curriculum.

A group studio theory project will increase the students' knowledge of the field, and a thread of professional practice throughout the course will teach exhibition skills as a vocational attribute.

Excluded: GEND0209.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COFA0210
Spatial Branding
College of Fine Arts
UOC6 HPW3

Online Elective Course

It may seem obvious why a fashion boutique stamps a big logo on the front of its commercial premises, however, ask yourself: why do local councils label street signs in their municipality with a council emblem, or why do public parks nowadays have a logo designed to represent them?

Most environments we encounter on a daily basis have been designed to carry a specific visual identity or brand. Some of the more obvious examples include retail stores, shopping malls and themed parks. Today, however, even train stations, public parks and city districts are being visually branded.

The course Spatial Branding explores a range of commercial and non-commercial spaces. It examines how visual identity has been programmed into these spaces and how this affects the user-experience. Through these examples, the course aims to evaluate the practice of 'spatial branding', focusing on some of the relevant social, commercial and ethical issues. As part of the practical aspect of the course, students will learn how to create a spatial identity and apply it to a range of environments, after which students will be introduced to the fabrication process and learn how a tender is put together.

This course includes a series of online lectures, individual and group tasks and site visits (in your locality) that will provide you with insight needed to identify social and commercial implications arising from the practice of 'spatial branding'.

Excluded: GEND0210, SDES3103, SDES3110.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 6 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

COMD1001
Development Studies: The Emergence of Underdevelopment
Faculty of Arts and Social Sciences
UOC6 HPW3
Excluded: COMD1000

Introduces and analyses the emergence in the pre and post industrial world of notions of progress and development and relates them to the emergence of a modern world characterised by poverty, conflict, and socio-economic inequalities. Examines the transformation of the modern world via an analysis of different and often overlaping modes of production including hunter/gatherer, tributary (agricultural) and capitalist modes. Examines the emergence and characteristics of contemporary debates around issues of 'development', 'imperialism' and 'globalisation'.

COMD1002
Development Studies: Poor World, Rich World
Faculty of Arts and Social Sciences
UOC6 HPW3
Excluded: COMD1000

Examines the characteristics and interpretation of the poor world/rich world divide. Traces the relationships between the rich world from 1945 to the present focusing on the international division of labour, militarism, the roles of finance capital, multinationals and the multilateral agencies, and the attempts of some societies to escape the 'poverty trap'. Countries will be examined to see if they can serve as models, as well as development predictions about countries like Brazil, Russia, India and China will be examined. The role of women, minorities and issues such as the environment in development will be considered.

COMD2000
The Theory and Practice of Development
School of Social Science and Policy
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GLST2104, INST2400, POLS2023, SLSP2701

The theories developed to explain the different rate and pattern of economic and social development within and between countries and regions and the policy consequences of these explanations are analysed and compared. The theories covered include explanations for different rates of development internal and external to nation states based on social, market, technological and other factors. Significant cases studies of policy experience from Latin America and Asia, where a variety of economic and social policy approaches have been adopted are examined. The current status of debates about the nature of underdevelopment and its solutions is reviewed.

COMD2010
(Un)Making the Third World: History and Global Development B
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GLST2101, HIST2040, HIST2060, SPAN2424, SPAN2428

Explores the history of dictatorship and democracy in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. In geographical terms, the focus is on Latin America with a particular focus on Argentina, Brazil, Chile, Peru, Mexico, Cuba, Guatemala and Colombia. The historical trajectories, current circumstances and future prospects of these nation-states will be examined in relation to themes such as authoritarianism, violence, terror, fear, democracy, liberty, freedom, nationalism, revolution, US hegemony, neo-liberalism and globalisation.

COMD2020
(Un)Making the Third World: History and Global Development A
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GLST2102, HIST2061, INST2000, SPAN2429

Explores the history of underdevelopment and development in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. Themes include: colonialism, nationalism, decolonisation and post-colonial states; the history and politics of development in the Cold War and post-Cold War era; the state and economic development; the role of international organisations such as the World Bank and the IMF; and the question of globalisation. In geographical terms, the focus is on sub-Saharan Africa, especially the Democratic Republic of the Congo; the Middle East, especially Egypt; South Asia, especially India; Southeast Asia, especially Indonesia; and Northeast Asia, especially South Korea.

COMD2050
Sustainable Development, Globalisation & the Third World
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HPSC2550, INST2401, SCTS3106

This course is about sustainable development along with the technological and social changes that are involved in achieving it, both at a national and global level. It is divided into three parts: (1) the historical causes of the present global environmental and economic crisis; (2) possible solutions to problems of food production, environmental degradation, industrialisation, energy use, and population growth; (3) ideas for a New World Economic Order and the economic and technological changes required to bridge the ever increasing gap between rich and poor nations.

COMD4000
Development Studies Honours (Research) Full-Time
School of Social Science and Policy
UOC24 HPW4
Prerequisite: 54 units of credit in COMD at 65% or better including 12 units of credit at the 3000 level and permission of the Coordinator of Development Studies

Honours (Research) students are required to prepare a thesis of between 15,000 - 20,000 words which must be submitted by a date specified by the Coordinator and to complete two fourth year seminar courses.

COMD4050
Development Studies Honours (Research) Part-Time
School of Social Science and Policy
UOC12 HPW2
Prerequisite: 54 units of credit in COMD at 65% or better including 12 units of credit at the 3000 level and permission of the Coordinator of Development Studies

Students are required to participate in two Honours research seminars, at least one taken in the first session of enrolment and complete a research thesis of between 15,000 and 20,000 words. The research seminars are to be selected with the permission of the Coordinator of Development Studies, and in consultation with the relevant program coordinator.

COMD4500
Combined Honours (Research) in Development Studies F/T
School of Social Science and Policy
UOC12 HPW2
Prerequisite: 48 units of credit in COMD including COMD2000 at an average of 70%

For Combined Honours, students are required to present a thesis as approved by the Heads of the participating Schools or Departments.

COMD4550
Combined Honours (Research) in Development Studies P/T
School of Social Science and Policy
UOC6 HPW2
Prerequisite: 48 units of credit in COMD including COMD2000 at an average of 70%

For Combined Honours, students are required to present a thesis as approved by the Heads of the participating Schools or Departments.

COMP1011
Computing 1A
School of Computer Science and Engineering
UOC6 HPW6

Defining problems. Reasoning about and solving problems using Logic, Abstraction, Specification, Algorithms and Data Structures. Exposure to a functional programming language (Haskell) for practical experience with these concepts. Introduction to software engineering and professional ethics. Lab: programming assignments.

Assumed knowledge: HSC Maths: 2 units (90-100), or 2 and 3 unit (100-150), or 3 and 4 unit (100-200).

Further Information
CSE class page www.cse.unsw.edu.au/~cs1011

COMP1021
Computing 1B
School of Computer Science and Engineering
UOC6 HPW6
Prerequisite: COMP1011 or COMP1711; Excluded: COMP1821, COMP1721.

The objective of this course is for students to develop proficiency in programming in a high level imperative language and to develop a background of relevant knowledge and skills on which to base further study of computing. Topics covered include: fundamental data structures and algorithms, program testing and debugging and the structure of computer systems. Practical experience of these topics is supplied by laboratory programming exercises and assignments.

Further Information: CSE class page: **www.cse.unsw.edu.au/~cs1021**

COMP1081
Harnessing the Power of Information Technology
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: Enrolment in a non-CSE program

In the digital age, it is increasingly becoming essential to use, innovatively and effectively, current and emerging information technologies to meet challenges of the new "knowledge economy". Topics include: history of IT, business and online applications, data and knowledge representation, coding and security, viruses, worms and other malware, programming principles and techniques. The course will examine latest information technology trends and outline new technologies on the horizon. Available to non-computing majors only.

Further Information: CSE class page: **www.cse.unsw.edu.au/~cs1081**

COMP1091
Solving Problems with Software and Tools
School of Computer Science and Engineering
UOC6 HPW5.5
Prerequisite: Enrolment in a non-CSE program

Introduction to building applications and using software tools to solve computing problems. Emphasis is on acquisition of fundamental skills in procedural programming and scripting. Topics include: software design and development, C syntax and semantics, algorithms and programming techniques, data representation, image processing and analysis, interfacing to libraries; Linux tools; command scripts; reporting, data analysis and transformation using a scripting language.

Note/s: Assumed knowledge: COMP1001 or COMP1081; Excluded: COMP1011, COMP1711.

Further Information: CSE class page: **www.cse.unsw.edu.au/~cs1091**

COMP1711
Higher Computing 1A
School of Computer Science and Engineering
UOC6 HPW7
Excluded: COMP1011, COMP1811.

As for COMP1011 but in greater depth and at a faster pace. Additional non assessable extension material (just for interest). Assumes no prior computing background but must be enthusiastic.

Assumed Knowledge: There is no specific assumed knowledge. We suggest this course be taken by those with HSC Maths 2 and 3 units: (145-150), or 3 & 4 unit Maths (186-200), or UAI > 97.

Note/s: Enrolment requires School approval which is granted automatically on submitting consent form.

(Please see http://www.cse.unsw.edu.au/~cs1711/consent-to-do-1711.html)

Further Information: CSE class page: **www.cse.unsw.edu.au/~cs1711**

COMP1721
Higher Computing 1B
School of Computer Science and Engineering
UOC6 HPW7
Prerequisite: a mark of at least 75 in COMP1011 or COMP1711; Excluded: COMP1021, COMP1821, COMP2811.

As for COMP1021 but in greater depth and breadth.

Further Information: CSE class page: **www.cse.unsw.edu.au/~cs1721**

COMP2011
Data Organisation
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP1021 or COMP2811 or COMP1721

Data types and data structures: abstractions and representations; dictionaries, priority queues and graphs; Search trees, heaps. File Structures: storage device characteristics, keys, indexes, hashing. Memory management. Programming assignments, Mid and final session examinations.

Further Information: CSE class page: **www.cse.unsw.edu.au/~cs2011**

COMP2041
Software Construction: Techniques and Tools
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP1021 or COMP1721 or COMP2811.

Software system decomposition and design. Overview of the software development life-cycle. Command languages. Version control and configuration management, programming for reliability. Testing and debugging techniques. Profiling and code improvement techniques. Practical work involving programming-in-the-large.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs2041**

COMP2091
Computing 2
School of Computer Science and Engineering
UOC6 HPW5.5
Prerequisite: COMP1091; Excluded: COMP2011, COMP2711

Abstract data types and data structures: sequential (lists, stacks, queues), dictionaries (binary trees, hashing), priority queues (heaps), graphs and networks. Implementation of associated algorithms in C. Informal analysis of efficiency. File structures: binary formats, direct access techniques, XML. Data compression, Huffman coding. Numeric representation and limitations. Conditional compilation, storage classes, memory management, function parameters, using profilers and debuggers. Interfacing to libraries. Introduction to multi-threading.

COMP2111
System Modelling and Design
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP1021 or COMP1721; Corequisite: MATH1081; Excluded: COMP2110.

This course introduces rigorous and formal methods for modelling system behaviour. The course will use the B Method (B), which is a formal method founded on set theory and logic. B supports the modelling of abstract specifications and the refinement of abstract specifications through to concrete implementations. Consistency of formal development is verified by proof obligations and formal proof. A toolkit (the B-Toolkit or Atelier B) assists with all aspects of the process.

The course will cover: set theory, logic, abstract machines, specification, animation, refinement, implementation, proof obligations and proof.

The course will also explore the relationship between formal B models and UML, the informal or semi-formal modelling notation for Object-Oriented design. The course will use case-studies and assignments to develop competence. The methods developed in this course will be used in the SENG2010 and SENG2020 workshops.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs2111**

COMP2121
Microprocessors and Interfacing
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP1021 or COMP1721 or COMP1091. Exclusions: ELEC2041, COMP9221, COMP3221, COMP2821.

Instruction Set Architecture (ISA), Floating point number representation, computer arithmetic, assembly and machine language programming, machine language fundamentals; addressing modes; instruction repertoire, assembly language programming methodology, interrupts and I/O interfacing (hardware and software), serial communication, timers, analog input and output, converting analog signals to digital signals (data acquisition), taking input from a variety of sensors and driving actuators, buses and memory system, low level device drivers.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs2121**

COMP2411
Logic and Logic Programming
School of Computer Science and Engineering
UOC6 HPW5

Introduction to logic for computer scientists: an elementary exposition of propositional logic and predicate logic from a computational point of view, including introduction to interpretations, models, proof procedures, soundness, and completeness. Automated deduction: clausal form logic and Horn clause logic, skolemisation, the Herbrand domain, unification, resolution and resolution strategies. Logic Programming: data representation, operational views of unification and backtracking, the notion of logical variable, reversibility, non-logical features, meta-programming, introduction to constraint logic programming and other paradigms. Lab: programming assignments in Prolog. Extensive practical work.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs2411**

COMP2711
Higher Data Organisation
School of Computer Science and Engineering
UOC6 HPW7
Prerequisite: COMP1721 or, a mark of at least 75 in COMP1021 or COMP2811; Excluded: COMP2011.

As for COMP2011 but in greater depth and breadth.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs2711**

COMP2811
Computing B
School of Computer Science and Engineering
UOC6 HPW6
Prerequisite: COMP1011 or COMP1711 or COMP1811; Excluded: COMP1021, COMP1721,COMP1821.

The objective of this course is for students to develop proficiency in programming in a high level imperative language and to develop a background of relevant knowledge and skills on which to base further study of computing. Topics covered include: fundamental data structures and algorithms, program testing and debugging and the structure of

computer systems. Practical experience of these topics is supplied by laboratory programming exercises and assignments.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs2811**

COMP2920
Professional Issues and Ethics for Computer Science
School of Computer Science and Engineering
UOC3 HPW3
Not available to students in CSE programs: 3645, 3722, 3726, 3728, 3648, 3651, 3652, 3653, 3749, 3647, 3715, 3755, 3756, 3757.

This course will develop a framework on which professional and ethical issues can be developed. Topics covered will include team and meeting skills, communication skills, interpersonal skills, software quality and process, survey of employment in IT, in addition to ethics. The course will be delivered using lectures, class discussions, written assignments, reading lists, the Internet, presentations, and invited speakers.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs2920**

COMP3111
Software Engineering
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2011 or COMP2711 or MTRN3530; Excluded: COMP9008.

The phases of the software lifecycle: requirements, specification, (informal and formal) analysis, design, implementation, testing, integration, and maintenance are studied. Also focuses on software project managment. A major group-based software development project is undertaken.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3111**

COMP3120
Introduction to Algorithms
School of Computer Science and Engineering
UOC3 HPW2.5
Prerequisite: COMP2011 or COMP2711; Excluded: COMP3121, COMP9101.

Design and algorithms using divide-and-conquer, greedy, inductive, parallel and systolic strategies. Models of computations. Correctness and complexity analysis. Time and space analysis: worst- and average- and amortised case algorithms. Algorithms: sorting and searching, trees, graphs and matrices.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3120**

COMP3121
Algorithms and Programming Techniques
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2011 or COMP2711; Excluded: COMP9101, COMP3120.

Correctness and efficiency of algorithms. Computational complexity: time and space bounds. Techniques for best-case, worst-case and average-case time and space analysis. Designing algorithms using induction, divide-and-conquer and greedy strategies. Algorithms: sorting and order statistics, trees, graphs, matrices. Intractability: classes P, NP, and NP-completeness, approximation algorithms.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3121**

COMP3131
Programming Languages and Compilers
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2011 or COMP2711; Excluded: COMP9102.

Covers the fundamental principles in programming languages and implementation techniques for compilers (emphasis on compiler front ends). Course contents include: program syntax and semantics, formal translation of programming languages, finite-state recognisers and regular expressions, context-free parsing techniques such as LL(k(and LR(k), attribute grammars, syntax-directed translation, type checking and code generation. Lab: implementation of a compiler in a modern programing language for a small programming language.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3131**

COMP3141
Software System Design and Implementation
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2110 or COMP3111.

This course will present rigorous and formal methods for the design and implementation phases of software system development. Also considered are testing and reuse of designs. As far as possible, software tools that can assist the process will be used. The material will be presented using case studies, and students will be required to undertake a project.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3141**

COMP3151
Foundations of Concurrency
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2011 or COMP2711; Excluded: COMP9151.

Concurrency = processes + communication. Communication via shared variables vs message passing. Models of concurrency: true concurrency vs interleaving. Abstractions: atomicity, locks and barriers, semaphores, monitors, threads, RPC, rendezvous. Classical problems: mutual exclusion, dining philosophers, sleeping barber, termination detection, gravitational N-body problem.

Practical work: programming assignments using the C-like language MDP.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3151**

COMP3161
Concepts of Programming Languages
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP2011 or COMP2711

Programming language paradigms: imperative, object oriented, declarative (i.e., functional and logic). Theoretical foundations of programming languages: syntax, operatational, axiomatic and denotational semantics. Implementation aspects of central language features, such as dynamic and strong typing, polymorphism, overloading and automatic memory management. Abstracting over programming languages and architectures: byte code approach, component software.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3161**

COMP3211
Computer Architecture
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2021 or COMP3222 or ELEC2041; Excluded: COMP9211.

Study the architecture & organisation of modern processors, and influences upon these, with emphasis on pipelined RISC machines; gain understanding of the design of the memory subsystem, I/O, and system level interconnect; become proficient in the use of tools such as VHDL and SimpleScalar for the description, simulation, and verification of architectural designs; complete a series of assignments leading to the design, implemention, validatation and assessment of a RISC system. It is assumed students are familiar with combinational and sequential logic design principles and have some experience in the use of CAD tools to describe and simulate digital systems.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3211**

COMP3222
Digital Circuits and Systems
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2121 or COMP2821. Exclusions: COMP2021, ELEC1041, COMP3881.

This course aims to provide students with a knowledge of problem solving with digital systems (computer systems and digital circuits). The basic building blocks of combinational and sequential circuits are introduced to develop circuit solutions to problems and to understand and implement the design and operation of hardware models of digital and computer systems. HDLs will be used to describe circuits and state of the art computer aided design tools will be used to design complex systems.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3222**

COMP3231
Operating Systems
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2011 or COMP2711, COMP2121 or ELEC2041; Excluded: COMP3891,COMP9201,COMP9283.

Operating System Organisation and services. Process management: scheduling, synchronisation and communication. Memory management: virtual memory, paging and segmentation. Storage management: disk scheduling, file systems. Protection and security. Distributed operating systems and file systems. Case studies: UNIX & NT. Lab: Programming assignments.

Assumed Knowledge: C

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3231**

COMP3241
Real -Time Systems: Specification , Design & Implementation
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP3231 or COMP9201 and, COMP3111 or COMP9008 or COMP2111 or COMP4001, or extended versions.

System taxonomy. Time and causality. Characteristics of real-time systems and their environment. Real-time systems design such as real-time UML; model driven and software architectures; software and requirements engineering for real-time systems; temporal reflection. Performance analysis: worst case execution time analysis; scheduling tasks (rate montonic, generalised rate, slack scheduling); reliability analysis and fault tolerance. Risk assessment and minimisation. Famous faults and disasters. Time triggered architectures and approaches. Real-time languages and language Extensions. Real-time communication.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3241**

COMP3311
Database Systems
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2011 or COMP2711; Excluded: COMP9311, INFS3608.

Data models: entity-relationship, relational, object-oriented. Relational database management systems: data definition, query languages, development tools. Database application design and implementation. Architecture of relational database management systems: storage management, query processing, transaction processing. Lab: design and implementation of a database application.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3311**

COMP3331
Computer Networks and Applications
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2011 or COMP2711 or MTRN3530; Excluded: COMP9331,COMP9833, COMP3931,TELE4352.

Networking technology overview. Protocol design and validation using the finite state automata in conjunction with time-lines. Overview of the IEEE802 network data link protocol standards. Addressing at the data link and network layers. Network layer services. Introduction to routing algorithms such as Distance Vector and Link State. Congestion control mechanisms. Internetworking issues in connecting networks. The Internet Protocol Suite overview. The Internet protocols IPv4 and IPv6. Address resolution using ARP and RARP. Transport layer: issues, transport protocols TCP and UDP. Application level protocols such as: File Transfer Protocol (FTP), Domain Name System (DNS) and Simple Mail Transfer Protocol (SMTP). There is a substantial network programming component in the assessable material.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3331**

COMP3411
Artificial Intelligence
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2011 or COMP2711; Excluded: COMP9414.

Machine intelligence. Principles: knowledge representation, automated reasoning, machine learning. Tools: AI programming languages, control methods, search strategies, pattern matching. Applications: computer vision, speech recognition, natural language processing, expert systems, game playing, computer-aided learning. Philosophical and psychological issues. Lab: logic programming assignments.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3411**

COMP3421
Computer Graphics
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2011 or COMP2711; Excluded: COMP9415.

Graphics hardware: scan conversion of lines and polygons. 2D transformations: windowing, clipping, viewports. User interfaces. 3D transformations: perspective transformation, 3D clipping, hidden surface removal, lighting and texture maps. Hierarchical modelling of objects, modelling curves and surfaces with splines and fractals. Graphics standards. Lab: programming assignments.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3421**

COMP3431
Robotic Software Architecture
School of Computer Science and Engineering
UOC6 HPW6
Prerequisite: Overall WAM of 80 and, COMP2011 or COMP2711 or COMP9024 or, enrolment in MIT program 8684 or GradCert program 7344.

An introduction to Intelligent agent design. Picking actions using planning, learning or engineered control. Both practical and theoretical components. Practical component: Re-implement parts of a real agent architecture on a robot. Assignment based. Emphasis on engineering a working system. Theoretical component: Introduction to a variety of research agent architectures including classical planning and reinforcement learning. Lecture and lab based.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3431**

COMP3441
Cryptography and Distributed Systems Security
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2011 or COMP2711 and, MATH1081 or MATH1090 and, a mark of at least 65 in COMP3331 or 12uc of courses with a mark of 75 or better.

Topics chosen from: intrusion detection, prevention, and response, ciphers and cryptanalysis, private key and public key systems, secure hash functions, cryptographic protocols, protocol analysis, digital signatures, public key infrastructures, authentication, key agreement, authorization, timestamping, trust management, social and legal issues, Java security model, digital cash, payment protocols, digital rights management, zero knowledge protocols, complexity theoretic foundations, quantum cryptography.

Assumed Knowledge: MATH1081 Discrete Mathematics.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3441**

COMP3511
Human Computer Interaction
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP2011 or COMP2711; Excluded: COMP9511.

Provides an introduction to user-system interactions, both analysis and design. The approach is cognitive, focusing on matching user goals with computer technologies. Topics: the human information processing system, models of interaction, strategies for and process of design and evaluation. Project work is emphasised.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3511**

COMP3711
Software Project Management
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: Completion of stage 1 in Software Engineering programs, or completion of stage 2 in Bioinformatics or Computer Engineering programs. Excluded: COMP3710, COMP3720.

This course will provide students with the analytical and practical skills to plan, develop and improve the effectiveness of a project through hands-on team and project managment. The purpose of the course is to provide fundamental insights and introduce project managment tools and techniques that will be useful throughout an engineer's career.

Further Information: CSE class page: **www.cse.unsw.edu.au/~cs3711**

COMP3821
Extended Algorithms & Programming Techniques
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: a mark of at least 70 in COMP2011 or COMP2711; Excluded: COMP3120, COMP3121, COMP9101, COMP9801.

As for COMP3121 but in greater depth.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3821**

COMP3891
Extended Operating Systems
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: a mark of at least 70 in COMP2011 or COMP2711 and, COMP2121 or ELEC2041; Excluded: COMP3231,COMP9201, COMP9283.

As for COMP3231 Operating Systems but in greater depth and breadth.

Assumed Knowledge: C

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3891**

COMP3901
Special Project A
School of Computer Science and Engineering
UOC6

The student will complete a small research project under the supervision of a member of the academic staff of the School. The project will be assessed on the basis of a project written by the student.

COMP3902
Special Project B
School of Computer Science and Engineering
UOC12 HPW1

The student will complete a medium-sized research project under the supervision of a member of the academic staff of the School. The project will be assessed on the basis of project written by the student.

COMP3931
Extended Computer Networks and Applications
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: a mark of at least 70 in COMP2011 or COMP2711 or MTRN3530; Excluded: COMP9331,COMP9833, COMP3331,TELE4352.

As for COMP3331 Computer Networks and Applications but in greater depth and breadth.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs3931**

COMP4001
Object-Oriented Software Development
School of Computer Science and Engineering
UOC6 HPW4
Prerequisite: COMP2011 or COMP2711

This course will cover object-oriented design and implementation methods for complex software systems. Topics covered include: object-oriented program design techniques, object-oriented programming in C++, software reuse and designing for reuse, design patterns and styles, object persistence and distribution. Examples from a wide range of application areas will be used at all stages to illustrate concepts and techniques.

Assumed Knowledge: Competency in C.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4001**

COMP4003
Industrial Software Development
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: COMP9024 or enrolment in MIT program 8684 or GradCert program 7344.

Introduction to development and distribution of large software systems. Use of industrial tools for maintaining the code base and for producing quality portable, deliverable code. Methods for producing systematic test suites. Additional topics include licensing issues, software configuration, and internationalisation.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4003**

COMP4121
Advanced and Parallel Algorithms
School of Computer Science and Engineering
UOC6 HPW4

Topics chosen from: Spatial, semi-structured and multi-dimensional data storage and manipulation techniques, non Von-Neumann techniques, advanced and parallel algorithmic techniques, algorithm engineering and problem solving practices; algorithms for matrices and systems of linear equations, approximation algorithms, FFT and convolution and their software and circuit implementations, iteration methods for the solution of operator equations.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4121**

COMP4132
Advanced Functional Programming
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP3131 or COMP9102.

Note: Available to students in CSE programs only.

Programming techniques: combinator libraries, concurrency, monadic programming, graphics and multimedia applications. Implementation techniques: compilation by program transformation, optimisation techniques.

Parallel programming: FP approaches to high performance computing, distributed implementation.

This course will be taught in a seminar format, with students expected to give presentations based on readings of primary and secondary sources. In addition, each student needs to solve a medium sized programming assignment.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4132**

COMP4151
Algorithmic Verification
School of Computer Science and Engineering
UOC6 HPW4
Prerequisite: COMP3151 or COMP9151 or, enrolment in MIT program 8684 or GradCert program 7344, or permission from the lecturer in charge.

This course is an Advanced Topics in Concurrency occasional elective; a change of name is expected each year.

Topics will be chosen from: semantics models of concurrent and distributed systems (e.g. process algebra, event structures, Petri nets, Chu spaces), linear versus branching time, interleaving versus partial order semantics, true concurrency, semantic equivalences, modal and temporal logic for concurrent systems (proof theory and applicants), algorithmic verification (model checking, automa on infinite structures, synthesis), reasoning about knowledge in distributed systems.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4151**

COMP4161
Advanced Topics in Software Verification
School of Computer Science and Engineering
UOC6 HPW4

This course is about mechanical proof assistants, how they work, and what they can be used for. It presents specification and proof techniques used in industrial grade theorem provers, teaches the theoretical background to the techniques involved, and shows how to use a theorem prover to conduct formal proofs in practice. The courses is intended to bring third/fourth year and postgraduate students into contact with teh current research topics in the field of theorem proving and automated deduction and to teach them the necessary skills to sucessfully use industrial grade verification environments in modelling and verification.

Topics covered included: higher order logic, natural deduction, lambda calculus, term rewriting, data types and recursive functions, induction principles, calculational reasoning, mathematical proofs, decision procedures for a variety of logical domains, and proofs about programs.

Note: experience with (first-order) logic and functional programming is required.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4161**

COMP4211
Advanced Architectures and Algorithms
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: a mark of at least 70 in COMP3211 or COMP9211.

This course builds on an understanding of COMP3211/9211 Computer Architecture to allow advanced features of current general purpose and embedded processors to be appreciated. Related research themes in computer architecture such as multiple issue, instruction level parallelism, dataflow, multiprocessing and multithreading are exposed. The course develops research and presentation skills through readings, presentations, and project work.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4211**

COMP4411
Experimental Robotics
School of Computer Science and Engineering
UOC6 HPW5
Prerequisite: Overall WAM of 75 and, 12 units of credit from COMP3### courses or 12 units of credit from COMP9### courses, or enrolment in the postgraduate Autonomous Systems major.

Artificial Intelligence Concepts in Robotics. The approach is experimental, with hands-on experience with a small mobile robot kit. Topics covered will include a selection from: history and philosophy of robotics, hardware components and subsystems, sensors, measurements and perception, robotic architectures, multiple robot systems, localisation problem and solutions, robot learning, navigation and obstacle avoidance, robot planning, robot vision and vision processing.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4411**

COMP4412
Introduction to Modal Logic
School of Computer Science and Engineering
UOC6 HPW4
Prerequisite: COMP9101 or COMP3121 or COMP2411 or, enrolment in MIT program 8684 or GradCert program 7344, or permission from the lecturer in charge.

This course aims to introduce fourth year and beginning graduate students to modal logic. Modal logic is used widely in computer science to model a variety of systems including databases, communication protocols, software, multi-agency and knowledge systems. This course will address the basic axioms, techniques, model theory of modal logic and some representative applications. This course will be assessed on the basis of student presentations and assignments.

Syllabus: Standard modal axioms such as K, T, 4 and 5. Kripke's possible world semantics. Soundness and completeness. The canonical model theorem. Logics of belief and knowledge. Logics of time and computation. If time permits, filtrations and the finite model property.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4412**

COMP4415
First-order Logic
School of Computer Science and Engineering
UOC6 HPW4
Prerequisite: COMP9101 or COMP3121 or COMP2411 or, enrolment in MIT program 8684 or GradCert program 7344, or permission from the lecturer in charge.

This course is a presentation of the kind of logic useful for knowledge representation and reasoning. It begins with the elements of first-order logic using tableau methods and proceeds to soundness and completeness, and compactness. Using compactness it addresses issues like expressibility to show, for instance, why transitive closure is not first-order. The course concludes with an introduction to non-monotonic reasoning as a formalization of common sense reasoning.

Note/s: Permission of lecturer in charge is required.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4415**

COMP4416
Intelligent Agents
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: a mark of at least 65 in COMP3411 or COMP9414.

Agents are computational entities that act autonomously in a dynamically changing environment in order to achieve their goals. This course covers the foundations, engineering and applications of intelligent software agents, with an emphasis on theories and architectures for rational agents and on personal assistant applications. Topics include modelling intention, BDI (Belief, Desire, Intention) agent architectures, methodologies for engineering multi-agent systems, communication, coordination and negotiation in multi-agent systems, and applications of agents in electronic commerce and interface design.

This course will involve in-depth and intensive reading, and assume a high level of mathematical maturity and critical analysis. Assessment is by participation in class discussion and essay.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4416**

COMP4418
Knowledge Representation and Reasoning
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP3411 or COMP9414 or COMP4415, and 6 units of credit in COMP3### or COMP9###.

Knowledge Representation and Reasoning (KRR) is at the core of Artificial Intelligence. It is concerned with the representation of knowledge in symbolic form and the use of this knowledge for reasoning. This course presents current trends and research issues in Knowledge Representation and Reasoning (KRR). It enables students interested in Artificial Intelligence to deepen their knowledge in this important area and gives them a solid background for doing their own work/research in this area. The topics covered in more detail are AI Logics, Probablilistic Reasoning, Constraints, and Game Theory.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4418**

COMP4431
Computer Game Programming Workshop
School of Computer Science and Engineering
UOC6 HPW2
Prerequisite: COMP3421.

This course is run in conjunction with SOMA3610 Digital Studio. Students will form teams containing programmers (this course), artists and designers (SOMA3610) to create a computer game. There will be invited lectures from the game industry, AI researchers, artists and designers from the College of Fine Arts (COFA) and computer graphics researchers.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4431**

COMP4904
Industrial Placement Program
School of Computer Science and Engineering
UOC0
Excluded: COMP4903, COMP4905.

COMP4904 is an optional 6-month industrial work experience, available to students in Computer Engineering, Software Engineering, Bioinformatics programs and for Computer Science students who have completed Year 2 (96 units of credit). COMP4904 satisfies the industrial training requirements for students in Computer Engineering, Software Engineering and Bioinformatics programs.

Students are required to submit to the School evidence from their employers confirming completion of the work experience and a report, typically 2000 words long, summarising the work done and the training received.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4904**

COMP4910
Thesis Part A
School of Computer Science and Engineering
UOC3 HPW7
Prerequisite: 126 units of credit, and enrolment in Computer Engineering or Computer Science programs 3645 or 3722 or 3726, 3715 or 3978 Honours

Thesis part A and B are done in the last two semesters of the BE degree program. For full-time students, a nominal three hours per week in the first semester and fifteen hours per week in the second semester are devoted to directed laboratory and research work on an approved course under guidance of members of the academic staff. Usually, the Thesis involves the design and construction of experimental apparatus and/or software, together with appropriate testing and evaluation. For Part A, students are required to present a satisfactory seminar. For Part B, a written thesis must be submitted by the Tuesday of the final week of the semester.

Further Information: CSE class page **www.cse.unsw.edu.au/thesis**

COMP4911
Thesis Part B
School of Computer Science and Engineering
UOC15 HPW14
Prerequisite: COMP4910.

Thesis part A and B are done in the last two semesters of the BE degree program. For full-time students, a nominal three hours per week in the first semester and fifteen hours per week in the second semester are devoted to directed laboratory and research work on an approved course under guidance of members of the academic staff. Usually, the Thesis involves the design and construction of experimental apparatus and/or software,

together with appropriate testing and evaluation. For Part A, students are required to present a satisfactory seminar. For Part B, a written thesis must be submitted by the Tuesday of the final week of the semester.

Further Information: CSE class page **www.cse.unsw.edu.au/thesis**

COMP4920
Professional Issues and Ethics
School of Computer Science and Engineering
UOC3 HPW4
Prerequisite: enrolment in Computer Engineering program 3645, 3715, 3722, 3726, 3728.

This course will develop a framework on which professional and ethical issues can be developed. Topics covered will include team and meeting skills, communication skills, interpersonal skills, software quality and process, in addition to ethics. The course will be delivered using lectures, class discussions, written assignments, reading lists, the Internet, presentations, and invited speakers.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs4920**

COMP9018
Advanced Graphics
School of Computer Science and Engineering
UOC6
Prerequisite: a mark of at least 65 in COMP3421 or COMP9415.

Assumed knowledge: Experience with OpenGL and Java.

This course covers advanced topics in graphics and related technologies with a strong hands-on and interactive focus. Topics include: advanced features of OpenGL; 2D and 3D still, interactive and animated file formats; advanced modelling and animation techniques; detailed surface models; performance optimisation; radiosity; ray tracing and optimisations; Monte Carlo and metropolis rendering; volumetric rendering; image based rendering; interactivity; collision detection and 3D graphics hardware design. Students will be given the opportunity to present seminars on research areas of interest to them, as well as experiment with 3D graphics software.

This course will be extremely interactive. You'll be expected to be involved.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9018**

COMP9116
Software System Development Using the B-Method and B-Toolkit
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP2111 or COMP3111 or COMP9008 or enrolment in MIT program 8684 or GradCert program 7344.

The B-Method is a rigorous mathematically based method for the development of reliable software. The method covers the complete software cycle from requirement s analysis through specification, design, implementation, testing, maintenance, and re-use. The B-Method is supported by the B-Toolkit: a collection tools of that provide for specification animation, proof obligation generation, theorem proving, configuration management, code generation, and documentation. The B-Method uses similar mathematical notation to Z, but does not use Z. Specifications are given in AMN (Abstract Machine Notation), which is a small abstract programmin g language. The B-Method is object based in the sense that systems of machines use a number of different forms of inheritance to control visibility and inherit operations. There is no dependence on a particular programming language, but the current code generator generates C.

This course will explore the use of the B-Method and the B-Toolkit. The topics covered will include: The Abstract Machine Notation; Machine Composition; Refinement; Implementation; The method of presentation will use case studies to present the method; laboratory exercises to use the tools; a major project to apply all aspects of the method, and use of the tools.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9116**

COMP9117
Architecture of Software Systems
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: an overall WAM of 65, and COMP3111 or COMP9008 or COMP3141, and COMP3131 or COMP9102 or SENG3020, or enrolment in MIT program 8684 or GradCert program 7344.

Principal architectural issues associated with the design and construction of large scale software systesm. Study and evaluation of several well-known and frequently used architectural styles, patterns and frameworks. Study of pipes and filters, layered systems, distributed object-oriented systems, component-based systems, etc. The course will also examine the practical applicability of architecture research, specifically its relationship to the work in software reuse and component interopability of platforms such as J2EE, Microsoft, NET and CORBA. Case studies and exercises will be used to illustrate the architectural issues.

Note/s: This course is available to students in CSE programs only. There are a limited number of places.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9117**

COMP9242
Advanced Operating Systems
School of Computer Science and Engineering
UOC6 HPW4
Prerequisite: A mark of at least 75 in COMP9201 or COMP3231.

Covers operating systems design and implementation issues at an advanced level, focussing on specific issues such as performance and on current OS research areas. Topics selected from: Microkernels; user-level servers; performance; kernel implementation; device drivers; scheduling for real-time; effects and control of hardware caches; security and protection; persistent systems; security; dealing with large, sparse address spaces; experimental systems. A laboratory running a state-of-the-art microkernal system will be used to provide hands-on experience with low-level implementation of OS components.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9242**

COMP9243
Distributed Systems
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP3231 or COMP9201, COMP3331 or COMP9331.

A detailed coverage of distributed systems, with a particular focus on operating systems issues: client-server paradigm, remote-procedure call as OS support for client-server; distributed shared memory, distributed memory coherency; distributed file systems; distributed process management, including load sharing and process migration; concurrency control; fault tolerance, recoverability and distributed transactions; naming; industry standards; case studies.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9243**

COMP9314
Next Generation Database Systems
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP9311 or COMP3311 or INFS3608 or INFS5926 or INFS5992, and COMP9024 or COMP2011 or COMP2711, or enrolment in MIT program 8684 or GradCert program 7344.

Detailed examination of current developments and future trends in database, web, and e-commerce technologies. The emphasis will be on the following topics: modeling, querying, and integrating e-catalogs, integration frameworks for B2B EC applications, and web-based databases.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9314**

COMP9315
Database Systems Implementation
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP9311 or COMP3311 or INFS3608 or INFS5926 or INFS5992, and COMP9024 or COMP2011 or COMP2711, or enrolment in MIT program 8684 or GradCert program 7344.

Detailed examination of techniques used in the implementation of relational, object-oriented and distributed database systems. Topics are drawn from: query optimisation, transaction management, advanced file access methods, database performance tuning.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9315**

COMP9318
Data Warehousing and Data Mining
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP9311 or COMP3311 or INFS3608 or INFS5926 or INFS5992, and COMP9024 or COMP2011 or COMP2711, or enrolment in MIT program 8684 or GradCert program 7344.

Data Warehouse: (a) Data Model for Data Warehouses. (b) Implementing Data Warehouses: data extraction, cleansing, transformation and

loading, data cube computation, materialized view selection, OLAP query processing. Data Mining: (a) Fundamentals: data mining process and system architecture, relationship with data warehouse and OLAP systems, data pre-processing. (b) Mining Techniques and Application: association rules, mining spatial databases, mining multimedia databases, web mining, mining sequence and time-series data, text mining, etc. The lecture materials will be complemented by projects /assignments.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9318**

COMP9321
e-Commerce Systems Implementation Infrastructure
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP9021 or COMP1021 or COMP1711 or COMP2811; or enrolment in MIT program 8684 or GradCert program 7344; Corequisite: COMP9311 or COMP3311 or INFS3608 or INFS5926 or INFS5992; or enrolment in MIT program 8684 or GradCert program 7344.

The goal of this course is to expose students to basic infrastructure for building web-based ecommerce applications. It discusses web application development techniques and enabling technologies including CGI scripts, remote method invocation, servlets, JSPs, Web access to databases, programmatic access to XML documents. The lecture materials will be complemented by several assignments and labs.

Excluded: COMP9316 and COMP9031

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9321**

COMP9322
e-Commerce Systems Engineering
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP9321or COMP9031 or COMP9316, and COMP9024 or COMP2011, and COMP9311 or COMP3311 or INF3608 or INFS5926 or INFS5992; or enrolment in MIT program 8684 or GradCert program 7344.

This course covers principles, techniques, architectures, and enabling technologies for the development of the different components and layers of complex e-commerce systems (presentation and personalization layer, business logic, message exchange). It discusses: (1) e-commerce transaction models, system architectures and functions, (2) enterprise applications development using J2EEE, (3) Web services and business process modelling, (4) security, transaction, payment protocols for enterprise applications, (5) e-catalogues, (6) inter-enterprise message exchange, and (6) personalization. The lecture materials will be complemented by several assignments and labs

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9322**

COMP9323
e-Enterprise Project
School of Computer Science and Engineering
UOC6 HPW3
Corequisite: COMP9322.

This course covers principles, techniques, architectures, and enabling technologies for the development of the different components and layers of complex e-Commerce systems (presentation and personalisation layer, business logic, message exchange). In particular, it discusses (1) advanced XML technologies as data exchange/transformation format, (2) a model-driven approach in Web application development, (3) business processes modelling and Web services, (4) business process automation with Web service standards, (5) security, transaction, payment protocols for enterprise applications, and (6) personalisation. The lecture materials will be complemented by several assignments and labs.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9323**

COMP9332
Network Routing and Switching
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP3331 or COMP9331.

This course will focus on the routing and switching architectures, algorithms and protocols for packet switching networks, both connectionless and connection oriented networks (such as IP and ATM networks). Advanced Internet addressing : CIDR, VPN, NAT. In depth discussion of interior and exterior routing protocols, such BGP, OSPF. IP over ATM solutions : such as LANE, Classical IP over ATM. IP switching and MPLS. Mobile IP. Internet Multicasting. Overview of emerging switching and routing technologies, such as optical routing and QoS routing. There is a substantial network programming component in the assessable material, for which C prgramming knowledge is assumed.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9332**

COMP9333
Advanced Computer Networks
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP3331 or COMP9331.

This course teaches the fundamentals and practical solutions to quality of service (Qos) based networks, with an emphasis on the next generation Internet architectures and protocols. Topics include: scheduling policies (fair queueing, priority queueing etc.), congestion avoidance/control schemes (RED, RIO etc), admission control, multimedia protocols (RTP, RTCP etc).

This course will also cover recent Qos related developments by IETF/IEEE such as : Intserv, Diffserv, RSVP, LAN, Qos. There will be hands on practical labs on network performance measurement and some network programming. The assessment of the course includes a substantial hands on project on building a network system in Linux/FreeBSD environment. C programming knowledge is assumed for labs and the project.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9333**

COMP9334
Capacity Planning of Computer Systems and Networks
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP3331 or COMP9331.

Techniques for performance evaluation of distributed systesms. These techniques will then be applied to designing systems to have good performance, and to the analysis of future workloads and the system changes required to cope with them.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9334**

COMP9416
Knowledge Based Systems
School of Computer Science and Engineering
UOC6 HPW3

Assumed knowledge: COMP9414 or COMP3411.

This course introduces students to the basic concepts in knowledge-based systems and provides practical experience through project work. The topics covered include: knowledge representation and problem solving; knowledge acquisition and machine learning; knowledge level modelling, expert systems lifecycles and expert system shells. A major component of this subject is a project in which students work in 3 teams to build expert systems that act as agents in a competitive simulation game.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9416**

COMP9417
Machine Learning and Data Mining
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP9024 or COMP2011 or COMP2711 or COMP2091 (or extended versions) or enrolment in MIT program 8684 or enrolment in GradCert program 7344.

Machine learning is the algorithmic approach to learning from data. This course covers the key techniques in data mining technology, gives their theoretical background and shows their application. Topics include: decision tree algorithms (such as C4.5), regression and model tree algorithms, neural network learning, rule learning (such as association rules), lazy learning, version spaces, evaluating the performance of machine learning algorithms, Bayesian learning and model selection, algorithm-independent learning, ensemble learning, kernel methods, unsupervised learning (such as clustering) and inductive logic programming (relational learning)

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9417**

COMP9444
Neural Networks
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP2011 or COMP2711 or COMP9024, and 12uc COMP3### or COMP4### or COMP9### - excluding Group A, or enrolment in MITprogram 8684 or GradCert program 7344.

Topics chosen from: Network architectures: perceptrons, Hopfield and Kohonen nets, ART models, back-propagation trained feed-forward networks, recurrent nets, weightless nets. Computational complexity analysis of training neural network architectures. Probabilistic analysis of generalisation capabilities of feed-forward networks. Hardware based neural nets. Introduction to fuzzy logic, neurotrained nets; designing successful applications of neural networks; tensor product networks; and recent developments in neural networks. The assessment will include a lab project related to application of neural nets.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9444**

COMP9515
Pattern Classification
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: COMP9024 or COMP2011 or COMP2711 or COMP2091 (or extended versions) or enrolment in MIT program 8684 or enrolment in GradCert program 7344.

The course has three basic aims: firstly to understand the field of pattern recognition in general, secondly to get familiar with pattern recognition techniques, and thirdly to obtain the ability to apply techniques to applications.

This course is an introduction to the subject of pattern recognition. We will cover theoretical foundations of classification and pattern recognition and discuss applications in character, speech, and other applications. A tentative list of topics includes: Bayesian decision theory, discriminate functions for normal class distributions, supervised learning, unsupervised learning and clustering, Structural and Syntactic pattern recognition, Edit distance, String matching, Statistical pattern recognition, and neural pattern recognition.

Assumed Knowledge for PG: MATH2859 or MATH2801 or MATH2901 or statistical course equivalent.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9515**

COMP9517
Computer Vision
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: 12 units of credit from COMP3### or 12 units of credit from COMP9### - excluding Group A.

Cameras and Radiometry, local shading models, Colour Vision perception, representation, modelling, linear filters for smoothing, edge detection using concvolution, fourier transform, scale and image pyramids, texture, segmentation by clustering, model fitting and probabilistic methods, tracking and Kalman filters, model-based vision, template matching using classifiers, recognition by relations, applications in robotics, medical imaging, satellite image analysis.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9517**

COMP9519
Multimedia Systems
School of Computer Science and Engineering
UOC6 HPW4
Prerequisite: COMP2011 or COMP2711 or COMP9024, 12uc level 3 or level 4 (for undergrads), or enrolment in MIT program 8684 or GradCert program 7344.

Provides an introduction to multimedia computing and distributed multimedia systems. The subject includes multimedia and agent fundamentals; multimedia application, structures and organization; interactive multimedia software authoring basics; information management issues; and dynamic agent and distributed processing.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9519**

COMP9790
Principles of Global Navigation Satellite System (GNSS) Positioning
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: 18 units of credit COMP3### or COMP9### courses, or enrolment in MIT program 8684 or GradCert program 7344; Excluded: GMAT4900.

This course will introduce the student to reference coordinate systems and time systems, satellite orbital motion, signal propagation and satellite tracking observables. The principles of positioning using the current two Global Navigation Satellite Systems (GNSS) will be studied: the U.S. developed Global Positioning System (GPS) and Russia's Global Navigation Satellite System (GLONASS). The mathematical models for pseudo-range and carrier phase-based modes of positioning, for both single receiver (absolute) positioning and relative positioning implementations, will be developed. These principles will be illustrated using the Matlab GNSS toolkit, which allows the student to develop algorithms for real and simulated data processing. Land, marine and airborne positioning applications will be discussed.

Physical attendance at the lab class is optional. Students with own copies of MATLAB need not attend, and may do exercises in their own time.

Further Information: See GMAT4900

COMP9791
Modern Navigation & Positioning Technologies
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: 18 units of credit COMP3### or COMP9### courses, or enrolment in MIT program 8684 or GradCert program 7344;Excluded: GMAT4910.

This course presents an overview of the various satellite-based and non-satellite navigation technologies and some of their applications. Various user receiver configurations, system augmentations and implementation issues will be analysed. These include: differential GPS schemes and services, real-time systems and their communication links, pseudo-range and carrier phase-based techniques, pseudolites, and other satellite-based positioning systems. In addition, the role of other sensors (such as gyros, accelerometers and inertial navigation systems - INS) and ancillary data can play in navigation will be discussed. Particular emphasis will be placed on the role such positioning technologies will play in Transport Telematics and for personal location, in relation to Location-Based Services, etc. Students will gain hands-on experience with a variety of navigation technology.

Further Information: See GMAT4910

COMP9844
Extended Neural Networks
School of Computer Science and Engineering
UOC6 HPW3
Prerequisite: (A mark of at least 70 in COMP2011 or COMP2711 or COMP9024) and (12uc COMP3 or COMP4 or COMP9 - excluding Group A) or enrolment in MITprogram 8684 or GradCert program 7344.

As for COMP9444 but in greater depth and breadth.

Further Information: CSE class page **www.cse.unsw.edu.au/~cs9844**

CRIM1000
Criminal Law and Justice 1
School of Social Science and Policy
UOC6 HPW4
Prerequisite: Enrolment in program 3422 Social Science (Criminology)

Introduces students to key processes of criminalisation, criminal law formation, established concepts of criminal law and the operation of criminal justice agencies. Considers forces and criteria behind criminalisation, and justifications for and against the use of criminal law as a mode of regulation. Examines key components of criminal law: conduct, circumstance and consequence, how these are operationalised in specific substantive areas of criminal law doctrine such as homicide and criminal defences. Particular attention will be paid to the criminal processes and the workings of the major criminal justice agencies such as the police, the DPP, defence lawyers, and the courts.

CRIM1001
Criminal Law and Justice 2
School of Social Science and Policy
UOC6 HPW4
Prerequisite: CRIM1000

Emphasises the operationalisation of criminal justice through the workings of key agencies. Examines particular areas of substantive criminal law doctrine and practice such as assault and sexual assault, public order offences, property offences and drugs offences. Examines sentencing and penalty, including justifications for punishment, sentencing options, the rise of retributivism, victim participation, and penal practices. Fosters a reflexive approach to the operation of criminal law and the criminal process, including consideration of the limits of criminal law as a mode of regulation in the light of technological and policy changes, and the blurring boundaries between criminal and civil law.

CRIM2000
Criminological Theories
School of Social Science and Policy
UOC6 HPW3
Prerequisite: CRIM1001

Examines the way in which crime is conceptualised in different theoretical traditions. Introduces students to the historical development of criminology and explores the interconnections between social and political context, criminological theory and crime control policy.

CRIM2014
Policing
School of Social Science and Policy
UOC6 HPW3
Prerequisite: CRIM1001; Excluded: LAWS2789, LAWX1789

Focuses on policing as a set of social and legal practices and institutions as a resource and as a regulator. Policing is placed in its social and historical contexts by assessing conflicting interpretations of its history and of police public relations. Topics include: police uses of law, the relevance of law to policing, and the effectiveness of statutory and other rules in influencing and controlling police decisions and activities, drug policing, police culture, the policing of social divisions, police corruption and deviance, the policing of public order, fictional representations of policing, investigative methods, developments in community, private and international policing, and the limits and possibilities of police reform.

CRIM2018
Crime, Power & Human Rights: Transnational Organised Crime & State Crime
School of Social Science and Policy
UOC6 HPW3
Prerequisite: CRIM1001

Many governments and the United Nations now regard combating transnational organised crime as an important national and international security issue, requiring exceptional policing measures which often override standard criminal justice procedures and human rights norms. Examines how criminological theory can be applied to the complex and often contradictory relationship between crime, human rights and the state by providing an overview of the debates regarding transnational and state crime. Topics include globalisation and crime; the war on drugs; the war on human smuggling/trafficking; the war on terror; the dispossession of indigenous communities; genocide; refugees; arbitrary detention and torture.

CRIM3000
Researching Crime and Justice
School of Social Science and Policy
UOC6 HPW3
Prerequisite: CRIM2000, SLSP2001

Examines the methodological, ethical and legal issues in relation to criminological research through a critical review of published research studies. Topics to be covered include: the availability and quality of official data, uses and abuses of criminal justice statistics, doing research on sensitive topics and vulnerable populations, problems of access, validity issues, ethical practice, political and legal issues.

CRIM3010
Comparative Criminal Justice: From Investigation to Trial
School of Social Science and Policy
UOC6 HPW3
Prerequisite: CRIM2000 and 30 units of credit at Upper Level

Introduces the aims, objectives and practice of comparative law, and the strengths and limitations of such an inquiry by focusing on aspects of criminal trial practice in various jurisdictions. Critically evaluates our criminal trial process by focusing on a number of themes, including: Bill of Rights; understanding adversarialism and accusatorial justice; inquisitorial or adversarial; transplanting legal cultures; confessions and the right to silence; plea bargaining; jury decision-making and controlling prejudice; double jeopardy.

CRIM4000
Criminology Honours (Research) F/T
School of Social Science and Policy
UOC24 HPW4
Prerequisite: 48 units of credit in Criminology Core Program and 48 units of credit in Social Science Core Program and SLSP3911 at an average of at least 65% and permission from the Head of School

Students are required to prepare a thesis of between 15,000-20,000 words. Partipation in prescribed seminars of at least four hours duration per week is also required.

CVEN0646
Water and Wastewater Engineering
School of Civil and Environmental Engineering
UOC3 HPW3

Basic concepts of hydraulics: Fluid properties, hydrostatics, motion of fluids, conduit flow and open channel flow. Scope and applications of hydrology: Hydrologic measurements, rainfall analysis, storm rainfall-runoff relations, flood estimation, surface and groundwater sources, transmission and distribution. Urban drainage design: Relationship between urban development and each of water supply, wastewater and stormwater drainage. Subdivision layouts.

Note: This is a servicing course for other schools.

CVEN0656
Soil and Pavement Engineering
School of Civil and Environmental Engineering
UOC3 HPW3

Basic properties of soils and soil mechanics; Classification of soils; soil forming processes; seepage of water through soils; shear strengths, bearing capacity, settlement of foundations, stability of slopes and embankments, earth pressures and simple design of retaining walls; Concepts related to land use and transport systems; Pavement design based on engineering classification;

site investigation for pavements, sampling and in-situ testing of subgrades, design practice of urban and rural roads, intersections and interchanges; base and sub-base materials; subgrade space improvement.

Note: This is a servicing course for other schools.

CVEN1021
Civil Engineering Practice 1A
School of Civil and Environmental Engineering
UOC4 HPW2

Introduction to the structure, nature and scope of civil and environmental engineering. Topics include: history of engineering; engineering today; organisation of the profession; the engineer in society; environmental, social and legal considerations; civil and environmental engineering failures and engineering responsibilities; communication methods and skills; oral presentations; report writing, presentation and expectations; case studies of major projects.

Assumed knowledge: 2 unit HSC English.

CVEN1022
Civil Engineering Practice 1B
School of Civil and Environmental Engineering
UOC6 HPW4

Following on from CVEN1021, this course introduces student to engineering and its place in society an demonstrates how the various engineering sub-disciplines are integrated in real-world civil engineering projects. The objective is to develop the students' skills in critical thinking, communication, teamwork and research. Topics include: communication methods and skills; oral and written presentations; the conduct of meetings; problem solving; recycling; public participation, including the role of sustainability and the influence of engineering practice, the engineer and the law.

Assumed knowledge: CVEN1021.

CVEN1023
Statics
School of Civil and Environmental Engineering
UOC4 HPW3

An introductory course in engineering mechanics dealing with conditions of equilibrium of structures and fluids. Topics include: two dimensional concurrent and non-concurrent force systems; resultant of forces; equilibrium of forces; distributed forces; centre of gravity; centroids; internal actions; analysis of beams (shear force and bending moment diagrams); analysis of frames (determinancy, internal hinges); analysis of trusses (methods of joints and sections); cables; fluid statics including hydorstatic pressure, body forces, buoyancy, stability, and manometry; introduction to three dimensional statics.

Assumed Knowledge: 2 unit HSC Mathematics

CVEN1024
Dynamics
School of Civil and Environmental Engineering
UOC4 HPW3

An introductory course dealing with mechanics of bodies and of fluids in motion. Topics include laws governing continuity, energy and momentum; dynamics of particles; planar motion of rigid bodies and of fluids; ideal fluid flow; simple spring mass systems responding to forces of simple form; applications to civil and environmental engineering problems.

Assumed knowledge: CVEN1023.

CVEN1025
Computing
School of Civil and Environmental Engineering
UOC4 HPW3

A course designed to introduce students to engineering computing, including computer programming; programming using spreadsheets; computer graphics and computer aided drafting (CAD).

Assumed knowledge: Basic computer literacy including the use of PC operating systems, word processors & text editors.

CVEN1026
Engineering Materials 1
School of Civil and Environmental Engineering
UOC4 HPW3

An introduction to the properties and behaviour of civil engineering materials including concrete, steel, other metals, polymers and ceramics. Topics include : (i) Concrete Technology : Cements, aggregates,. admixtures, workability, strength and durability; (ii) Metals Technology: Types of materials, mechanical properties of metals, response of metals to loading, creep and fatigue; (iii) Polymers: Classification of polymers, structure of polymers, creep and relaxation, deterioration of mechanisms and durability; (iv) Ceramics: Types of ceramic materials, mechanical and insulation properties and durability.

Assumed knowledge: CHEM1011.

CVEN1531
Introduction to Water and Atmospheric Chemistry
School of Civil and Environmental Engineering
UOC4 HPW4

Chemical species in the atmosphere and natural waters. Air and water pollutants. Basic structural chemistry and its environmental significance. Structural units in organic molecules, their formation and interconversion. Organic pollutants.

Assumed knowledge: CHEM1011.

CVEN1721
Environmental Engineering Practice 1A
School of Civil and Environmental Engineering
UOC4 HPW2

Introduction to the structure, nature and scope of civil and environmental engineering. Topics include: history of engineering; engineering today; organisation of the profession; the engineer in society; environmental, social and legal considerations; civil and environmental engineering failures and engineering responsibilities; communication methods and skills; oral presentations; report writing, presentation and expectations; case studies of major projects.

Assumed Knowledge: 2 unit HSC English

CVEN1722
Environmental Engineering Practice 1B
School of Civil and Environmental Engineering
UOC6 HPW4

Following on from CVEN1721, this course introduces students to engineering and its place in society and demonstrates how the various engineering sub-disciplines are integrated in real-world environmental engineering projects. The objective is to develop the students' skills in critical thinking, communication, teamwork and research. Topics include: communication methods and skills; oral and written presentations; the conduct of meetings; problem solving; recycling; public participation, including the role of sustainability and the influence of engineering practice, the engineer and the law.

Assumed Knowledge: CVEN1721.

CVEN2022
Civil Engineering Practice 2
School of Civil and Environmental Engineering
UOC3 HPW2
Prerequisite: 36 units of credit

The 2nd year integrating course introducing students to the multi-disciplinary nature of real world engineering problems and the relationship of engineering to the wider socio-economic environment. Case studies in formulation, modelling and resolution of engineering problems. A holistic approach to addressing complex engineering problems, engineering methodology, community participation and public involvement, sustainability, equity and distributional effects. Other topics include introduction to EIS and risk- quantification.

Assumed knowledge: CVEN1021, CVEN1022.

CVEN2023
Mechanics of Solids
School of Civil and Environmental Engineering
UOC3 HPW3
Prerequisite: CVEN1023

An introduction to the strengths of materials: properties of sections; concepts of stress and strain; stress-strain relationships; bars under axial force, bending moment, shear force, torsion; deflections due to bending and shear; combined stresses; stressses and strains at a point; principal stresses and strains.

Assumed knowledge: MATH1231.

CVEN2025
Engineering Computations 1
School of Civil and Environmental Engineering
UOC3 HPW3

Graphical data analysis; curve fitting and interpolation; simple and multi-linear regression; random variables and their properties; normal and binomial distributions. Functions of random variables and their simulation using computers; one and two sample interference methods. Risk-quantification; ecological risk assessment. Applied data analysis.

Assumed knowledge: MATH1231, CVEN1025.

CVEN2026
Engineering Materials 2
School of Civil and Environmental Engineering
UOC3 HPW3

The course builds on the concepts of CVEN1026 with topics in concrete technology, metals technology and fibre reinforced polymer composites. Concrete Technology: Mix design, quality control, long term effects (creep and shrinkage); high performance concrete and fibre reinforced concrete. Metals Technology: Volume change; corrosion; various types of steel including stainless steel. Fibre Reinforced Polymer Composites: Matrix materials, types of fibres, density of composites, absorption characteristics, durability and long term mechanical properties.

Assumed knowledge: CVEN1026.

CVEN2125
Systems Engineering
School of Civil and Environmental Engineering
UOC3 HPW2

The formulation and solution of engineering problems and their interfaces with other issues.. An holistic approach to addressing complicated engineering problems. Basic systems concepts applied to Civil and Environmental Engineering. Classification and representation of systems. Modelling of systems. Classification of fundamental systems problems of anlalysis, synthesis and investigation. Decision making. Allownace for variability and uncertainty. Case studies.

Assumed knowledge: CVEN1022, CVEN1025.

CVEN2126
Engineering Construction 1
School of Civil and Environmental Engineering
UOC3 HPW3

An introduction to elemental processes used in construction. Characteristics, selection and usage of plant and equipment, temporary works and specialist construction techniques. Researching issues associated with construction processes. Topics selected from: earthmoving; temporary works including scaffolding and formwork; dewatering systems; specialist techniques including drilling, compressed air and fluid power systems; explosives and blasting, ground anchors, grouting methods; aggregate production including quarrying, dredging, building construction including foundations, piles, cranes, steel construction, concrete construction and masonry construction; a selection of particular construction activities including dam construction, coffer dams and caissons, tunnelling, pipelines and road, railway and bridge construction.

Assumed knowledge: CVEN1022.

CVEN2222
Geotechnical Engineering 1
School of Civil and Environmental Engineering
UOC3 HPW3

A course covering an introduction to Geotechnical Engineering and Geology. Topics include: history of the earth; plate tectonics; fomation of different soils and rocks; classification of soils and rocks; structural geology and mapping; site investigation concepts and the geotechnical model.

Assumed Knowledge: CVEN1022.

CVEN2322
Structural Engineering 1
School of Civil and Environmental Engineering
UOC6 HPW6
Prerequisite: CVEN1023

The course consists of an analysis strand and a design strand. Analysis Strand: Revision of Mechanics of Solids; combined stresses and failure theorems. The principles and requirements of structural analysis of indeterminate trusses and simple frames; structural idealisation; determinancy; principles of virtual work; the force method (flexibility analysis). Design Strand: Introduction to limit states design and codes of practice (design objectives; strength; serviceability and durability limit states); loads and load combinations (dead, live, wind and earthquake loads); structural steel;: design of tension and stocky compression memebers; local buckling; Euler buckling; design of laterally supported steel beams; simple steel connections.

Assumed knowledge: CVEN2023.

CVEN2525
Introduction to Water Engineering
School of Civil and Environmental Engineering
UOC3 HPW3
Prerequisite: CVEN1023, CVEN1024.

Review of fluid properties, hydrostatics and manometry; extension of pressure, continuity, energy and momentum concepts introduced in CVEN1023 Dynamics (Bernoulli s equation, momentum flux and force balances); introduction to Navier Stokes Equations; turbulent and laminar flow; velocity profiles; energy losses and gains; pipe systems; boundary layers, skin friction and form drag; pump behaviour and selection; physical models.

Assumed knowledge: CVEN2023.

CVEN2722
Environmental Engineering Practice 2
School of Civil and Environmental Engineering
UOC3 HPW2
Prerequisite: 36 units of credit

The 2nd year integrating course introducing students to the multi-disciplinary nature of real world engineering problems and the relationship of engineering to the wider socio-economic environment. Case studies in formulation, modelling and resolution of engineering problems. A holistic approach to addressing complex engineering problems, engineering methodology, community participation and public involvement, sustainability, equity and distributional effects. Other topics include: introduction to EIS; risk-quantification; sources of information on natural and social systems; perception and communication; the media; and other current environmental issues.

Assumed knowledge: CVEN1722, CVEN2025.

CVEN3023
Civil Engineering Practice 3A
School of Civil and Environmental Engineering
UOC3 HPW2
Prerequisite: 84 units of credit

A project-based course integrating the material learnt in the various sub-disciplines of civil engineering. Multi-disciplinary projects are undertaken and involve the identification of major issues and the development of solutions for open-ended problems including considerations of the environmental, economic and social impacts of the proposed solutions. The objective is to further develop the students' research, teamwork, managerial and self-directed learning skills. This course is focal in Year 3 (S1) of the undergraduate civil engineering program reinforcing the material covered in Years 1 and 2 and in the courses being undertaken concurrently.

Assumed Knowledge: CVEN2022.

CVEN3024
Civil Engineering Practice 3B
School of Civil and Environmental Engineering
UOC3 HPW2
Prerequisite: 84 units of credit

CVEN3024 continues on from CVEN3023. A project based course integrating the material learnt in the various sub-disciplines of civil engineering. This course is focal in Year 3 (S2) of the undergraduate civil engineering program.

Assumed Knowledge: CVEN3023.

CVEN3025
Engineering Computations 2
School of Civil and Environmental Engineering
UOC3 HPW3

Topics include: Numerical solution of linear and non-linear equations; numerical integration, finite differences; differential equations, boundary value problems, initial value problems; eigenvalue problems; partial differential equations (civil and environmental engineering applications); an introduction to finite element analysis.

Assumed knowledge: MATH2019, CVEN2025.

CVEN3125
Engineering Construction 2
School of Civil and Environmental Engineering
UOC3 HPW3
Prerequisite: CVEN2126.

Construction management issues dealing with resources of people, money, equipment and materials. An introduction to the design, planning and management of constuction operations. Researching issues associated with construction operations. Topics include: sustainable construction, recycling, waste and environmental issues; construction site organisation of personnel; construction site layout; materials planning and procurement, suppliers, subcontractors; equipment management and maintenance; maintenance; estimating; work physiology; ergonomics; selected construction operations - design, planning and management.

Assumed Knowledge: CVEN2125.

CVEN3126
Engineering Management 1
School of Civil and Environmental Engineering
UOC3 HPW3

Basic techniques used in the management of engineering projects and engineering works; purpose and practices of management; management of resources including people, equipment and materials; project, asset and strategic management; management information systems.

Assumed knowledge: CVEN2125.

CVEN3222
Geotechnical Engineering 2
School of Civil and Environmental Engineering
UOC3 HPW3
Prerequisites: CVEN2023, CVEN2222.

An introductory course for fundamental and applied soil mechanics. Topics include: description of soil, clay mineralogy, basic phase relationships, confined and unconfined seepage, principle of effective stress, consolidation theory, stress distribution and settlement.

Assumed Knowledge: CVEN2025.

CVEN3223
Geotechnical Engineering 3
School of Civil and Environmental Engineering
UOC3 HPW3
Prerequisite: CVEN3222.

An introductory course to fundamentals of soil mechanics. Topics include: Mohr circle, failure criterion, strength of soils, soil testing, shear stress-strain behaviour of soils, slope stability, site investigation and mechanics of unsaturated soils.

Assumed Knowledge: CVEN2222.

CVEN3322
Structural Engineering 2
School of Civil and Environmental Engineering
UOC6 HPW6
Prerequisites: CVEN2023, CVEN2322.

A course consisting of a structural design strand and a structural analysis strand. Design strand: Reinforced concrete elements; revision of limit states, concrete mechanical properties, reinforcement types and properties; durability requirements; behaviour of cross-sections in bending at both service and ultimate loads; ultimate strength analysis and design of cross-sections in both flexure (singly and doubly reinforced, ductility); serviceability analysis and design of beams (cracked section analysis, deflection and crack control); ultimate strength in shear; bond anchorage and curtailment (simple and continuous beams and one-way slabs); short and slender concrete columns (interaction diagrams). Analysis strand: Stiffness method (displacement method) of analysis for beams and frames; second order behaviour of frames; slenderness effects in frames; elastic stability analysis; software applications; moment distribution applied to continuous beams and non-sway frames; plastic analysis of continuous beams.

CVEN3324
Structural Engineering 3
School of Civil and Environmental Engineering
UOC3 HPW3
Prerequisite: CVEN2322

A structural design course dealing with: laterally unsupported steel beams; steel plate girders; steel-beam columns; steel members subjected to biaxial bending; steel connections and detailing; plastic design of steel beams and frames; and timber engineering (including materials, design of simple elements and members, timber connections; domestic construction).

Assumed Knowledge: CVEN3322.

CVEN3438
Transport Planning and Environment
School of Civil and Environmental Engineering
UOC3 HPW3

There are two components of this course. The first deals with environmental acoustics including analytical techniques and procedures for noise impact assessment and control. The second component is concerned with analysis of traffic and transport systems, including the interactions between transporation, land use and the environment. Topics include: definitions and concepts related to land use and transport systems; equation of state; traffic generation; trip distribution; traffic assignment and mode choice; computer modelling of transport systems; assessment of environmental and community impacts.

Assumed knowledge: CVEN2025.

CVEN3448
Transport Engineering
School of Civil and Environmental Engineering
UOC3 HPW3

This course develops skills related to highway design and pavement evaluation. Topics include: introduction to road design including elements, history, terminology and driver influence; route location process; design practice of urban and rural roads, intersections and interchanges; computer aided design; road traffic loadings; sub-grade evaluation; base and sub-base materials; surfacings; pavement design including flexible pavements.

Assumed Knowledge: CVEN2222.

CVEN3526
Water Resources Engineering
School of Civil and Environmental Engineering
UOC3 HPW3

The course introduces the practice of engineering hydrology and its application in water resources management and flood estimation. Topics include: hydrological cycle, climatology, atmospheric circulation, meteorological measurements, precipitation, interpretation of data, streamflow measurement, runoff components, hydorgraph analysis, storm runoff and loss rates, rainfall estimation - IFD diagrams and design hyetographs, concepts of flood estimation, deterministic rational method, probabilistic rational method, time-area methods, unit hydrographs concepts.

Assumed Knowledge: CVEN2525, CVEN2025.

CVEN3527
Water Engineering
School of Civil and Environmental Engineering
UOC3 HPW3
Prerequisite: CVEN2525.

The course develops and expands knowledge in hydraulics and hydrology and their application in water engineering. Topics include: open channel flow - specific energy, specific momentum and force, Manning and Chezy equations, uniform flow, subcritical and supercritical flow, hydraulic jumps, gradually varied flow profiles, sediment characteristics, Shields diagram, beform, sediment stability, channel side slopes, suspended sediment, fluvial sediment transport capacity estimators, groundwater, hydraulic conductiviity, Darcy's Law, intrinsic permeability, water potential, hydraulic head, unsaturated zone, aquifers, aquicludes, aquitards, steady state flow, transient flow, effective stress, transmissivity, storativity.

Assumed Knowledge: CVEN3526.

CVEN3531
Principles and Applications of Aquatic Chemistry
School of Civil and Environmental Engineering
UOC3 HPW3
Prerequiistes: CHEM1011, CVEN1531.

Basic thermodynamic and kinetic concepts are extended in this course to enable analysis of complex aqueous systems typical of surface water, ground water and marine environments. The principles of acid-base behaviour, solid dissolution and precipitation, complexation, oxidation and reduction and interactions at solid surfaces are presented such that problems pertaining to natural system behaviour, water quality degradation and water and wastewater treatment can be coherently addressed. A problem solving approach is emphasised.

CVEN3723
Environmental Engineering Practice 3A
School of Civil and Environmental Engineering
UOC3 HPW2
Prerequisite: 84 units of credit

A project-based course integrating the material learnt in the various sub-disciplines of environmental engineering. Multi-disciplinary projects are undertaken and involve the identification of major issues and the development of solutions for open-ended problems including considerations of the environmental, economic and social impacts of the proposed solutions. The objective is to further develop the students' research, teamwork, managerial and self-directed learning skills. This course is focal in Year 3 (S1) of the undergraduate environmental engineering program reinforcing the material covered in Years 1 and 2 and in the courses being undertaken concurrently.

Assumed Knowledge: CVEN2722.

CVEN3724
Environmental Engineering Practice 3B
School of Civil and Environmental Engineering
UOC3 HPW2
Prerequisite: 84 units of credit

CVEN3724 continues on from CVEN3723. A project-based course integrating the material learnt in the various sub-disciplines of environmental engineering. This course is focal in S2 of Year 3 of the undergraduate environmental engineering program reinforcing the material covered in the courses being undertaken concurrently.

Assumed Knowledge: CVEN3723.

CVEN3725
Waste Management
School of Civil and Environmental Engineering
UOC3 HPW3

An introduction to waste management, from generation to treatment and disposal; including waste characterisation, waste minimisation, waste treatment and landfill design. Wastes generated in urban economies are the focus of the course, but mining and contaminated sites may also be included.

Assumed Knowledge: CVEN2222.

CVEN3726
Environmental Policy, Law and Economics
School of Civil and Environmental Engineering
UOC3 HPW3

An introduction to environmental policies at a range of institutional levels, including sustainable development principles; implementation of environmental policies by regulatory action at international, national, state and local levels; introduction to a range of environmental economic

analytical tools, and implementation of environmental policies by market mechanisms.

CVEN4000
Honours Thesis Part A
School of Civil and Environmental Engineering
UOC6
Prerequisite: 132 units of credit completed and WA of 62.

The thesis may describe directed laboratory, investigatory, design, field or research work on an approved subject and will be completed under the guidance and supervision of a member of the academic staff. This subject must be satisfactorily completed by all students wishing to obtain an honours degree.

Prerequisite: Only students having a weighted average as set by the School (currently > 62%) in all courses in Years 1, 2 and 3 will be permitted to undertake the honours thesis. All courses to the end of Year 3 in the disciline of the thesis topic.

CVEN4001
Honours Thesis Part B
School of Civil and Environmental Engineering
UOC4
Prerequisite: CVEN4000

Part B of the honours thesis. Course description as for CVEN4000.

CVEN4027
Civil Engineering Practice 4A
School of Civil and Environmental Engineering
UOC6 HPW4
Prerequisites; 36 units of credit from Year 3 including CVEN3024.

This final year integrating course involves formulating designs for and solution to real world civil engineering problems in the areas of structural and geotechnical engineering. The problems will be drawn form industry and will be mulit-disciplinary involving application of material learnt throughout the undergraduate program. The course will involve either group or individual project work and will involve the preparation fo working drawings and project reports similar to those required in industry.

CVEN4028
Civil Engineering Practice 4B
School of Civil and Environmental Engineering
UOC6 HPW4
Prerequisites; 36 units of credit from Year 3 including CVEN3024.

This final year integrating course involves formulating designs for and solution to real world civil engineering problems in structural engineering, construction and management. The problems will be drawn from industry and will be multi-disciplinary involving application of material learnt throughout the undergraduate program. The course will involve either group or individual project work and will involve the preparation of working drawings and project reports similar to those required in industry.

CVEN4029
Civil Engineering Practice 4C
School of Civil and Environmental Engineering
UOC6 HPW4
Prerequisites; 36 units of credit from Year 3 including CVEN3024.

This final year integrating course involves formulating designs for and solution to real world civil engineering problems in water, geotechnical and transport engineering. The problems will be drawn from industry and will be multi-disciplinary involving application of material learnt throughout the undergraduate progam. The course will involve either group or individual project work and will involve the preparation of working drawings and project reports similar to those required in industry.

CVEN4126
Engineering Management 2
School of Civil and Environmental Engineering
UOC3 HPW3

Tools and knowledge needed by engineering managers. Topics chosen from contracts management and administration; legal matters and professional practice; engineering economics and financial management; management of international projects; marketing; managing professional services.

Students are required to complete a minimum of 60 working days of approved industrial training, submit a report on this training before Week 4 of Session 1 Year 4, and to present a seminar during S1 outliing their industrial training experiences.

Assumed knowledge: CVEN3126.

CVEN4139
Advanced Construction and Project Management
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisite: CVEN3126, CVEN4126

Advanced construction technology topics and topics in the planning, design, organisation, coordination, staffing, administration, control and management of construction and allied projects.

CVEN4149
Professional Level Project Management Tools and Skills
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisite: CVEN3126, CVEN4126

Professional level construction and project management skills and techniques.

CVEN4159
Advanced Construction Technology and Engineering
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisite: CVEN3126, CVEN4126

State-of-the-art work associated with selected advanced topics in construction technology and engineering.

CVEN4225
Geotechnical Engineering 4
School of Civil and Environmental Engineering
UOC3 HPW3
Prerequisite: CVEN3222.

Theoretical and presumptive bearing capacity of shallow and deep foundations including pad, raft and piled foundations. Allowable settlement of foundations on soil and rock. Foundation construction including dewatering, temporary support, soil boring and pile driving. Special foundations for expansive soils and rock. Lateral earth pressures and retaining wall design.

Assumed Knowledge: CVEN3223.

CVEN4269
Environmental Geotechnics
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisites: CVEN3223, CVEN4225.

Geotechnical design of landfills; contaminant migration in soils; emediation of contaminated sites. Mine waste management, including tailings disposal and acid mine drainage.

CVEN4279
Rock and Slope Engineering
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisites: CVEN3223, CVEN4225.

Description of rock mass and discontinuities; rock strength and failure criteria.Core logging; field data collection, mapping and fracture surveys; data presentation; hemispherical projections;introductory rock slope stability; foundations on rock; excavation or rock; in-situ stress; stresses about underground openings; classification systems and tunnel support requirements; site investigations for landslides and slope stabilisation techniques; use of slope stability analysis programs. The course includes a compulsory 3 day field trip.

CVEN4289
Site Investigations and Dam Engineering
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisites: CVEN3223, CVEN4225.

A general review of foundations, dewatering and temporary support system, and parameters required for design of foundations, slopes and other structures. The influence of geology on geotechnical behaviour of soil and rock; weathering processes and profiles in valleys, site

investigation techniques - test pitting, drilling and water pressure testing; in-situ testing methods - SPT, CPT, vane shear, site investigation examples; laboratory shear strength testing and selection of design parameters; peak and residual strengths; triaxial and direct shear test; zoning of embankment dams. Design of seepage control, and design, specification and construction of filters for dams. Stability analysis for embankment dams. Foundation preparation, cleanup, grouting, specification and quality control for embankment dams.

CVEN4299
Advanced Topics in Geotechnical Engineering
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisites: CVEN3223, CVEN4225.

Topic 1 plus either of Topics 2 or 3 will be offered in any one year. Topic 1: An introduction to the fundamentals of critical state soil mechanics and soil plasticity. Topic 2: Advanced pavement engineering. Topic 3: Application of computer simulation techniques to geotechnical engineering problems.

CVEN4323
Structural Engineering 4
School of Civil and Environmental Engineering
UOC3 HPW3
Prerequisiite: CVEN3322.

The course deals with the design and behaviour of the following: one-way and two-way reinforced concrete slabs (including the Direct Design Method and the Equivalent Frame Method of analysis); retaining walls; footings; prestressed concrete beams and one-way slabs; and prestressed concrete anchorage zones.

Assumed Knowledge: CVEN3324.

CVEN4339
Design of Bridges
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisites: CVEN3322, CVEN3324, CVEN4323.

Fundamentals of bridge engineering (site selection; bridge type selection; standard superstructures and substructures; bridge hydraulics; bridge form); bridge codes; load distribution in bridges; preliminary design considerations for simply supported beam-and-slab and box girder bridges, continuous beam-and-slab bridges, cable-stayed bridges.

CVEN4349
Special Topics in Concrete, Steel and Composite Structures
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisites: CVEN3322, CVEN3324, CVEN4323.

Topics will be selected from the following. Concrete Structures: The art of detailing; design for torsion; yield line design; strut and tie modelling; time effects; design of continuous prestressed concrete beams. Steel Structures: Plastic analysis and design of steel structures. CompositeSteel-Concrete Structures: concrete filled steel tubes; connections, beam-slab systems; longitudinal shear and slip.

CVEN4359
Structural Analysis and Finite Elements
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisites: CVEN3322, CVEN3324, CVEN4323.

Application of finite elements to structural problems. Topics will be selected from 2D membrane elements and their application to shear walls and panels subject to in-plane loading; plate elements and their application to floor slabs and panels subject to out-of-plane loading; buckling analysis using finite elements; output checking.

CVEN4439
Transport Operations and Systems Design
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisite: CVEN3438

This course covers advanced topics on transport operations and design. Topics include: application of mathematical approaches to the operational characteristics of different modes of transport, congestion analysis, graphical and simulation techniques, network theory and queuing theory applications to ports, airports and railyards. Case studies related to ferry services, bus operations and freight transport are also covered.

CVEN4449
Traffic Management and Control
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisite: CVEN3438

An advanced course covering traffic management and control. Topics include traffic studies and capacity, integrated urban traffic management, arterial road traffic management measures and devices, traffic signal timing calculations, history, basic concepts, current signal setting practice, and intersection analysis with the SIDRA software package.

CVEN4459
Transport and Environment
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisite: CVEN3438

This course covers advanced topics on transport planning in the context of integration of land-use, transport and environmental consideration. Topics include the land use/transport/environment, trip generation, trip distribution, modal split, route choice modelling, traffic assignment, economic evaluation of transport and environmental impacts of transport.

CVEN4526
Water and Wastewater Treatment
School of Civil and Environmental Engineering
UOC3 HPW3
Prerequisites: CHEM1011, CVEN2525

The course introduces public health engineering, including water supply and wastewater disposal systems, water and wastewater treatment, water quality and contamination indicators. Topics include water quality parameters; unit operations in treatment of water and wastewater; potable water distribution systems; sewage collection systems; and stormwater systems.

Assumed Knowledge: CVEN3527.

CVEN4533
Transport and Fate of Pollutants
School of Civil and Environmental Engineering
UOC3 HPW3

Topics include pollutant sources; spreading of substances in air, water and groundwater environments; transport processes in rivers, estuaries, lakes and coastal waters; quantification of a groundwater resource, its sustainability and possible contamination.

Assumed knowledge: CVEN3525.

CVEN4539
Advanced Water Quality and Treatment
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisite: CVEN4526.

Topics will be selected from the area of water quality and treatment. Topics may include water and wastewater treatment; water quality in rivers, lakes, reservoirs, estuaries, and coastal waters; catchment processes and management; water quality modelling.

CVEN4549
Advanced Catchment and Coastal Processes
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisite: CVEN4526.

Topics will be selected from the area of catchment and coastal processes. Topics may include catchment processes and management; rainfall and flood estimation with reservoir yield analysis; groundwater systems; stormwater systems; fluvial processes and river engineering; coastal processes, coastal engineering and coastal zone management.

CVEN4559
Advanced Water Engineering
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisites: CVEN3526, CVEN3527.

Topics will be selected from the area of hydraulic and hydrologic systems. Topics may include hydraulic structures; groundwater investigations; hydrological data, analysis and risk assessment; stormwater control structures; computational hydraulics.

CVEN4569
Advanced Environmental Systems
School of Civil and Environmental Engineering
UOC4 HPW3
Prerequisite: CVEN4526.

Topics will be selected from the area of environmental systems and management. Topics may include environmental material accounting techniques; waste management; environmental risk assessment; groundwater system contamination; site remediation; microbiology; water quality in rivers, lakes, reservoirs, estuaries, and coastal waters; water quality modelling.

CVEN4727
Environmental Engineering Practice 4A
School of Civil and Environmental Engineering
UOC6 HPW4
Prerequisite: 132 units of credit

This final year integrating course involves formulating designs for and solutions to real world environmental engineering problems in the areas of chemical engineering, water and wastewater treatment, and environmental management. The problems will be drawn from industry and will be multi-disciplinary involving appllication of material learnt throughout the undergraduate program. The course will involve either group or individual project work and will involve the preparation of working drawings and project reports similar to those required in industry.

Assumed Knowledge: CVEN3723, CVEN3724.

CVEN4728
Environmental Engineering Practice 4B
School of Civil and Environmental Engineering
UOC6 HPW4
Prerequisite: 132 units of credit

This final year integrating course involves formulating designs for and solution to real world environmental engineering problems in the areas of groundwater, environmental geotechnics and waste engineering. The problems will be drawn form industry and will be multi-disciplinary involving application of material learnt throughout the undergraduate program. The course will involve either group or individual project work and will involve the preparation of working drawings and project reports similar to those required in industy.

Assumed Knowledge: CVEN3723, CVEN3724.

CVEN4729
Environmental Engineering Practice 4C
School of Civil and Environmental Engineering
UOC6 HPW4
Prerequisite: 132 units of credit

This final year integrating course involves formulating designs for and solutions to real world environmental engineering problems in water, geotechnical and transport engineering. The problems will be drawn from industry and will be multi-disciplinary involving application of material learnt thoughout the undergraduate progam. The course will involve either group or individual project work and will involve the preparation of working drawings and project reports similar to those required in industy.

Assumed Knowledge: CVEN3723, CVEN3724.

DANC1001
Dance Styles 1
Media, Film and Theatre
UOC6 HPW7.5
Prerequisite: Enrolment in program 3408

Establishes the basis by which students acquire a technical mastery over their bodies and involves the study of two essential dance styles: Classical Ballet and Modern Dance.

DANC1002
Dance Styles 2
Media, Film and Theatre
UOC6 HPW7.5
Prerequisite: DANC1001

Extends the student's acquisition of technical mastery over the body begun in Dance Styles 1.

DANC1101
Anatomical Foundations of Dance Education
Media, Film and Theatre
UOC6 HPW3
Prerequisite: Enrolment in program 3408

Studies the basic principles of anatomy as a foundation for the understanding of human movement and function.

DANC1102
Teaching Safe Dance
Media, Film and Theatre
UOC6 HPW3
Prerequisite: DANC1101

Provides the knowledge essential to a detailed analysis of dance technique in order to allow safe class construction and instruction. Injury prevention is a primary concern.

DANC2000
Dance Analysis and Composition 1
Media, Film and Theatre
UOC6 HPW4
Prerequisite: DANC1002 or THST1101 or THFI1002 or DANC1103 or FILM1101 or PFST1103; Excluded: THST2140, PFST2000

Studies (a) a range of systems and methods of analysing dance, leading to a comprehensive understanding of the ways in which movement makes meaning and (b) an introduction to dance making and the fundamentals of dance composition.

DANC2002
Theatre Production
Media, Film and Theatre
UOC6 HPW4
Prerequisite: DANC1002 or THST1101 or THFI1002 or DANC1103 or FILM1101 or PFST1103; Excluded: PFST2002

Addresses the question of how theatre and dance are presented and produced, provides the comprehensive theoretical basis involved in staging a production, along with practical experience in selected areas of production.

Note: Students should be aware that this course involves at least 20-30 extra hours of production time. This includes some weekday timeslots, and up to 5 evenings. Please check with the Staff Contact for exact dates and times.

DANC2005
Dance Analysis and Composition 2
Media, Film and Theatre
UOC6 HPW4
Prerequisite: DANC2000 or PFST2000; Excluded: PFST2005

A detailed study of the nature and role of composition in dance and the relationship between composition and the process and product of choreography.

Note: Composition workshops are of a highly practical nature. Students must be prepared to spend time outside of class working with peers on composition tasks.

DANC2007
History of Dance
Media, Film and Theatre
UOC6 HPW4
Prerequisite: DANC1002 or THST1101 or THFI1002 or DANC1103 or FILM1101 or PFST1103; Excluded: DANC2001, PFST2002

Explores the nature and historical background of dance as an art form and as musical theatre. The emphasis is on major events and figures in Western European, American and Australian ballet, modern and jazz dance.

DANC2103
Dance Styles 3
Media, Film and Theatre
UOC6 HPW7.5
Prerequisite: DANC1001, DANC1002

Course requires a demonstration of skill and competence in Classical Ballet, Modern Dance and Jazz Dance.

DANC2104
Dance Styles 4
Media, Film and Theatre
UOC6 HPW7.5
Prerequisite: DANC1001, DANC1002

Expands and consolidates the student's mastery of a range of practical dance styles.

DANC2105
Dance Styles 5
Media, Film and Theatre
UOC6 HPW7.5
Prerequisite: DANC1001, DANC1002

Expands and consolidates the student's mastery of a range of practical dance styles.

DANC2106
Dance Styles 6
Media, Film and Theatre
UOC6 HPW7.5
Prerequisite: DANC1001, DANC1002

Expands and consolidates the student's mastery of a range of practical dance styles.

DANC2107
Dance Styles 7
Media, Film and Theatre
UOC6 HPW7.5
Prerequisite: DANC1001, DANC1002

This course is the last in a carefully sequenced and graded series involving a range of styles. Students will be expected to display a high level of technical mastery over their bodies.

DANC2201
The Teaching-Learning Process in Dance
Media, Film and Theatre
UOC6 HPW4
Prerequisite: DANC1001, DANC1002

Introduces students to pedagogy in general and considers how dance may best be taught in the context of the Australian secondary school system.

DANC2203
Dance Teaching Practice
Media, Film and Theatre
UOC12
Prerequisite: DANC2209

Teaching experience consists of 40 days experience in a New South Wales secondary school. Students observe lessons conducted by experienced teachers and plan and deliver lessons for a number of classes, under the direction of supervising teachers. Students also become familiar with organisational aspects of a high school and activities other than those related to subject delivery, for example, school policies and general supervision of school students.

Note: This course is a formal requirement of the BA(Dance)BEd program.

DANC2209
Dance Method A
Media, Film and Theatre
UOC3 HPW2
Prerequisite: DANC1102, DANC2201; Excluded: DANC2210

Students are given a wide range of practical dance activities that will enable them to implement all levels of the NSW Syllabuses. They will examine the national Curriculum Document and investigate ways of integrating dance with the other major arts areas.

DANC2211
Dance Method B
Media, Film and Theatre
UOC3 HPW2
Prerequisite: DANC2209

This course, which extends and develops the work of Dance Method A, deals with the application of the experiences gained in schools towards the profession of teaching dance.

DANC4000
Dance Honours (Research) Full-Time
Media, Film and Theatre
UOC24 HPW5
Prerequisite: 54 units of credit in DANC/FILM/PFST/THFI/THST courses with an average of 65% in DANC

Students are required to undertake an original piece of research extending throughout the year and to submit a thesis of 20,000 words based upon it and to undertake a seminar in research method and complete a practical project accompanied by a written exegesis.

DANC4050
Dance Honours (Research) P/T
Media, Film and Theatre
UOC12 HPW3
Prerequisite: 54 units of credit in DANC/FILM/PFST/THFI/THST courses with an average of 65% in DANC

Students are required to undertake an original piece of research extending throughout the year and to submit a thesis of 20,000 words based upon it and to undertake a seminar in research method and complete a practical project accompanied by a written exegesis.

ECON1101
Microeconomics 1
School of Economics

UOC6 HPW3

Introduces economics as a social science: scarcity, resource allocation and opportunity cost; an introductory analysis of consumer behaviour; the economics of firms and markets; production and costs; the classification and analysis of markets; efficiency concepts and market failure; the gains from international trade and the impact of trade restrictions; economic growth and structural change.

ECON1102
Macroeconomics 1
School of Economics
UOC6 HPW3
Prerequisite: ECON1101

Provides an introduction to the analysis of aggregate output, employment and economic growth and their relationship to the policy issues of unemployment, inflation and the balance of payments. Other topics include: social accounting and aggregate income and expenditure analysis; macroeconomic models of income determination; consumption and investment functions; the role of money and financial institutions; interactions between goods and money markets in equilibrium and disequilibrium situations; and an analysis of recent Australian macroeconomic experience.

ECON1107
Elements of Environmental Economics
School of Economics
UOC6 HPW3
Excluded: ECON1101

This course provides an introduction to environmental issues, market failure, conservation and preservation of environment, discounting, sustainable economic growth and zero growth, measuring benefits and costs on environment, methods of controlling pollution, and management of environment.

ECON1202
Quantitative Methods A
School of Economics
UOC6 HPW3
Excluded: MATH1031, MATH1011, MATH1021, MATH1131, MATH1231, MATH1141, MATH1241, ECON2291

This course examines: mathematics of finance: (compound interest, present value, annuities); matrix algebra: (operations with matrices, determinants, matrix inverse, rank, solutions to matrix equations); the graphical approach to linear programming; calculus: (univariate differentiation, maxima and minima of a function, functions of several variables, partial derivatives, unconstrained and constrained optimisation) and the applications of the above concepts and techniques in accountancy and economics, including the use of spreadsheet computer programs.

Assumed Knowledge: A level of knowledge equivalent to achieving a mark of at least 60 in HSC Mathematics. Students who have taken General Mathematics will not have achieved the level of knowledge which is assumed for this course.

ECON1203
Quantitative Methods B
School of Economics
UOC6 HPW3
Prerequisite: ECON1202; Excluded:ECON2292, MATH1041, MATH2801, MATH2841, MATH2901.

Course topics include: frequency distributions; measures of central tendency; dispersion and skewness; introduction to probability theory; the binomial distribution; the poisson distribution; the normal distribution; point estimation of population parameters and confidence intervals; hypothesis tests; the t and chi square distributions; bivariate regression; estimation; and hypothesis testing.

ECON1301
Australia in the Global Economy
School of Economics
UOC6 HPW3
Excluded: ECOH1301, PECO1001

This course looks at the international economy at the end of the 19th century (trade, factor flows, and payments arrangements); problems of the international economy between the wars; the impact of World War II and the international economy in the post-war era; and Australian economic development and its relationship with the international economy in terms of economic fluctuations, problems of the inter-war period, growth of manufacturing, government policy and action, the importance of the mining industry, economic development and the distribution of income and wealth.

ECON1302
Australia and the Asia-Pacific Economies
School of Economics
UOC6 HPW3
Excluded: ECOH1302

This course focuses on Australia's economic relations with the countries of Asia and the Western Pacific since the 19th century, with particular emphasis on the period since the Second World War. Topics include: capital and trade flows, labour and immigration issues; the changing political structures; Australian colonial rule and economic development in Papua and New Guinea; the rise to economic power of Japan and its relations with Australia before the Second World War; resurgence of Japan in the 1950s and its dominance of Australia's trade; future relations with Japan; the emergence of the newly industrialising nations in Asia and their impact on Australia; the ASEAN group's special relationship with Australia; Sino-Australian economic relations; trans-Tasman economic integration; Australia's perceptions of Asia and the Pacific and obstacles to greater economic integration.

ECON2101
Microeconomics 2
School of Economics
UOC6 HPW3
Prerequisite: ECON1101

Economists believe that in a perfect world, with perfect information, under certain conditions, markets will allocate goods efficiently. Usually, markets do not function in this way. Firms may have market power, which they will exert in strategic ways to influence their rivals to gain advantage. Imperfect information presents a series of problems for firms, consumers and households, particularly for insurance and labour markets.

ECON2102
Macroeconomics 2
School of Economics
UOC6 HPW3
Prerequisite: ECON1102

This course covers models of aggregate income determination in open economies; theories of aggregate economic behaviour with respect to consumption and investment expenditures and financial transactions; balance of payments and exchange rate analysis; theories of inflation and unemployment; introductory dynamic analysis; and theories of growth and cycles.

ECON2103
Business and Government
School of Economics
UOC6 HPW3
Prerequisite: ECON1101

This course examines how government affects the business environment at the microeconomic level. The effects on business of government instrumentalities such as the Productivity Commission and the Australian Consumer and Competition Commission are examined. Issues relating to microeconomic reform, economic rationalism, market failure and government business enterprises are explored.

ECON2104
Applied Macroeconomics
School of Economics
UOC6 HPW3
Prerequisite: ECON1102

This course examines the big-picture issues that affect households, businesses and governments. The emphasis is on practical approaches rather than theoretical models.Topics include living standards, economic growth and inflation, the business cycle and economic forecasting, fiscal and monetary policy, the balance of payments, exchange rates, and employment and welfare policy.

ECON2105
Economics of Corporations
School of Economics
UOC6 HPW3
Prerequisite: ECON1101

Examines the economics of internal organisations in firms, corporations and other formal organisations. Addresses questions such as: why do organisations arise in market economies, how are incentives designed in organisations, how do organisations coordinate the decisions of many diverse agents, how does organisational design affect business strategy? Issues of transaction cost economics, informational economics and principal-agent theory are discussed.

ECON2109
Economics of Natural Resources
School of Economics
UOC6 HPW3
Prerequisite: ECON1101

Provides an introduction to the exploitation of natural resource systems examined within an economic framework, particularly forestry, fisheries, water, oil and other minerals. Also looks at policies required to ensure improved management without overexploitation of these renewable and non-renewable resources under different property-right regimes.

ECON2111
Globalisation
School of Economics
UOC6 HPW3
Prerequisite: ECON1102

This course analyses economic issues relating to the global economy and the effects of economic events on nations, with special emphasis on the effects of trade and economic interdependence on growth, welfare and the standard of living. It covers motives for tariff and non-tariff barriers, and the effects of strategic protection of high productivity industries, and the effects of new technologies. It also examines the consequences of increasing global interdependence on wages, with particular attention to different occupations and skill levels in the labour force. Students will also study issues facing the WTO, especially conflicts between international trade and the environment, human rights and labour standards.

ECON2112
Game Theory and Business Strategy
School of Economics
UOC6 HPW3
Prerequisite: ECON1101

Outlines the basic tools and concepts in game theory and explores its applicability to a wide variety of real business situations. Business decision-making is inherently strategic and game theory shows what outcomes occur when agents interact strategically with one another. Applications from auction theory, industrial organisation, labour and environmental economics and public policy are examined.

ECON2113
Economics of E-Commerce
School of Economics
UOC6 HPW3
Prerequisite: ECON1101

Electronic commerce is radically altering economic activities and the social environment. It affects large sectors of the economy, such as communications, finance, retail trade, education, health and government. It affects the way that businesses interact. This course examines the impact of e-commerce, and the way that business should behave strategically in this new environment. The topics covered include, (with case studies), the planning of product lines of information goods, the development of value-maximising pricing strategies, the management of intellectual

property rights, the strategic implications of lock-in and switching costs, and strategic choice in relation to government policy and regulation. Implications for international trade patterns and taxation policy are also explored.

ECON2116
Economics of Japanese Business and Government
School of Economics
UOC6 HPW3
Prerequisite: ECON1102

This course introduces a number of important facts concerning Japanese business and government and analyses them by applying theorectical frameworks and concepts such as game theory and comparative institutional analysis. This approach provides ways for understanding interconnections among a variety of Japanese-style business and labour market practices as well as tools for evaluating the effectiveness of Japanese industrial policy. Topics include: internal labour market; employment practices; work organisations; industrial relations; manufacturer-suppliers relationships; industrial policy (competition vs. collusion; R&D policy; protectionism).

ECON2117
Economics of Tourism
School of Economics
UOC6 HPW3
Prerequisite: ECON1102

Topics include: macro and micro economic environments; factors affecting international and domestic tourism; tourism forecasting models; economic analysis of projects; cost-benefit and related procedures; and the implications of tourism developments for the community in general.

ECON2127
Environmental Economics
School of Economics
UOC6 HPW3
Prerequisite: ECON1101

Considers the main elements of environmental economics and cost-benefit analysis as it relates to the assessment of environmental issues. Topics include: pollution and pollution policy; environmental cost-benefit analysis and economic methods for measuring costs and benefits; species extinction and irreversibility; environmental ethics and discounting; the environment and developing countries; and the sustainable economy.

ECON2206
Introductory Econometrics
School of Economics
UOC6 HPW3
Prerequisite: ECON1203

This course introduces econometrics and explores the representation of economic relationships by simple and multiple regression models; static and dynamic models; and the statistical complications of autocorrelation, collinearity, and heteroskedasticity. Practical computer applications feature throughout.

ECON2207
Econometric Methods
School of Economics
UOC6 HPW3
Prerequisite: ECON2206

This course covers estimation of econometric models using cross-section data, discrete choice models, and instrumental variable estimators. Practical computer applications feature throughout.

ECON2209
Business Forecasting
School of Economics
UOC6 HPW3
Prerequisite: ECON1203

This course looks at the use of econometric and statistical techniques relevant to forecasting in a business environment and computer implementation of the methods. Short-term forecasting using time series analysis; long-term forecasting with S-shaped growth curves and trend analysis. The study of applied work is emphasised in this non-specialist course.

ECON2215
Statistics for Econometrics
School of Economics
UOC6 HPW3
Prerequisite: ECON1203; Excluded: MATH2801, MATH2901, MATH2841, BEES2041

Statistical distribution theory: moments, normal, T, chi-square, F, and multivariate normal distributions. Basic asymptotic theory. Approaches to estimation and significance tests in univariate and multivariate models.

ECON2291
Quantitative Methods A (Arts)
School of Economics
UOC6 HPW3
Excluded: ECON1202, MATH1011, MATH1021, MATH1031, MATH1131, MATH1141, MATH1231, MATH1241

This course examines: mathematics of finance: (compound interest, present value, annuities); matrix algebra: (operations with matrices, determinants, matrix inverse, rank, solutions to matrix equations); the graphical approach to linear programming; calculus: (univariate differentiation, maxima and minima of a function, functions of several variables, partial derivatives, unconstrained and constrained optimisation) and the applications of the above concepts and techniques in accountancy and economics, including the use of spreadsheet computer programs.

Assumed Knowledge: A level of knowledge equivalent to achieving a mark of at least 60 in HSC Mathematics. Students who have taken General Mathematics will not have achieved the level of knowledge which is assumed in this course.

ECON2292
Quantitative Methods B (Arts)
School of Economics
UOC6 HPW3
Prerequisite: ECON2291; Excluded: ECON1203, MATH1041, MATH2801, MATH2841, MATH2901

Course topics include: frequency distributions; measures of central tendency; dispersion and skewness; introduction to probability theory; the binomial distribution; the poisson distribution; the normal distribution; point estimation of population parameters and confidence intervals; hypothesis tests; the t and chi square distributions; bivariate regression; estimation; and hypothesis testing.

ECON2313
Australian Economic Development
School of Economics
UOC6 HPW3
Prerequisite: ECON1102 Excluded: ECOH2313

This course examines the development of the Australian economy from the Long Boom and the Depression of the 1890s to the present day. It looks at Australian economic development and its main features: economic fluctuations and their consequences, especially the Depression of the 1930s; the rise of Australian economic institutions; changes in the philosophy of development and the role of government; migration and the inflow of foreign capital; development strategies of the States; impact of war; growth of manufacturing and industry policy; development of the services sector; problems of the agrarian economy; and changes in the standard of living. Also considered is Australia s changing economic relations with other countries and the world economy, and economic problems in the later 20th century in a historical perspective.

ECON2322
European Integration
School of Economics
UOC6 HPW3
Prerequisite: ECON1102 Excluded: ECOH2322, EURO2600

The objective of the course is to impart a knowledge and understanding of the institutions, current policies and likely directions of economic and social change within the European Union. This involves consideration of nation states which, through historical circumstances, have created differing institutional and policy directions (and in the case of Eastern Europe a different socioeconomic system) that now are in the course of being melded. Specific topics considered include the process towards a single market; the problems and implications of monetary integration; the trade distortions arising from the Common Agricultural Policy; the collapse of the Soviet system and the widening of the European Union; the operation of European multinationals; the process of privatisation in Europe; and European integration in relation to Australia and Asia. The

course is of relevance not only to those interested in European issues. It also has implications for other regional arrangements (ASEAN and NAFTA) which are at an earlier stage in the integration process.

ECON3101
Markets and Public Choice
School of Economics
UOC6 HPW3
Prerequisite: ECON2101

Considers the theory of various types of market failure including uncertainty, property rights problems and congestion, and the role of government in measuring, correcting and restructuring markets to remedy these problems.

ECON3104
International Macroeconomics
School of Economics
UOC6 HPW3
Prerequisite: ECON2102

This course considers topics in international macroeconomics, including nominal and real exchange rates, international capital markets and capital mobility, international business cycles, policy coordination and the international monetary system, financial crises and currency unions.

ECON3105
Economic Analysis of Productivity
School of Economics
UOC6 HPW3
Prerequisite/s: ECON2101 or ECON2105, ECON2112

Provides an economic analysis of the concept of productivity. What is productivity? Why does it matter? How can we measure it? Topics to be covered include; the microeconomic foundations of productivity levels and productivity growth, the measurement of productivity and empirical studies of productivity measurement for Australia and overseas countries.

ECON3106
Public Finance
School of Economics
UOC6 HPW3
Prerequisite: ECON1101

Topics covered include: general aspects of public sector expenditure and its financing with special reference to Australia; the role of government in the economy; principles and types of public expenditure; taxation theory, tax sharing and revenue systems; economic and welfare aspects of different types of taxes; inflation and tax indexation; loan finance and the public debt.

ECON3107
Economics of Finance
School of Economics
UOC6 HPW3
Prerequisite: ECON2101

Provides a treatment of the microeconomic foundations of modern finance. Many valuation or pricing formulas in modern finance are derived from the requirement that arbitrage profits are non-existent in properly functioning capital markets. The aim of the course is to show that the valuation formulas used in modern finance can also be derived from the microeconomic theory of markets in general equilibrium. Begins with a discussion of how economics agents make decisions when some aspect of the economic environment in which they operate is uncertain. This entails a discussion of expected utility theory and stochastic dominance, which form the cornerstone of modern financial economics. Asset pricing models are developed within the context of general eqilibrium portfolio choice problems. The notion that uncertainty in the economic environment can be dealt with by the introduction of state-contingent securities and that these securities lead to efficient market outcomes is fully discussed. The micoreconomic theory underlying the determination of firms' value is developed. This leads to a discussion of the Modigiliani-Miller proposition that the capital structure of the firm is irrelevant in determining its value. The course concludes with a discussion of the implications of informational asymmetrics for financial theories, with particular emphasis on insurance markets.

ECON3109
Economic Growth, Technology and Structural Change
School of Economics
UOC6 HPW3
Prerequisite: ECON2101 or ECON2103 or 48uoc in Arts and Social Science; Excluded: INST3301

The process of economic development is never smooth. It is associated with profound changes in the fundamental structure of economic society. The rate of growth and development varies substantially between different economies. The course seeks to explain the factors that determine how societies grow and develop, with special emphasis on the role of technology and finance. Various approaches will be examined, and attention will be paid to problems associated with growth, including those relating to equity and human rights issues.

ECON3110
Development Economics
School of Economics
UOC6 HPW3
Prerequisite: ECON2101 or ECON2103 or 48uoc in Arts and Social Science

This course provides an in-depth introduction to different theories of underdevelopment and the associated strategies for fostering development, with emphasis on more recent perspectives. It investigates the role of institutions, institutional change, and markets as they relate to development, and discusses accompanying domestic and international economic policy questions. Much of the material is near the interface between economics and the other social sciences.

ECON3112
The Newly Industrialising Economies of East Asia
School of Economics
UOC6 HPW3
Prerequisite: ECON1102

This course focuses on the principal economic characteristics of the newly industrialising economies of East Asia; South Korea, Taiwan and Hong Kong, and compares internal and external policies and their contribution to the achievement of socio-economic objectives.

ECON3113
Economic Development in ASEAN Countries
School of Economics
UOC6 HPW3
Prerequisite: ECON1102

Analyses principal economic characteristics of the original members of the Association of South East Asian Nations: Indonesia, Malaysia, Philippines, Singapore and Thailand. Looks at causes and consequences of economic development policies, the theoretical issues related to formation of customs unions and free trade areas, and their application to ASEAN.

ECON3114
Superannuation and Retirement Benefits
School of Economics
UOC6 HPW3
Prerequisite/s: ECON1101, ECON1203 Excluded: ACTL3005

This course provides a comprehensive analysis of superannuation and retirement benefits, primarily in Australia. Topics include: alternative superannuation arrangements, taxation and regulation of superannuation, risk management and investment strategies for superannuation, design of retirement benefits, the retirement decision, policy developments and controversies and international comparisions.

ECON3116
International Economics
School of Economics
UOC6 HPW3
Prerequisite: ECON2101, ECON2102 or ECON2103, ECON2104.

Primarily a theoretical treatment of international trade and finance. Looks at international trade and finance theory; comparative costs, gains from trade, effects of resource endowments on trade; barriers to trade including tariffs and quotas; strategic trade policy; economic integration; imperfect competition; Australian balance of payments; balance of payments adjustment mechanisms, internal and external balance; foreign exchange markets; international monetary system; foreign investment.

ECON3119
Political Economy
School of Economics
UOC6 HPW3
Prerequisite: ECON1102, PECO3000

Course examines alternative paradigms in economics and may include schools of thought such as the Post Keynesians, New Institutionalists, Marxians or Austrians. Particular non-traditional approaches to the theory

of the firm and such topics as experimental economics, Cambridge distribution and growth theory, economic sociology, economics of politics and the debate over economic rationalism may be covered. Specific topics will depend on student preferences.

ECON3120
Economic Reasoning
School of Economics
UOC6 HPW3
Prerequisite: ECON2102 or 48uoc of Arts and Social Science

How do economists reason? How do they know when their theories are useful? This course answers these questions. Within this context, it examines the development of economics and the structure of macro and micro theory. After completing this subject, students will be able to apply economics logically to practical problems.

ECON3121
Managerial Economics
School of Economics
UOC6 HPW3
Prerequisite: ECON2101 or ECON2105 or ECON2112

This course aims to equip students with the knowledge and skills necessary to tackle many of the complex strategic decisons facing modern managers. Topics to be covered include: the economics of mergers and acquisitions; strategic competition over prices, quality characteristics and capacity; profitability and entry into new industries; R&D and the strategic importance of innovation; collusion and other methods to reduce competition and the role of networks in modern economies.

ECON3202
Mathematical Economics
School of Economics
UOC6 HPW3
Prerequisite: ECON1202

This course gives students a working knowledge of static and dynamic optimisation techniques applied in economics. Topics include classical optimisation, comparative statics, non-linear programming, differential equations and optimal control. All techniques introduced are illustrated with mainstream applications such as consumer theory and the neoclassical theory of optimal growth.

ECON3203
Econometric Theory
School of Economics
UOC6 HPW3
Prerequisite: ECON2215

This course covers: a coherent theoretical development of multiple regression analysis; restricted least squares and tests of exact linear restrictions on parameters; theoretical aspects of problems with data; basic approaches to econometric specification in nested and non-nested models; error autocorrelation and heteroskedasticity.

ECON3204
Econometric Model Building
School of Economics
UOC6 HPW3
Prerequisite: ECON2207

This course aims to develop students' knowledge of the theory and practice of building causal econometric models for real-world application. Effective modelling requires a deep understanding of economic data, familiarity with a number of model design principles and an awareness of commonly-met construction problems and how to overcome them. These themes are discussed in sequence, in the context of two diverse applications. The presentation emphasises practicalities, rather than formal rigour.

ECON3206
Financial Econometrics
School of Economics
UOC6 HPW3
Prerequisite: ECON2206

This course is concerned with the special statistical characteristics that arise when modelling time series data, such as commodity prices, interest rate exchange rate data, that have been collected at high frequency (such as daily or hourly). Topics include: modelling time varying volatility (ARCH models), generalised method of moments estimators (GMM), and non-normality issues.

ECON3290
Introductory Econometrics (Arts)
School of Economics
UOC6 HPW3
Excluded: ECON2206

This course introduces econometrics and explores the representation of economic relationships by simple and multiple regression models; static and dynamic models; and the statistical complications of autocorrelation, collinearity, and heteroskedasticity. Practical computer applications feature throughout.

ECON3291
Econometric Methods (Arts)
School of Economics
UOC6 HPW3
Excluded: ECON2207

Covers estimation of econometric models using cross-section data, discrete choice models, and instrumental variable estimators. Practical computer applications feature throughout.

ECON4100
Advanced Economic Analysis
School of Economics
UOC6 HPW3
Prerequisite: ECON2101, ECON2102 or at discretion of the Head of School

Selected topics in advanced microeconomics and macroeconomics.

ECON4101
International Trade
School of Economics
UOC6 HPW3
Prerequisite: ECON2101, ECON2102 or at discretion of the Head of School

The theory and practice of international trade. The course will emphasize both traditional neo-classical trade theory as well as the more modern strategic trade theory. The principles and predictions of these theories will be used to consider the recent developments in Australian trading relations and international trading relations in general.

ECON4102
Strategic Market Behaviour and Government Regulation
School of Economics
UOC6 HPW3
Corequisite: ECON4100

Topics covered will be from amongst the following. Theory of the firm, production costs, monopoly, dominant and fringe firms, cartels, oligopoly and monopolistic competition, differentiated products, regulation, advertising, horizontal and vertical integration, strategic behaviour by firms, and R & D. Both theoretical and empirical results will be covered in the course.

ECON4103
Business Cycles and Growth
School of Economics
UOC6 HPW3
Corequisite: ECON4100

This course combines modern economic theory and quantitative techniques to examine theories of business cycles and economic growth. Measurement of business cycles, theories of real and nominal courses of business cycle fluctuations, endogenous growth theories, and cross-country growth analysis will be considered.

ECON4104
Economics of Labour Markets
School of Economics
UOC6 HPW3
Prerequisite: ECON2101, ECON2102 or at discretion of the Head of School

Traditional models of labour supply; participation and hours of work, immigration. Provision of training and skills, human capital theory. The theory of screening, specific and general skills models. Demand for labour, marginal productivity theory, labour hoarding, quit rates and turnover. Internal labour markets. The theory of wage differentials and the structure of earnings. Labour market segmentation. Trade unions and theories of bargaining.

ECON4105
Seminar in Research Methods
School of Economics
UOC6 HPW3

This course provides training in the techniques and methods used in economic analysis and research. Students will be required to attend lectures and undertake a course of independent study as prescribed by the Head of School.

ECON4120
Economics Honours (Arts)
School of Economics
UOC48 HPW6
Prerequisite: ECON2206, ECON2207 and credit in both ECON2101, ECON2102.

This program consists of four courses and a thesis ECON4127. The courses are ECON4100 and three other courses from a selected list.

ECON4127
Thesis (Economics)
School of Economics
UOC12 HPW3

ECON4201
Applied Econometrics
School of Economics
UOC6 HPW3
Prerequisite: ECON2207, ECON2101 or ECON2103.

This course takes a modern approach to applied econometric work. Various empirical problems are considered and the strengths and weaknesses of available ways of solving them are examined. Attention will be given to such matters as diagnostic tests in an LM framework, various forms of autocorrelation and heteoskedasticity, trending data, and outliers and influential observations. Practical experience is gained both from the study of the empirical literature and from class projects.

ECON4202
Advanced Econometric Theory
School of Economics
UOC6 HPW3
Prerequisite: ECON3203

This course focuses on some theoretical aspects of economic time series and cross-sectional data analysis. Topics for the time series part include: stationary and non-stationary processes; unit root tests; VAR and cointegrated VAR models; cointegration tests; estimation and testing in the presence of unit roots. Topics for the cross-section data part include: fixed effect models; random effect models, unbalanced panels; dynamic models and estimation in the presence of autocorrelation; heteroscedasticity and unit roots.

ECON4207
Elements of Econometrics
School of Economics
UOC6 HPW3
Prerequisite:ECON1203; Exclusion: ECON2206

The aim of this course is to provide students with an in-depth understanding of the simple and multivariate regression models. This course deals with numerous economic applications emphasisng the practical aspects of model building. Extensions to the multiple regression model are considered in cases where the classical assumptions do not hold. In addition, topics including simultaneous equation models and qualitative choice models are covered using a range of applications from the fields of consumption, demand, investment and production economics.

ECON4227
Thesis (Econometrics)
School of Economics
UOC24 HPW3

ECON4321
Economic History 4 Honours
School of Economics
UOC48
Prerequisite: ECON1102 Excluded: ECOH4321

Consists of a thesis and four courses: Approaches to Economic and Social History; Aspects of Australian Economic Development; Seminar in Research Method; and Comparative Issues in Economic History.

ECON4327
Thesis (Economic History)
School of Economics
UOC24 HPW3

Honours students in their final year are required to prepare a thesis of not more than 20,000 words which must be submitted before the final examinations in November.

EDST1101
Educational Psychology 1
School of Education
UOC6 HPW3

An introduction to the study of Educational Psychology which examines some aspects of development and of learning and instruction. Topics include: cognitive development, development of memory, the role of knowledge, problem solving and thinking, an introduction to instructional methods.

EDST1103
Educational Psychology 2
School of Education
UOC6 HPW3
Prerequisite: EDST1101; Excluded: EDST2010, GENT1507

An extension of EDST1101. Focuses on learning and instruction in academic domains. Topics include cognitive processes involved in reading, in writing, in mathematics and science. Related research and implications for instruction are discussed.

EDST1104
Social Perspectives in Education
School of Education
UOC6 HPW3

Investigates schools as an important part of society in terms of how they interact with and respond to cultural, political, economic and other factors in society. Introduces students to relationships between education and Australian society by focusing on the nature and purpose of education in Australian society, winners and losers in education and the current directions in education. Students investigate the above through a small collaborative research project.

EDST2030
History, Philosophy and Science Teaching
School of Education
UOC6 HPW6
Prerequisite: EDST1102 or enrolment in Diploma in Education Program; Excluded: EDST1303

Examines the justification for, and ways of teaching, the historical and philosophical components of the NSW Years 7-12 Science curriculum; includes the study of the history and nature of science and its relations with other aspects of human culture such as philosophy, religion, art and poetry.

Note: Offered in condensed mode during 6 non-practice teaching weeks. Contact the School for dates and details.

EDST2032
Philosophical Issues in Education
School of Education
UOC6 HPW3
Prerequisite: EDST1101 or EDST1104

Examines the ethical, political, epistemological and metaphysical aspects of a number of important issues in education such as: determining aims of education, determining what constitutes human well being, deciding on curriculum content, examining what constitutes knowledge claims in different discipline areas, distinguishing rote learning from understanding, identifying rational in contrast to other kinds of beliefs, appreciating the special role of educators in society and their sometimes conflicting obligations towards children, parents and the state, examining arguments about provision of equal educational opportunity, and social justice considerations in school funding.

EDST2041
Stress and Anxiety in Students and Teachers
School of Education
UOC6 HPW3
Prerequisite: EDST1101 or enrolment in Diploma in Education Program; Excluded: EDST1304, GENT1508

Examines the concepts of emotion, stress and anxiety and their effects in both students and teachers. Discusses a range of physiological and psychological aspects, and the impact of the individual's state on performance outcomes. Includes possible management procedures.

EDST2044
Motivation in Learning and Teaching
School of Education
UOC6 HPW3
Prerequisite: EDST1101 or enrolment in Diploma in Education Program; Excluded: EDST1402, GENT1520

Explores various theories of motivation and their application to learning and teaching. A variety of theories, issues and strategies, such as goal setting, learned helplessness, self construal, self regulation, attributions of causality and group behaviour, concerned with achievement-related contexts, are discussed. Teachers' work motivation and implications for job satisfaction, professional commitment and teaching efficacy are considered.

EDST2045
Teacher Effectiveness, Research and Practice
School of Education
UOC6 HPW3
Prerequisite: EDST1101, EDST1102 or enrolment in Diploma in Education Program; Excluded: EDST1451, EDST3904

Explores concepts of teacher effectiveness, the measurement of teacher effectiveness and teacher development. Uses research to identify those teacher skills and behaviours that facilitate student achievement. Examines the school effectiveness and school improvement movements. Analyses the relationship between effective schools and teachers. Explores contemporary education issues within an effectiveness framework. Equips student teachers with the knowledge to link theory with best practice.

EDST2046
Language and Literacy in the Classroom
School of Education
UOC6 HPW3
Prerequisite: 36 units of credit or enrolment in Diploma of Education Program; Excluded: LING2700

Introduces students to theories of second language learning, similarities and differences between first and second language learning, language varieties and social attitudes, differences between community and classroom learning, and the implications for language teaching and learning. Uses current research to identify likely areas of difficulty in language learning and effective teaching strategies for language learners including English as Second Language learners.

EDST2052
Relationships Between Personality, Mood, Motivation and Learning
School of Education
UOC6 HPW3
Prerequisite: EDST1101 or enrolment in Diploma in Education Program; Excluded: EDST1452, GENT1512

A study of the nature and measurement of a variety of personality characteristics, moods and attitudes commonly encountered in learning situations and their effect on learning. Relationships between personality and subject preferences and possible subsequent occupations.

EDST2053
Human Variation and Education
School of Education
UOC6 HPW3
Prerequisite: 36 units of credit or enrolment in Diploma of Education Program

Surveys variation in the major physical and psychological traits relevant to education, particularly ability, personality and sex differences, and examines how educators can best deal with them.

EDST2054
Managing the Classroom Environment
School of Education
UOC6 HPW3
Prerequisite: 36 units of credit or enrolment in Diploma in Education Program

Develops student understanding of the relationships between classroom environment, classroom behaviour and learning. Various models of discipline and management and their application in the classroom will be examined. Demonstrates how teacher behaviour and/or instructional strategies can influence student behaviour and learning.

EDST2060
Educational Programs and Curricula for Intellectually Gifted Students
School of Education
UOC6 HPW3
Prerequisite: EDST1205 or EDST2050 or EDST4095 or enrolment in Diploma in Education Program; Excluded: EDST1206

Current research on appropriate curriculum design, teaching methodologies and program development for gifted and talented children. Evaluation of program models and enrichment strategies currently used in Australia and internationally. Development of differentiated curricula for use with academically gifted students in the regular classroom or in special settings. Examines research on the effectiveness of in-class enrichment, acceleration and various forms of ability, achievement and interest grouping with particular attention to the effects of these strategies on the students' academic and social development.

EDST2070
Culture, Identity and Education
School of Education
UOC6 HPW3
Prerequisite: EDST1102 or enrolment in Diploma in Education Program; Excluded: EDST1207, EDST3908

Examines how the processes of schooling have interacted with issues of identity and diversity. Explores the historical dynamics of migration and settlement and how their growth has affected the rhetoric of Australian nationalism. How have the issues of race and culture been addressed in our schools? Discussion of how multiculturalism has influenced educational perceptions at a policy level and examination of the interpretations of that policy in the context of the public school classroom.

EDST2090
Student Learning, Thinking and Problem Solving
School of Education
UOC6 HPW3
Prerequisite: EDST1101 or enrolment in Diploma in Education Program; Excluded: EDST1301, GENT1502

Examines how we reason, think and solve problems. How should we communicate with people to help them understand and learn? Answers are sought in the context of theories of mental processes.

EDST3090
Introductory Teaching Experience
School of Education
UOC6 HPW6

From a combination of university lectures and school-based experiences, students will learn how to plan and conduct lessons in their teaching specialty, as well as become familiar with the many functions of schools and teachers. Seminars will be used to discuss the effectiveness of the lessons taught, and to enable students to identify and solve classroom-based problems. Students will spend one day per week in schools for ten weeks.

Note: A Method 1 course in a teaching specialisation is a corequisite.

EDST4000
Education Honours Full-Time
School of Education
UOC24 HPW5
Prerequisite: 42 units of credit in EDST with an average of 65% plus 12 units of credit in approved relevant courses offered by other Schools or programs

Includes three coursework components and a thesis of approximately 10,000 - 15,000 words. The thesis involves individual research work undertaken with direction from a supervisor. The thesis constitutes 60% of the final honours mark and the coursework components constitute 40% of the final honours mark.

Note: Intending Honours students are advised to consult the School about their program of study.

EDST4050
Education Honours Part-Time
School of Education
UOC12 HPW3

Prerequisite: 42 units of credit in EDST with an average of 65% plus 12 units of credit in approved relevant courses offered by other Schools or programs

Includes three coursework components and a thesis of approximately 10,000 - 15,000 words. The thesis involves individual research work undertaken with direction from a supervisor. The thesis constitutes 60% of the final honours mark and the coursework components constitute 40% of the final honours mark.

Note: Intending Honours students are advised to consult the School about their program of study.

EDST4081
Professional Issues in Teaching
School of Education
UOC6 HPW3
Prerequisite: EDST1101 and EDST1102; Excluded: EDST1449

Issues related to the teacher as a professional, and concomitant ethical ramifications including responsibilities to students, superordinates, subordinates, employers, parents and society; the role of the teacher in schooling; critical examination of Government and education system policies, especially those related to equity, education of girls, boys' education, English across the curriculum and child sexual assault. Issues related to private schools and private school systems. Models and means of classroom management.

Note: May not be counted towards a major sequence in the BA program. Course is compulsory for students enrolled in programs 4055, 4075 and 3408.

EDST4092
Computer Skills for Teachers
School of Education
UOC3 HPW2
Prerequisite: Enrolment in Program 5560 or completion of one Teaching Method course; Excluded: EDST1492

Designed to focus on practical computer skills that teachers will need on a day-to-day basis. This e-learning course centres on the use of the internet and its role in education, including learning how to locate an internet site, how to conduct education-based searches and download teaching and educational resources from the internet.

Note: Designed to meet the NSW DET requirements for new teachers in government schools. Students are required to follow a self access e-learning program. Students must attend the demonstration lectures from Week 1 to Week 5 of Session 1. Computer laboratory facilities are available in Mathews Building 210 and 211.

EDST4093
Special Education
School of Education
UOC3 HPW2
Prerequisite: 36 units of credit; Excluded: EDST4080

Exceptional children with learning, intellectual, physical, emotional or sensory disabilities. Philosophical and practical issues. Tests and criteria for identifying these students; their special needs, programs of remediation and evaluation of teaching strategies.

EDST4094
Teaching Experience
School of Education
UOC15
Excluded: EDST4090

Consists of 40 days experience in a New South Wales secondary school. Observation of lessons conducted by experienced teachers; planning and delivery of lessons, under the direction of supervising teachers. Organisational aspects of a high school and activities other than those related to subject delivery, eg school policies and general supervision of school students.

Note: Requires successful completion of 6 units of credit in Teaching Method courses.

EDST4095
Gifted and Talented Students: Recognition and Response
School of Education
UOC3 HPW2
Prerequisite: 36 units of credit; Excluded: EDST2050, GENT1501

Designed to equip prospective teachers with the skills to recognise and respond to the needs of intellectually gifted students, including those from disadvantaged and minority groups. Critically examines theories and definitions of giftedness which currently influence education systems in Australia, and NSW in particular, and focuses on different forms and levels of giftedness. Introduces objective and subjective methods of assessing the abilities and achievements of gifted students. Examines the cognitive and affective development of these students in the light of current research on providing optimal contexts for learning. Introduces systematic approaches to differentiating curriculum for gifted and talented learners.

EDST4121
Chinese Method 1
School of Education
UOC3 HPW4
Excluded: EDST1428, EDST2428, EDST1469

A variety of approaches to the teaching of languages other than English in secondary classrooms and the contribution of linguistics to language learning. Current New South Wales syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of Chinese; lesson preparation and assessment practices.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4122
Chinese Method 2
School of Education
UOC3 HPW4
Prerequisite: EDST1469 or EDST4121; Corequisite: EDST4094; Excluded: EDST1429, EDST2429, EDST1470

Continuation of the topics in EDST4121.

EDST4125
Drama Method 1
School of Education
UOC3 HPW3
Excluded: EDST1420, EDST2420, EDST1461

Conceptual structures and practical approaches in the teaching of drama in the secondary school, including consideration of school context, pupil experience and resources. Analysis of the Drama Syllabus; program development; assessment criteria and evaluation procedures. Workshop techniques for teaching theatre arts including consideration of appropriate levels of achievement.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required. Students are expected to have experience in at least one area of practical theatre arts: eg mime, movement or dance, mask, commedia, voice, puppetry, street theatre, technical, actor training, direction.

EDST4126
Drama Method 2
School of Education
UOC3 HPW3
Prerequisite: EDST1461 or EDST4125; Corequisite: EDST4094 or DANC2203; Excluded: EDST1421, EDST2421, EDST1462

Continuation of the topics in EDST4125.

EDST4127
English Method 1
School of Education
UOC3 HPW3
Excluded: EDST1422, EDST2422, EDST1403, EDST4129, EDST1463

Aims and objectives of English teaching and the principles which underpin selection and application of teaching methods. Various teaching strategies for effective classroom management in the teaching of English in secondary schools. Includes practical tasks such as analysing the English syllabus, planning units of instruction, selecting media of instruction, and designing items for assessment.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4128
English Method 2
School of Education
UOC3 HPW3

Prerequisite: EDST1463 or EDST4127; Corequisite: EDST4094; Excluded: EDST1423, EDST2423, EDST1404, EDST4130, EDST1464

Continuation of the topics in EDST4127.

EDST4129
English Double Method 1
School of Education
UOC6 HPW6
Excluded: EDST1422, EDST2422, EDST1463, EDST4127, EDST1403

Aims and objectives of English teaching and the principles which underpin selection and application of teaching methods. Various teaching strategies for effective classroom management in the teaching of English in secondary schools. Includes practical tasks such as analysing the English syllabus, planning units of instruction, selecting media of instruction, and designing items of assessment. Extensive coverage of current English curriculum development initiatives and research based instructional strategies will be provided. Intensive application and evaluation of both the Junior and Senior syllabus will be facilitated.

Note: Available only to DipEd students.

EDST4130
English Double Method 2
School of Education
UOC6 HPW6
Prerequisite: EDST1403 or EDST4129; Excluded: EDST1423, EDST2423, EDST1464, EDST4128, EDST1404

Continuation of the topics covered in EDST4129.

Note: Available only to DipEd students. It is recommended that students complete this course in conjunction with EDST4094.

EDST4131
Literacy / English as a Second Language Method 1
School of Education
UOC3 HPW3
Excluded: EDST1424, EDST2424, EDST1465

Aspects of language and language theory; various teaching skills and strategies, different lesson types and the fundamentals of planning units of work. Principles for the evaluation of teaching materials and possible strategies for their use. Student assessment and classroom management in a range of teaching situations for learners of English as a second language.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4132
Literacy / English as a Second Language Method 2
School of Education
UOC3 HPW3
Prerequisite: EDST1465 or EDST4131; Corequisite: EDST4094; Excluded: EDST1425, EDST1466, EDST2425

Continuation of the topics listed in EDST4131.

EDST4133
French Method 1
School of Education
UOC3 HPW4
Excluded: EDST1430, EDST2430, EDST1471

A variety of approaches to the teaching of languages other than English in secondary classrooms and the contribution of linguistics to language learning. Current New South Wales syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of French; lesson preparation and assessment practices.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4134
French Method 2
School of Education
UOC3 HPW3
Prerequisite: EDST1471 or EDST4133; Corequisite: EDST4094; Excluded: EDST1431, EDST2431, EDST1472

Continuation of the topics in EDST4133.

EDST4135
Geography Method 1
School of Education
UOC3 HPW3
Excluded: EDST1493

Designed to equip students with the essential knowledge and skills to function as geography teachers in secondary schools by exposing them to a variety of teaching strategies which will enable them to operate effectively in classroom situations as well as in field settings. Lectures and discussions focus on the aims and objectives of geography teaching and the principles which underpin the selection and application of teaching methods. Also includes practical tasks such as analysing the geography syllabus, planning units of instruction, selecting media of instructions, and designing items for assessment.

Note: Intended for students in combined Education degrees, years 3 and 4 and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4136
Geography Method 2
School of Education
UOC3 HPW3
Prerequisite: EDST1493 or EDST4135; Corequiste: EDST4094; Excluded: EDST1494.

Continuation of the topics in EDST4135.

EDST4137
German Method 1
School of Education
UOC3 HPW4
Excluded: EDST1434, EDST2434, EDST1475

A variety of approaches to the teaching of languages other than English in secondary classrooms and the contribution of linguistics to language learning. Current New South Wales syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of German; lesson preparation and assessment practices.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4138
German Method 2
School of Education
UOC3 HPW4
Prerequisite: EDST1475 or EDST4137; Corequisite: EDST4094; Excluded: EDST1435, EDST2435, EDST1476

Continuation of the topics in EDST4137.

EDST4141
History Method 1
School of Education
UOC3 HPW3
Excluded: EDST1426, EDST2426, EDST1405, EDST4143, EDST1467

Aims and objectives of history teaching and the principles which underpin the selection and application of teaching methods for secondary school students. Teaching strategies for effective operation in classroom situations; practical tasks such as analysing the history syllabus, planning units of instruction, selecting media of instruction, and designing items for assessment.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4142
History Method 2
School of Education
UOC3 HPW3
Prerequisite: EDST1467 or EDST4141; Corequisite: EDST4094; Excluded: EDST1427, EDST2427, EDST1406, EDST4144, EDST1468

Continuation of the topics listed in EDST4141.

EDST4145
Indonesian Method 1
School of Education
UOC3 HPW4
Excluded: EDST1436, EDST2436, EDST1483

A variety of approaches to the teaching of languages other than English in secondary classrooms and the contribution of linguistics to language learning. Current New South Wales syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of Indonesian; lesson preparation and assessment practices.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A mimimum of 24 units of credit in appropriate background studies is required.

EDST4146
Indonesian Method 2
School of Education
UOC3 HPW4
Prerequisite: EDST1483 or EDST4145; Corequisite: EDST4094; Excluded: EDST1437, EDST2437, EDST1484

Continuation of the topics in EDST4145.

EDST4147
Japanese Method 1
School of Education
UOC3 HPW4
Excluded: EDST1432, EDST2432, EDST1473

A variety of approaches to the teaching of languages other than English in secondary classrooms and the contribution of linguistics to language learning. Current New South Wales syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of Japanese; lesson preparation and assessment practices.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4148
Japanese Method 2
School of Education
UOC3 HPW4
Prerequisite: EDST1473 or EDST4147; Corequisite: EDST4094; Excluded: EDST1433, EDST2433, EDST1474

Continuation of the topics in EDST4147.

EDST4149
Mathematics Method 1
School of Education
UOC6 HPW6
Excluded: EDST1444, EDST1479, EDST2444

Practical and theoretical issues in the teaching of mathematics in secondary classrooms; matching appropriate instructional strategies, including the use of technology and motivational strategies, to knowledge of how children learn mathematics. New South Wales syllabi; resource materials; relevant issues, including assessment, problem solving, gender and mathematics; practical experience in the preparation of lesson plans and a range of teaching techniques appropriate for mathematics.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A mimimum of 24 units of credit in appropriate background studies is required.

EDST4150
Mathematics Method 2
School of Education
UOC6 HPW6
Prerequisite: EDST1479 or EDST4149; Corequisite: EDST4094; Excluded: EDST1445, EDST2445, EDST1480

Continuation of the topics listed in EDST4149.

EDST4151
Science Method 1
School of Education
UOC6 HPW8
Excluded: EDST1446, EDST2446, EDST1481

Designed to prepare students for teaching the concepts and processes of science at the secondary level. Aims to assist students to develop skills in planning lessons, presenting demonstrations, using school science equipment, developing audio-visual aids and managing science classrooms. Demonstrates the use of a variety of teaching techniques. In addition, a range of resource material developed in recent projects in secondary science is introduced. Current syllabuses and ways by which they can be implemented are discussed. Important issues such as pupil preconceptions in science, assessment and evaluation, pupil differences, safety, and legal considerations for the science teacher are considered.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4152
Science Method 2
School of Education
UOC6 HPW8
Prerequisite: EDST1481 or EDST4151; Corequisite: EDST4094; Excluded: EDST1447, EDST2447, EDST1482

Continuation of the topics listed in EDST4151.

EDST4153
Spanish Method 1
School of Education
UOC3 HPW4
Excluded: EDST1438, EDST2438, EDST1477

A variety of approaches to the teaching of languages other than English in secondary classrooms and the contribution of linguistics to language learning. Current New South Wales syllabi; resource materials, in particular audio-visual resources, and a range of techniques to motivate learners of Spanish; lesson preparation and assessment practices.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background studies is required.

EDST4154
Spanish Method 2
School of Education
UOC3 HPW4
Prerequisite: EDST1477 or EDST4153; Corequisite: EDST4094; Excluded: EDST1439, EDST2439, EDST1478

Continuation of the topics in EDST4153.

EDST4157
Computing Studies Method 1
School of Education
UOC3 HPW3
Prerequisite: Enrolment in Program 5560

Designed to prepare students for teaching computing studies in schools. A number of syllabuses are studied in detail, including Design and Technology, Computing Studies for Years 7-10, Information Processes and Technology, Software Design and Development for Years 11-12. Aims to assist students to develop skills in the planning and management of computing lessons. Demonstrates a variety of teaching strategies associated with computing courses. Emphasises how students learn about computers and computing, and how computers impact on society. There is a focus on computing projects and how computing skills can be used to solve problems in other areas.

Note: A minimum of 24 units of credit in appropriate background studies is required.

EDST4158
Computing Studies Method 2
School of Education
UOC3 HPW3
Prerequisite: EDST4157; Corequisite: EDST4094

Continuation of topics covered in EDST4158.

EDST4161
Economics and Business Studies Method 1
School of Education
UOC3 HPW3
Enrolment in program 4055 Bachelor of Arts/Education or program 5560 Diploma in Education

Designed to equip students with the essential knowledge and skills to teach Economics and Business Studies at Years 11 and 12. Introduces students to a variety of teaching methods including project work and case studies. Examination of resources that are appropriate for the presentation of content in both HSC courses. Covers a range of assessment strategies.

Note: Intended for students in combined Education degrees, years 3 and 4, and DipEd students only. A minimum of 24 units of credit in appropriate background courses is required.

EDST4162
Economics and Business Studies Method 2
School of Education
UOC3 HPW3
Prerequisite: EDST4161; Corequisite: EDST4094

Continuation of the topics studied in EDST4161.

EDST4163
Junior HSIE Method 1
School of Education
UOC3 HPW3

Enrolment in program 4055 Bachelor of Arts/Education or program 5560 Diploma in Education

Designed to equip students with the essential knowledge and skills for teaching such HSIE subjects as Commerce and Geography from the Key Learning Area: Human Society and its Environment (HSIE) at Years 7-10 in secondary schools. Exposes students to a variety of teaching strategies which will enable them to operate effectively in both disciplines in classroom situations as well as field settings. Examines the content of both junior syllabuses and provides assessment and classroom management strategies in a range of teaching situations for learners in HSIE.

Note: A minimum of 24 units of credit in appropriate background studies is required.

EDST4164
Junior HSIE Method 2
School of Education
UOC3 HPW3
Prerequisite: EDST4163; Corequisite: EDST4094

Continuation of the topics studied in EDST4163.

ELEC0806
Industrial Electrical Design
School of Electrical Engineering and Telecommunications
UOC6 HPW3

This course deals with the fundamentals of Electrical Engineering relevant to Industrial Design. Without going into great detail or building on the ultimate physical properties of matter, the course will often use the concept of electrons. That, together with everyday knowledge of electrical applications, will be the starting point. On completion the student will have knowledge of some useful topics including the terminology of Electrical Engineering; which electric motor to choose depending on its application; Electrical Safety; Standards. The syllabus covers Ohm's law, concepts of AC and DC voltage and current, the basics of transformers, motors and electromechanical product systems, electromagnetic interference, shielding and earthing.

ELEC0807
Electrical Engineering 1E
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: PHYS1169 or PHYS1002 or PHYS1918.

Circuit theory: analysis and design of DC and AC circuits, comprising various energy sources and complex impedances, 3 phase circuits. Laboratory methods: electrical safety, transformers and motors, signal generators, measuring devices, oscilloscopes. Instrumentation: operational amplifiers, sensors, simple signal processing, AC machines and DC machines.

ELEC0809
Electrical Engineering 1C
School of Electrical Engineering and Telecommunications
UOC3 HPW3
Prerequisite: PHYS1169 or PHYS1002 or PHYS1918.

Circuit theory: analysis and design of DC and AC circuits, comprising various energy sources and complex impedances, 3-phase circuits. Laboratory methods: electrical safety, signal generators, measuring devices, oscilloscopes. Transformers and AC machines and induction motors. DC machines and motors.

ELEC1010
Introduction to Electrical Engineering
School of Electrical Engineering and Telecommunications
UOC3 HPW3

The lecture program for this course has three themes. The first lectures provide an introduction to the practice of electrical engineering. Key skills and knowledge in safety, technical communication and information gathering are discussed. Also covered are issues of what engineers do, the wider context in which engineers operate and their obligations to society. Several lectures also explore the key theme of engineering systems. Many of the latter course lectures will be given by guest speakers from industry, and will introduce you to the world of electrical engineering. Your ability to learn from and summarise the visitors' lectures will be included in the material assessed in the examination. A number of lectures will also be given by different lecturers from the School of Electrical Engineering and Telecommunications covering key areas including power systems, control, telecommunications and electronics.

ELEC1011
Electrical Engineering 1
School of Electrical Engineering and Telecommunications
UOC6 HPW6

Passive electrical components. Electric circuit concepts and relationship to field theory. Kirchhoff's laws. Node and mesh analysis of resistive networks. Network theorems. Controlled sources. Transient conditions. Sources of periodic signals. Average and r.m.s. values. Circuit models of diodes and transistors. Combinational logic principles and circuits.

ELEC1041
Digital Circuits
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC1011

Realisations of combinational circuits: MSI devices, ROM's, PLA's. Synchronous sequential logic circuits: latches, flip flops, counters, registers. Algorithmic state machines: systematic design procedures, ITDLS. Asynchronous sequential logic circuits, design applications. PLD's, & FPGA's.

ELEC2015
Electromagnetic Applications
School of Electrical Engineering and Telecommunications
UOC3 HPW3
Prerequisite: PHYS2939 or PHYS2949.

General field properties. Electric and magnetic fields. Inductance and capacitance. Dielectric and magnetic materials and their applications. Electrodynamic forces. Transformer and motor action: rotating magnetic fields. Dielectric and induction heating. Applications of Maxwell s equation. Transmission lines from circuit and electromagnetic viewpoints. Electromagnetic radiation. Some health and regulatory considerations.

ELEC2031
Circuits and Systems
School of Electrical Engineering and Telecommunications
UOC3 HPW3
Prerequisite: ELEC1011

Revision of basic circuit theory; RLC circuits; operational amplifiers; mutual inductance and transformers; state space modelling of systems with particular reference to circuits; Laplace transforms in general and applied to solution of state equations and circuit transient problems; two-port networks; assignments involving an introduction to PSPICE and MATLAB.

ELEC2032
Electronics and Systems
School of Electrical Engineering and Telecommunications
UOC3 HPW3
Prerequisite: ELEC2031

Revision of basic circuit theory; RLC circuits; sinusoidal circuit response; mutual inductance and transformers; operational amplifiers; computer aided circuit design; state space circuit representations and time responses; homogenous and particular solutions for first and secondorder linear differential equations; computer aided analysis of signals and systems, including state space representations; continuous time signals, sinusiods and signal norms; convolution, impulse and step responses; phasors; AC circuits (transient and steady state responses); complex power; frequency responses of circuits and systems; three-phase circuits.

ELEC2041
Microprocessors and Interfacing
School of Electrical Engineering and Telecommunications
UOC6 HPW4

Prerequisite: (COMP1011and ELEC1041) or (COMP1011 and COMP2021)

An introduction to programmer model of computer organisation, including assembly and machine language. Process of translation of computer programs including high level language to assembly, assembly to machine instructions, compilers, assemblers, linkers and loaders. Number representation including computer arithmetic, signed, unsigned and floating point arithmetic. Data types and data structures, including characters, integers, structures, arrays. Instruction set including instruction type and cycles, data processing, load/store and branch instructions, addressing modes. Functions, including functions calling conventions, instruction set support for functions, stack frames. I/O interfacing, I/O interrupts, and programming interrupts, instructions support for I/O and interrupts, and OS support for interrupt and I/O interfacing. Memory hierarchy; including cache, main memory, virtual memory and memory management unit. Bus system including memory bus, I/O device buses, and arbitration.

ELEC2042
Real Time Instrumentation
School of Electrical Engineering and Telecommunications
UOC3 HPW3

Prerequisite:(ELEC1041 and COMP1021) or (SOLA1051 and ELEC1041)

Discrete time systems: representation of discrete time signals, digital filters, simple difference equations and discrete time responses, computer representation of digital systems using object oriented programming, data abstraction. Hardware requirements for real time applications: systems model of the computer, process-related interfaces (digital, analog, clocks), scaling, data transfer (polling, interrupts). Software development: real-time specification standards, state machines. Simple real time kernels: state machine multi-tasking, co-routines, interrupts, foreground/background systems. Systems theory and controller design: differential equations, transfer functions, state-space, PID control, numerical methods.

ELEC3004
Signal Processing and Transform Methods
School of Electrical Engineering and Telecommunications
UOC6 HPW5
Prerequisite: ELEC2032.

The mathematics of signals and linear systems. Fourier series, Fourier and Laplace transforms, discrete Fourier and Z transforms. Processing and analysis of continuous (analogue) and discrete-time (digital) signals. Analogue filters: approximation theory, Butterworth, Bessel, Chebyshev and elliptic filters. Filter impulse and frequency responses, stability, and sensitivity. Sampling continuous signals: the sampling theorem, reconstruction, and aliasing. The discrete Fourier transform (DFT) and the fast Fourier transform (FFT). Fundamentals of the design and realisation of finite impulse response (FIR) and infinite impulse response (IIR) digital filters. Digital processing of analog signals, including applications of digital signal processing (DSP) and programmable DSP chips. The representation and modelling of non-deterministic (random) signals, correlation functions, and power density spectra.

ELEC3005
Electric Energy 1
School of Electrical Engineering and Telecommunications
UOC6 HPW5
Prerequisite: ELEC2015

Introduction to energy systems; three-phase circuits, overview of electricity generation, transmission, distribution storage and utilisation. Transformers: equivalent circuit, elimination of harmonics. Thermal rating of equipment. Electrical machines: fundamentals and applications of DC and AC machines. Small electrical machines. Introduction to power electronics: single- and three-phase switching of electrical power. Heat generation in and effects on electrical equipment. Insulation systems and deterioration, mathematical model of heat source and risk. Heat transfer by conduction, convection and radiation. Dynamic temperature behaviour and intermittent ratings of equipment.

ELEC3006
Electronics A
School of Electrical Engineering and Telecommunications
UOC6 HPW5
Prerequisite: ELEC2032.

Frequency analysis of amplifiers. Design and analysis of feedback amplifiers. Amplifier stability analysis. Operational amplifiers and comparators. Schmidt triggers. Waveform generators: sinusoidal, square, triangular. A-D and D-A converters.

ELEC3014
Systems and Control 1
School of Electrical Engineering and Telecommunications
UOC6 HPW5
Prerequisite: ELEC2032.

History of feedback control; Differential equations; Laplace transforms; Transfer functions; Poles & Zeros; State space models; Modelling mechanical systems; First and second order systems; Block diagram algebra; Signal flow graphs; Masons rule; Stability; Routh-Hurwitz criterion; Steady state errors; Root locus theory and sketching; Generalized root locus/Transient response design via gain adjustment/Pole sensitivity/ Design via root locus; PID control; Lag-lead compensation; Bode plots/Nyquist plots/Nyquist stability criterion/Gain margin and phase margin/Time delay; M&N circles/Nichols chart/ Introduction to design via frequency response; Practical classes include Matlab tutorials linked to lectures and construction and testing of DC servo motor feedback control systems.

ELEC3015
Electric Energy 2
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC3005

Basic aspects of both the supply and utilisation of electrical energy, with some emphasis on contemporary aspects of energy utilisation, including modern developments, energy efficiency and environmental aspects. Electrical energy supply systems: transmission and distribution systems, power transfer, reactive power effects, fault current calculation and protection. Quality of electricity supply; transient overvoltages, harmonics etc. and their ramifications in the operation of electrical power equipment. Electromagnetic compatibility (EMC). Utilisation of electrical energy: industrial application considerations, including DC machines, induction and synchronous motor drives. Computer-aided analysis of machines. Use of modern techniques of power electronics for application to variable speed drive systems, including DC-AC, DC-DC and AC-AC converters. Utilisation of electrical energy for lighting and industrial heating processes including discharge, induction and RF heating. Electrical safety of power equipment: equipment requirements for use in hazardous atmospheres; earthing and earth leakage protection.

ELEC3016
Electronics B
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC3006

Operating principles and fabrication technologies of electronic and photonic devices. Devices covered include: pn diodes, BJTs, MOSFETs, LEDs, solar cells, lasers and optical waveguides as used in communication systems and microwave devices. Ebers-Moll model of the BJT. BJTs & MOSFETs in analogue and integrated circuits, including TTL, ECL and CMOS. Principles and key technologies involved in microfabrication of integrated circuits. Non-idealities of devices resulting from realistic architectures and the effect of these non-idealities on the operation and design of circuits and systems.

ELEC3017
Electrical Engineering Design
School of Electrical Engineering and Telecommunications
UOC6 HPW5
Prerequisite/s: ELEC2032 and ELEC2041

Electrical product design in a manufacturing environment, from original idea through technical specifications, prototype, manufacture and finally to marketing. In particular: Design Project Management: Introduction to scheduling and other management techniques. Also introductions to costing, pricing, marketing, standards, patents, quality and reliability, safety, (electronic) manufacturing methods and systems, engineering innovation. Design Methodology: Systematic design procedures, design documentation. Designing for quality, for manufacture, for maintenance, for minimum life cycle cost. Use of computer aids for project management, drawing, PCB design, circuit analysis and synthesis, documentation. Engineering Drawing and Graphical Communications: Standards, projections, dimensioning, tolerancing, and drawing interpretation. Aspects of Electronic Design: Device specifications, component choices, sourcing, data sheets, tolerances, aging, thermal dissipation, passive

component characteristics. Also RFI and EMC, earthing, shielding, PCB layout principles, prototyping methods, interconnection technologies. Group Project: including specification, marketing and business plans, scheduling, design, prototype production, testing, formal technical report and seminar presentation.

ELEC3041
Real Time Engineering
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC2042

Real-Time Systems: real-time versus non real-time; hard/soft and critical/non-critical real-time systems; events and stimuli; processes, tasks and threads; concurrent processes; software architectures; state machines. Real-Time Kernels: Scheduling algorithms; co-routines and multi-tasking; inter-process communication and synchronisation; context switching; task management; reliability, testing and fault tolerance; timing analysis; device drivers. Real-Time Linux: POSIX and Linux; loadable kernel modules; inter-process communication; interrupts; shared memory and RT-FIFO's. Embedded Systems: Real-time kernels for embedded systems; Motorola 68HC11; MXC11 real-time executive.

ELEC4010
Project Management for Professional Services
School of Electrical Engineering and Telecommunications
UOC3 HPW4
Prerequisite: 96 units of credit

The purpose of this course is to provide students with fundamental insights and tools for project management in the provision of professional services. Lectures will cover the Projectised Organisation, planning processes, project execution and ongoing project management. Other topics include negotiation, organizational strategy development, human resources and effective communications.

ELEC4011
Ethics and Electrical Engineering Practice
School of Electrical Engineering and Telecommunications
UOC3 HPW2
Prerequisite: 120 units of credit.

An introduction to the nature ethical systems; the application of ethical bases to engineering practice with particular reference to electrical engineering and computing; codes of ethics in the professions, with special reference to the Code of Ethics of the Institution of Engineers, Australia; social, political, environmental and economic considerations.

Students are required to complete a miminum of 60 days of industrial training with one or more companies, prefereably before the commencement of this course. The objectives of industrial training are (i) to develop an appreciation fo the structure and operation of industrial organisations, (ii) to understand the role of the engineer and engineering in industry, (iii) to appreciate the importance of good communication and interpersonal skills, and to develop these skills, and (iv) to appreciate the ethical basis of engineering practice in industry. Students are required to submit to the School evidence from their employers of each period of training, confirming the work performed, together with a report. The report, typically 2000-3000 words long, should summarise the actual technical work performed, and should address the extent to which the aims of the industrial training have been met. It is preferred that some industrial training should be obtained in Australia. When the industrial training is done overseas, the report should include a more detailed description of the company concerned.

ELEC4042
Signal Processing 2
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC3004 Excluded: ELEC9342

Digital Oscillators. Decimation and interpolation. Frequency-Sampling Filters, Comb filters. Advanced design of digital filters and their implementation in Matlab. Discrete Fourier transform (DFT). Fast transform (FFT) algorithms. Wavelet Transform (WT). Comparison between FFT and WT. Multirate Systems. Quadrature-Mirror Filter Bank, Multilevel Filter Banks, Polyphase Decomposition. FIR Lattice filters, All-pole IIR Lattice filters and their implementation. Adaptive filters. Least square filter design. inverse filtering. Wiener filters, Noise reduction. Linear prediction and the Levinson algortihm. Analysis of Finite-word length effects. Limit Cycles. Round-off noise. Nonstationary Signal Processing.

ELEC4205
Electrical Energy Systems
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisites: ELEC3005 Excluded: ELEC9213

Review of the basic concepts used in power system analysis: phasors, complex power, three phase systems and per-unit methodology. Modelling of power system components, including transformers and synchronous machines. Aspects of power system operation, including power flow, reactive power control and fault analysis. Harmonics and their effects. Choice and use of protective equipment, including fuses, circuit breakers, relays and surge arresters. Equipment rating for operation in steady state and cyclic modes. Overvoltages and their effect in power systems. Insulation system design and practical limitations. Insulation coordination. High voltage equipment testing methods and their use in insulation condition monitoring of electrical energy systems. Quality of supply.

ELEC4216
Electrical Drive Systems
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC3005 Excluded: ELEC9231

Electrical Drive Systems. Elements of Drive systems and their requirements for servo and industrial drive applications. Drive representation, quadrant operation, dynamic and regenerative braking. Transfer function representations of dc motor and converter and drive performance analysis. Performance analysis of induction motor drives with variable voltage, voltage source, current source and variable frequency supply. Performance analysis of synchronous and reluctance motors with variable frequency supply. Transducers in electric drive systems. The analysis of asymmetrically connected induction motors. Unified machine theory. Computer aided design and analysis.

ELEC4240
Power Electronics
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC3006 Excluded: ELEC9240

Modern power semiconductor devices eg, diodes, thyristors, MOSFETs, and other insulated gate devices such as the IGBT, MCT and the FCT. Static and switching characteristics, gate drive and protection techniques. Various DC-DC, AC-DC, DC-AC and AC-AC converter circuit topologies, their characteristics and control techniques. Application considerations for remote and uniterruptible power supplies, and for computer systems, telecommunications, automobiles, traction and other industrial processes. Utility interaction, harmonic distortion, and power factor. EMI and EMC considerations.

ELEC4412
Control of Continuous-time Systems
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC3014

Design of controllers for multivariable dynamical systems (e.g., design of an automatic pilot for an aircraft). State space theory. Design of linear controllers using the polynomial approach and the Diophantine theorem. Continuous-time state space design methods for MIMO systems. Principal gains, shaping system performance, optimal control methods, Linear Quadratic Gaussian (LQG) controllers and Kalman filters.

ELEC4413
Control of Discrete-time Systems
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC3014

Covers the design of practical control systems intended for implementation using digital computers and embedded systems. Controllers may be developed using both continuous and discrete designs. The topics covered include: identification of model parameters; numerical integration and implementation of continuous designs; observers; discrete systems; stability analysis; observability and controllability; design of digital controllers; pole placement; nonlinear systems; Aspects of implementation are constantly emphasised.

ELEC4444
New Business Creation
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: 138 units of credit.

In the new economic environment, graduates must be better prepared to take control of their own employment futures which increasingly must include the option of entrepreneurship and the creation and growth of one's own company. For those graduates with a technical or engineering background, the new technology based firm offers extremely large potential to create jobs and wealth. The course provides the final year student with a clear understanding of the venture creation process with particular emphasis on technology-based ventures. A range of skills are developed relating to R&D management, intellectual property, technology contracts, product development, marketing, financial management and business planning. As a result, it is expected that this course could be the first step for a number of its attendees to progress to active involvement in new technology based firms either in Australia or internationally.

ELEC4483
Biomedical Instrumentation, Measurement and Design
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC3004

Design and development of biomedical instrumentation for clinical measurement and biomedical research. Hardware and software design issues required to produce instruments which satisfy Australian and International standards for safety, performance and quality control. Tutorials and laboratories will be closely integrated so that design and analysis carried in tutorial sessions will be followed by testing and development in the laboratory sessions. A design project and/or case study will also be required as part of this course.

ELEC4503
Electronics C
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC3006

Advanced analog circuit techniques for signal processing and interfacing. Active filters characteristics and design techniques. Realisation of active filters: continuous time RC and op amp circuits. Switched capacitor filters. Analog multipliers and their application in modulation, demodulation, gain control and phase comparison. The phase-locked loop: Phase detectors, VCO design, lock and capture processes. Applications. Low noise amplifier design. Power amplifiers; class A, class B, class C efficiency and linearity.

ELEC4522
Microelectronics Design and Technology
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC3006

Review of technology for bipolar and MOS integrated circuits. Device models, layout rules. Analog circuit building blocks. Bipolar and CMOS operational amplifiers. CMOS logic. MOS Analog-Digital and Digital-Analog converters. Memory - DRAM/SRAM. Yield, reliability, failure analysis techniques and packaging. The laboratory program is aimed at understanding the internal design of some standard IC functions.

ELEC4532
Integrated Digital Systems
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC1041 or COMP2021

Integrated circuit logic families with emphasis on MOS technologies, structured chip design, custom and semi-custom approaches, system architecture, computer aided design, layout considerations, timing estimates, circuit failures, faults, fault modelling, testing, design for testability.

ELEC4910
Thesis Part A
School of Electrical Engineering and Telecommunications
UOC3 HPW4
Prerequisite: 132 units of credit and weighted average mark of 65 & ELEC3017.

The thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for ELEC4910. Thesis Part A involves a detailed literature search and reviews of the background for the thesis topic and planning the activities that will required for Part B.

ELEC4911
Thesis Part B
School of Electrical Engineering and Telecommunications
UOC9 HPW10
Prerequisite: ELEC4910.

The thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for ELEC4910. Thesis Part B typically involves the detailed theoretical development or modelling work. A written thesis report must be submitted on the thesis topic by Tuesday of Week 14 of the session in which ELEC4911 is taken.

ELEC4914
Group Thesis Part A
School of Electrical Engineering and Telecommunications
UOC3 HPW4
Prerequisite: ELEC3017 and 132 units of credit.

The group thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for ELEC4914. Group Thesis Part A involves a detailed literature search and reviews of the background for the thesis topic and planning the activities that will required for Group Thesis Part B.

ELEC4915
Group Thesis Part B
School of Electrical Engineering and Telecommunications
UOC9 HPW10
Prerequisite: ELEC4914

The group thesis PartA&B is carried out in the last two sessions of the BE degree course. It is carried by a group of between two and five students working on various aspects of a particular topic. Under the guidance of a supervisor, directed laboratory and other research work on an approved topic is carried out. Generally, the project involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student group is required to present a seminar as part of the requirements for ELEC4914. Group Thesis Part B typically involves the detailed theoretical development or modelling. A written thesis report must be submitted on the project by Tuesday of Week 14 of the session in which ELEC4915 is taken.

ENGL1001
Ways of Writing: An Introduction to Literary Genres
School of English
UOC6 HPW3
Excluded: ENGL1000, GENT0205

Introduces students to the study of literature. Reinforces skills in the close reading of literary texts, expands understanding of genres as ways of structuring texts, hones writing skills and strengthens abilities to construct and deploy critical argument. Genres to be examined will include poetry, novels, short stories and plays, but may also include essays, diaries, biographies and collections of letters.

ENGL1006
Imagining the City
School of English
UOC6 HPW3

Introduces students to literary and cultural theory and encourages them to explore various processes in creative writing. Uses the city as a thematic centre, considering ways in which the city has been described and interpreted, imaginatively constructed, and theorised. Includes reference to intersecting cultural forms such as film and music.

ENGL1007
The Canon of English Literature
School of English
UOC6 HPW3

A historical survey of English literature aimed at improving students' knowledge of how it has been organised into a set of special texts (a 'canon'). Enhances their powers to describe, interpret and enjoy it. Presents particular works of literature in English from the earliest periods through to the twentieth century in chronological order, attending to the features of language that make them literary, the context of their production, and some of their major themes. Introduces students to some different kinds of criticism (Marxist, feminist, post-colonial, Bloomian) by way of critical engagement with their accounts of how the canon has been formed and how it should be revised.

ENGL1009
Literature of Revolution
School of English
UOC6 HPW3

Examines the relationship between social upheaval and literary production focusing on key moments in the culture of modernity including the French Revolution, the American Civil War and the Industrial Revolution. Considers literature of protest and reform in civil rights movements that have profoundly reshaped conceptions of the individual, community and the state. Will include fiction, drama and poetry and consider the political charge of oratory and forms of disobedience played out in experimental writing. Comprises modules focused on literary analysis and a component of creative writing.

ENGL2101
Women on the Shakespearean Stage
School of English
UOC6 HPW3
Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: ENGL2156, ENGL2157

Studies the social and sexual roles of leading female characters in English drama from the late 1590s to the early 1630s, beginning with an analysis of female characters' experience of the 'love-death nexus' in four of Shakespeare's plays and concludes with a consideration of the 'lost' status and state ascribed to 'loose' women in plays by some of Shakespeare's major contemporaries.

ENGL2104
Poetry, Virtue, Corruption: Milton to Burns
School of English
UOC6 HPW3
Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: IRSH2104

Studies how English, Irish, and Scottish poets from 1660-1800 define themselves in relation to a culture which they deem to be corrupt. Moves from Milton as the single just man in a society that has betrayed the godly revolution to the poet as libertine in Rochester and Behn, and the poet as political propagandist in Dryden. Sees how Finch, Swift, Pope, Wortley-Montague, and Johnson detach themselves and poetry from political life. Later poets show that once you do this, what is left are passion, death, superstition, madness, and small animals.

ENGL2206
Nineteenth Century Prose: Romantic & Victorian Fiction and Non-Fiction 1789-1914
School of English
UOC6 HPW3
Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall

Focuses on the study of both Romantic and Victorian fiction and non-fiction in English. Novels and other prose texts will be interrogated in the context of contemporary social, political, religious and scientific thought.

ENGL2321
The Twentieth Century: Modernism and Modernity
School of English
UOC6 HPW3
Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: ENGL2203, ENGL2250, ENGL2350

Examines the main artistic movements which express what it is that makes the twentieth century distinctive in Anglophone societies. Involves investigations into such terms as modernism and postmodernism and their relationship with the experience of modernity as articulated in expressive practices ranging from 'High' to 'Low' culture, from art to the everyday. Although the emphasis is on literary work, the course will also refer to other media including painting, film/video, music.

ENGL2340
Contemporary Irish Literature
School of English
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ENGL3471, IRSH2012

Critically examines the poetry and prose written by Irish writers after WWII in terms of issues of identity, nationality, gender, landscape, language, tradition, and religion. Considers how Irish poets have coped with the legacy of Yeats, Irish novelists with the legacy of Joyce and what their writing tells us about present-day Ireland and the contemporary world.

ENGL2422
Frontiers and Crossings
School of English
UOC6 HPW3
Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: ENGL2303

This comparative course in Australian, South African and American literature raises questions of the law and transgression in cultures defined as 'Frontier'. Examines the use of genres such as pastoral and the western, and explores the relations between concepts of gender and concepts of the frontier and transgression. The course is grounded in nineteenth- and early twentieth-century literature of the frontier, but also considers more recent reworkings of the field, particularly in film.

ENGL2460
Refiguring Dreams: Twentieth-Century American Literature
School of English
UOC6 HPW3
Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: ENGL2301

Explores American literature written between the 'twenties' and 'sixties', using novels and films which captured the spirit and the attention of each decade. Topics include: the 'roaring twenties', the Depression, the Second World War, McCarthyism, racial conflict and the liberation movements of the 'sixties'.

ENGL2520
Twentieth-century Australian Literature
School of English
UOC6 HPW3
Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: AUST2014, ENGL2300

An examination of some major post-colonial issues in Australian writing of the twentieth century.

ENGL2621
Contemporary Australian Women Writers
School of English
UOC6 HPW3
Prerequisite: 6 Level 1 units of credit in English and 36 units of credit overall; Excluded: AUST2015, ENGL3401

Examines the particular concerns of a selection of contemporary Australian women novelists, poets and a short story writer. In the process asks whether women write from a different perspective, or have different concerns from their male counterparts in a culture that is generally considered to be male-dominated. Also considers the special question of women writing about the land.

ENGL2821
Visual Communication
School of English
UOC6 HPW3
Prerequisite: 6 level 1 units of credit in English and 36 units of credit overall; Excluded: ENGL3504, ENGL3550, LING2530

Communication in contemporary society increasingly combines language with one or more different semiotic modalities, such as visual image, sound and spatial layout. Explores the techniques and theoretical frameworks useful in analysing how such multi-modal texts create meaning and construct positions for readers. Considers a range of texts from printed advertisements and magazines, to web pages, CD Roms, and public sites such as shops, museums and galleries. Aspects covered include the 'grammar' of visual images, the interaction of verbal and other modalities, ideological dimensions of multi-modal texts, questions of literacy and access.

ENGL2921
Creative Writing A
School of English
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ENGL3753

Aims to familiarise students with a wide range of contemporary writing and to encourage experimentation with a variety of different styles and genres in their own writing. Aims for a practical understanding of how literature works by developing critical reading skills. Students will also have the opportunity to gain feedback on their own writing in a supportive workshop environment. Aims to develop the craft skills necessary to generate, revise and edit their own work.

ENGL2930
Professional Writing
School of English
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ENGL3502, LING2560

Introduces the theory and practice of writing factual texts for professional contexts such as: journalism, educational publishing, the workplace, cultural institutions, non-profit organisations. Aspects covered include: forms and functions of different factual genres, appropriacy to readership of grammatical style, word choice, 'angle' and 'tone'; writing Plain English; writing for the web; self-editing skills. Includes workshops.

ENGL3122
Jane Austen in Context
School of English
UOC6 HPW3
Prerequisite: 12 units of credit at the ENGL2000 level; Excluded: ENGL2103

Focuses on the juvenilia and novels of Jane Austen as social and cultural products of their time. Austen's early novels in particular were written under and against the influence of contemporary romantic, gothic and sentimental fiction. Explores the way her work engages with these and other eighteenth- and early nineteenth-century texts as various as gender-based codes of conduct and landscape-gardening, concluding with an examination of transformations, such as film and sequel.

ENGL3320
Modernism - Joyce
School of English
UOC6 HPW3
Prerequisite: 12 units of credit at the ENGL2000 level; Excluded: ENGL2453, ENGL3472, IRSH3472

Intensive study of James Joyce's 'Ulysses' to enquire into selected aspects of modernism. Of particular interest will be the writer's negotiations with language and with structure, the function of history and/or myth, the role of the comic, and the tensions between innovation and various forms of tradition.

ENGL3420
The Rise of English
School of English
UOC6 HPW3
Prerequisite: 12 units of credit at the ENGL2000 level; Excluded: ENGL2655

Investigates the social and political reasons for the emergence of English as a discipline. Examines issues such as the function of English in consolidating imperial goals, its links with English nationalism, the importance of its 'civilising' function in educational planning. Investigates post-colonial appropriations of English and examines the place of English studies in postmodern discourse.

ENGL3423
African Resistance Writing
School of English
UOC6 HPW3
Prerequisite: 12 units of credit at the ENGL2000 level; Excluded: ENGL2305

Studies a range of resistance writing from various African countries. Examines the nature of literary resistance against political, cultural, colonial and patriarchal oppression and considers the ideologies and theories of literature which underlie the notion of writing as resistance.

ENGL3442
Narrative
School of English
UOC6 HPW3
Prequisite: 12 units of credit at the ENGL2000 level; Excluded: ENGL3900

An analysis of narratives and narrative theory across a range of genres, this course examines selected novels, short stories, poems and plays, and introduces ways of interpreting them in the light of structuralist and post-structuralist narrative theory.

ENGL3651
Contemporary Critical and Cultural Theory
School of English
UOC6 HPW3
Prerequisite: 12 units of credit at the ENGL2000 level; Excluded: ENGL3902

Introduces students to some central texts and concepts in critical and cultural theory as these bear on the study of English. Begins with coverage of key moments and debates in structuralist and post-structuralist thought, including concepts of subjectivity, discourse, ideology and some introductory psychoanalytic and semiotic work, followed by a focus on questions of the body, pleasure and experience.

ENGL4000
English Literature Honours Research Full-Time
School of English
UOC24 HPW5
Prerequisite: 54 units of credit in ENGL including 18 units of credit at the ENGL3000 level at an average of 70% or better

Coursework and seminars and preparation of a thesis. In the first session students are required to choose two courses. The courses offered in any one session depend on student demand and staff resources. The broad range of offerings is designed to enable students to conduct more intensive study in areas relating to special interests developed during earlier years of their English programs. Please refer to the list under the entry for MA, or see the School handbook. In the second session students submit a thesis of between 15,000 and 20,000 words based on research conducted on a topic to be chosen in consultation with the Head of School and other members of staff where appropriate. Throughout both sessions students are required to participate in regular thesis workshops.

ENGL4050
English Literature Honours Research Part-Time
School of English
UOC12 HPW3
Prerequisite: 54 units of credit in ENGL including 18 units of credit at the ENGL3000 level at an average of 70% or better

Coursework and seminars in preparation of a thesis. In the first year students are required to choose two courses. The courses offered in any one session depend on student demand and staff resources. The broad range of offerings is designed to enable students to conduct more intensive study in areas relating to special interests developed during earlier years of their English programs. Please refer to the list under the entry for MA, or see the School handbook. In the year session students submit a thesis of between 15,000 and 20,000 words based on research conducted on a topic to be chosen in consultation with the Head of School and other members of staff where appropriate. Throughout both years students are required to participate in regular thesis workshops.

ENGL4500
Combined English Literature Honours Research Full-Time
School of English
UOC12 HPW2
Prerequisite: 48 units of credit in ENGL including 12 units of credit at the ENGL3000 level at an average of 70% or better

Coursework and seminars and preparation of a combined thesis. In the first session students are required to take one coursework course in English and one course in the combined discipline. In the second session students submit a thesis on an agreed topic of between 15,000 and 20,000 words.

ENGL4550
Combined English Literature Honours Research Part-Time
School of English
UOC6 HPW2
Prerequisite: 48 units of credit in ENGL including 12 units of credit at the ENGL3000 level at an average of 70% or better

Coursework and seminars and preparation of a combined thesis. In the first year students are required to take one coursework course in English and one course in the combined discipline. In the second year students submit a thesis on an agreed topic of between 15,000 and 20,000 words.

ENVS1011
Environmental Science 1
School of Biological, Earth and Environmental Sciences
UOC6 HPW6

An overview of some of the many problems encountered by Environmental Scientists: climatic change, disturbance events (such as logging, fire and mining), management and conservation of marine and terrestrial resources, water management and pollution are considered. These problems are placed in perspective with regional case studies to highlight specific issues using seminars, workshops, field excursions and group projects. Special emphasis is placed on the political aspects and values inherent in environmental issues.

Note: Restricted to the Environmental Science Programs.

ENVS2030
The Human Environment
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Prerequisite: ENVS1011; Excluded: ENVS2010, ENVS2020, GEOG2641.

The nature of human population growth and its impact on resource management and global-scale environmental problems. Controls and demographic processes in human populations. Different cultures and development levels. Consideration of urbanisation and the interaction between urban economic and environmental systems. Case studies of urban environmental management, coastal planning and industrial change are used to critically evaluate human-environmental interactions. Practical work involves introduction to Geographical Information Systems (GIS).

ENVS2801
Aspects of Environmental Policy and Law
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Prerequisite: ENVS1011

This course examines the legal issues likely to be encountered by an environmental scientist and addresses the question: Is the adversary system the most appropriate method of dealing with conflict in determining the appropriate use of resources? The difficulties encountered with the multiplicity of authorities and interactions between local government regulations, state and federal laws and international law are considered. Case studies examined at each of these levels are used to provide a brief overview of current environmental law in Australia and the World, with examples.

ENVS4101
Environmental Science 4 Biology A (Honours) F/T
School of Biological, Earth and Environmental Sciences
UOC6

ENVS4103
Environmental Science 4 Biology (Honours) F/T
School of Biological, Earth and Environmental Sciences
UOC18

ENVS4104
Environmental Science 4 Biology B (Honours) Full-Time
School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4204
Environmental Science 4 Marine B (Honours) Full-Time
School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4304
Environmental Science 4 Microbiol B (Honours) Full-Time
School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4404
Environmental Science 4 Chemistry B (Honours) Full-Time
School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4504
Environmental Science 4 Geography B (Honours)
School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4518
Environmental Science 4 Geography (FBE) (Honours) Full-Time
School of Biological, Earth and Environmental Sciences
UOC24

Full year research project and thesis, under supervision of a member of staff in the Geography Program in the Faculty of the Built Environment.

Note: Superior performance in 144 UOC of an appropriate Environmental Science program, including all core requirements is necessary for enrolment.

ENVS4546
Environmental Science Geography B (Honours)
School of Biological, Earth and Environmental Sciences
UOC12

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Coordinator must be completed. 12 UOC research to be completed in each session.

ENVS4602
Environmental Science 4 Geology B (Honours) Part-time
School of Biological, Earth and Environmental Sciences
UOC12

Part-time research project and thesis. 12 UOC of course work as approved by the Environmental Science Program Co-ordinator.

Note: Completion of 144 UOC (with credit average) of an appropriate Environmental Science program is required before enrolment is allowed.

ENVS4604
Environmental Science 4 Geology B (Honours) Full-Time
School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

ENVS4704
Environmental Science 4 Math B (Honours) Full-Time
School of Biological, Earth and Environmental Sciences
UOC24

Half year research project and thesis. 24 UOC of course work as approved by the Environmental Science Program Co-ordinator must also be completed.

Note: Completion of 144UOC (with credit average) of an appropriate Environmental Science program is required for enrolment.

EURO1000
The New Europe A
Faculty of Arts and Social Sciences
UOC6 HPW3

Despite a surprisingly rapid economic recovery after the catastrophe of World War II and the remarkable success of European integration, Western European nations were effectively relegated to the status of second-class powers, both politically and 'morally', and the East seemed caught in the vise of state socialism for the foreseeable future. But the unexpected collapse of the Berlin Wall and the disintegration of the Soviet 'block' force us to look again at the developments from 1945-1989 in a divided Europe and a divided Germany from a post-89 perspective: what was really going on?

Note: EURO1000/1001: Two session-length courses, which together form the first year of the European Studies major, but are also available separately. May also be counted towards a major in HIST.

EURO1001
The New Europe B
Faculty of Arts and Social Sciences
UOC6 HPW3

After the unexpected collapse of the Berlin Wall and the disintegration of the Soviet 'block', Europe seemed once again to have assumed a central role on the world stage. Yet the euphoria of 1990, which looked forward to a United Europe and the rapid transformation and integration of post-communist societies, has been followed by a considerable hangover. The events of the last years and their implications will be discussed, and the problems and prospects confronting the New Europe in relation to its past, present and future.

Note: EURO1000/1001: Two session-length courses, which together form the first year of the European Studies major, but are also available separately. May also be counted towards a major in HIST.

EURO2000
Concepts of Europe
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2400

Europe conquered, colonised and revolutionised the world despite being politically and culturally fragmented. Now, faced with the threat of decline, it seeks to overcome that fragmentation through the consolidation and expansion of the European Union, but different ideas about what a united Europe should be like continue to divide the participants in the European project. These differences have deep historical roots, as indeed does the European idea itself. They reflect the ambiguities of defining "Europe" between geographical boundaries, cultural identities, religious beliefs, political power, military security and economic interests, between local, regional, national and imperial loyalties. Traces the historical origins of the European idea, examines the various concepts of Europe used though the centuries, and discusses their relevance to the contemporary difficulties of the European Union.

EURO2201
Text Workshop A
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2491

A close analysis of short key texts in modern European history and culture, designed to develop students' close reading skills and to introduce them to important social, philosophical and theoretical questions through first hand encounters with the texts themselves.

EURO2311
The Attractions of Communism
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2489, SOCA3313

After the demise of the Soviet Empire, the 'totalitarianism thesis', which equates Fascism and Communism, has gained a new lease of life. Though there are many similarities in the political practices of these two movements which dominated the twentieth century, their aims and the groups they appealed to seem radically opposed. Seeks to explain the attractions of Communism through the study of documents, literary texts and film, and to shed light on the reasons for the loyalty of many European workers and intellectuals to 'the cause' despite their increasing awareness of its deformations in the Soviet Union and elsewhere.

EURO2331
Understanding Nazi Germany: Origins, Structures, Explanations
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2422, HIST3101

Explores debates over the origins and role of Nazi Germany. Issues will include its roots in German history; the driving force of the regime; Hitler's role and Nazi Germany's war aims. Sixty years after its defeat in World War II, Nazi Germany continues to fascinate and to leave questions hotly debated by historians. Discusses whether the Nazis were modernisers or backward-looking romantics, and why there was so little opposition. Considers Nazi Germany's war aims and if the Holocaust was the inevitable outcome of Nazi ideology or a bureaucratic response to impending defeat. These issues will be explored in lectures and student-led seminar discussions of primary and secondary texts.

EURO2410
19th Century Europe, 1848-1918: Nation, Empire, Revolution
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2410 and IRSH2410

Examines the rise of the explosive social and national tensions in late nineteenth-century Europe which culminated in world war and revolution (Russia, Germany, Hungary, Ireland). Key themes are industrialisation and the rise of the labour movement; urbanisation and its impact on gender roles; the flowering of bourgeois culture and its fin de siecle crisis; the transformation of revolutionary into "integral" nationalism and imperialist jingoism; great power rivalry and the origins of the First World War. Aims to understand how the period laid the foundations for the dramatic events of the "short twentieth century".

EURO2411
Spain: From Loss of Empire to European Integration
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SPAN2406

An overview of Spain's turbulent history following loss of empire, including the Spanish Civil War and the Franco Dictatorship. Most attention is given to the nation's transformation since 1975 (the death of Franco and the return to democracy) and its enthusiastic embrace of Europe. As a peripheral European nation, and one that has been riven by cultural, political and economic conflicts in the recent past, Spain may well constitute a litmus test for the viability of European unity.

EURO2482
Europe, 1914-1945: Dark Continent?
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2066, HIST2067, HIST2482

Explores examples of catastrophic wars and revolutionary upheavals, examines cases of ethnic-cleansing and genocide, and analyses the impact of ideologies on concepts of nation, race and gender. Themes include: Total War, Socialism, Fascism, Communism, Anarchism and the "New Woman". Case studies will include Hitler's Germany, Stalin's Russia, the Spanish Civil War, WWI & WWII, the Armenian genocide and the Holocaust.

EURO2483
Decadence, Dada & All That Jazz: European Cultural History, 1880-1945
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2483

Focuses on the major cultural expressions of European modernity and the way in which they reflected social and political transformation. Themes include: modernism's challenges to positivism, fin-de-sihcle decadence, Freud and the rise of psychoanalysis, the roaring 20s, feminism, Surrealism, Cubism, Cabaret, Americanisation, Jazz, and cultural representations of WWI & WWII.

EURO2600
European Integration
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ECOH2322

Aims to impart a knowledge and understanding of the institutions, current policies and likely directions of economic and social change within the European Union. Problems confronting nation states with differing institutional and policy directions (and in the case of Eastern Europe a different socioeconomic system) that now are in the course of being melded. Specific topics include the process towards a single market; the problems and implications of monetary integration; the trade distortions arising from the Common Agricultural Policy; the collapse of the Soviet system and the widening of the European Union; the operation of European multinationals; the process of privatisation in Europe; and European integration in relation to Australia and Asia.

EURO2700
What is Postcommunism? Central and Eastern Europe after 1989
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: LAWS2232

When European communist states collapsed like a house of cards, there was an explosion of euphoria in the region and around the world. Post-communism has turned out, however, to be a more complex, variable, and uncertain condition than was anticipated by many of those who greeted it with such enthusiasm. An introduction to some of the characteristic features of the post-communist world, to some of its difficulties, problems, challenges and triumphs; and to similarities and differences among the developments in post-communist societies. Discusses some of the major successes of post-communist countries and some of their major failures; students will be encouraged to reflect on similarities and differences between post-communist realities and those of the society/ies which they know.

EURO3000
Evidence and Interpretation: Controversies in European History
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit, including 6 units of credit in HIST at credit level or better; Excluded: HIST3905

From the famous controversy between E H Carr and Geoffrey Elton, sparked by Carr's 'What is History?' half a century ago, to the more recent 'postmodernism' debate, historians have been sharply divided over such key issues in historiography as the relative importance of empirical evidence, theories, moral values, and narrative subjectivity. Explores these issues through both the major writings of the key protagonists in these debates, and case studies of three of the most celebrated 'wars of interpretation' in European history: the English Civil War, the French Revolution, and the rise of Nazism in Germany.

EURO3001
Barbarians, Peasants & Vampires: Eastern Europe in History & Imagination
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST3109

Examines imaginative representations of East European peoples through history, drawing on evidence from visual images, travel writing, and chronicles. Clarifies the connections between history, mythology, demonisation and romanticism in West European depictions of "the East", and Eastern self-representation.

EURO3900
Advanced Program A
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit including 6 units of European Studies at credit level

Topics in modern European history and culture (consult co-ordinator).

EURO3901
Advanced Program B
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit including 6 units of European Studies at credit level

Topics in modern European history and culture (consult co-ordinator).

EURO4000
European Studies Honours F/T
Faculty of Arts and Social Sciences
UOC24 HPW5
Prerequisite: An average of 70% in the European Studies major and related courses

Primarily intended for students enrolled in combined degrees who are unable to meet the prerequisites for Combined Honours. A thesis on a cross-disciplinary topic and a program of coursework negotiated between the Program and the appropriate School(s).

EURO4050
European Studies Honours P/T
Faculty of Arts and Social Sciences
UOC12 HPW3
Prerequisite: An average of 70% in the European Studies major and related courses

Primarily intended for students enrolled in combined degrees who are unable to meet the prerequisites for Combined Honours. A thesis on a cross-disciplinary topic and a program of coursework negotiated between the Program and the appropriate School(s).

EURO4500
Combined Honours (Research) in European Studies Full-Time
Faculty of Arts and Social Sciences
UOC12 HPW2
Prerequisite: 36 units of credit in EURO with an average of 70% and permission from co-ordinator

Students must satisfy the single Honours prerequisite of the School concerned and have completed a major in EURO with an average of 70%. Prescribed honours coursework and a thesis on a cross-disciplinary topic approved by the Coordinator and the relevant Head of School.

EURO4550
Combined Honours (Research) in European Studies Part-Time
Faculty of Arts and Social Sciences
UOC6 HPW2
Prerequisite: 36 units of credit in EURO with an average of 70% and permission from co-ordinator

Students must satisfy the single Honours prerequisite of the School concerned and have completed a major in EURO with an average of 70%. Prescribed honours coursework and a thesis on a cross-disciplinary topic approved by the Coordinator and the relevant Head of School.

EXCH8001
Arts and Social Sciences Exchange Program

EXCH8002
Built Environment Exchange Program

EXCH8003
College of Fine Arts Exchange Program

EXCH8004
Commerce and Economics Exchange Program

EXCH8005
Engineering Exchange Program

EXCH8006
Law Exchange Program

EXCH8007
Medicine Exchange Program

EXCH8008
Science Exchange Program
Division of Registrar and Deputy Principal
UOC24

These courses are for administrative use by Schools and Faculty Offices only. Students will not be able to enrol in these courses via myUNSW.

UNSW actively encourages all students to take part of their degree program overseas through formal reciprocal exchange agreements with over 160 universities in 34 countries. Under the program, students can spend one or two semesters at a university in Asia, Europe, USA, India, Canada, or Latin America. Studies completed at the overseas university are credited towards the UNSW degree.

Local and international undergraduate and postgraduate students with a satisfactory academic record may apply to participate in the exchange

program after one semester of study at UNSW. During their period of exchange, students remain enrolled at UNSW and pay normal activity fees and student contributions, local or international fees. The overseas university waives tuition fees for exchange students, but students are responsible for their own travel, accommodation and living expenses.

Given the objectives of Exchange programs, and reciprocal agreements with partner institutions, students are required to enrol in a full-time 24 unit exchange program. Students are usually enrolled in a 24 unit of credit exchange course that relates to the faculty that administers their degree program, and will be charged the corresponding Student Contribution amount (for Commonwealth supported students) or UNSW tuition fees (for fee-paying students). Where combined degree program students are approved to take their exchange in areas related to both component degrees, enrolment will be in equivalent 12 unit of credit courses, on the same fee principles. Please refer to Fee Band above for more information.

For details on institutions participating in the International Exchange Program at UNSW, visit **www.international.unsw.edu.au**.

EXCH8021
Arts and Social Sciences Exchange Program

EXCH8022
Built Environment Exchange Program

EXCH8023
College of Fine Arts Exchange Program

EXCH8024
Commerce and Economics Exchange Program

EXCH8025
Engineering Exchange Program

EXCH8026
Law Exchange Program

EXCH8027
Medicine Exchange Program

EXCH8028
Science Exchange Program
Division of Registrar and Deputy Principal
UOC12

These courses are for administrative use by Schools and Faculty Offices only. Students will not be able to enrol in these courses via myUNSW.

UNSW actively encourages all students to take part of their degree program overseas through formal reciprocal exchange agreements with over 160 universities in 34 countries. Under the program, students can spend one or two semesters at a university in Asia, Europe, USA, India, Canada, or Latin America. Studies completed at the overseas university are credited towards the UNSW degree.

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For details on institutions participating in the International Exchange Program at UNSW, visit **www.international.unsw.edu.au**

FINS1612
Capital Markets and Institutions
School of Banking and Finance
UOC6 HPW3
Corequisite: ECON1101, ECON1202

Focuses on the major financial markets, including the equity, money, bond, exchange rate and derivatives markets. Students learn about the basics of financial instruments in these markets, such as bank bills, treasury bonds, futures and options and are exposed to the tools of analyses and the roles and innovations of major financial institutions. These include the banks and non-banks, such as finance companies, building societies and credit unions, life and insurance companies as well as investment management companies. Documents the emergence of the wealth management industry as an integral component of the Australian financial services sector.

FINS1613
Business Finance
School of Banking and Finance
UOC6 HPW3
Corequisite: FINS1612 or any two of ACCT1511, ECON1102, ECON1203

Looks at the essential aspects of financial decision-making. Financial mathematics is used to value securities and make capital expenditure decisions. Portfolio theory is introduced to provide a foundation for determining the relationship between expected risk and returns in financial and real asset investments. Dividend payouts and the choices between debt and equity financing are covered. Includes: factors affecting the formulation of the capital structure and the influence of the capital market environment. The implications of financial risk, taxation and the conflict of interest between managers and investors on the value of business firms are introduced.

FINS2100
Industrial Training 1 (Co-op)
School of Banking and Finance
UOC6
Prerequisite: FINS1613

Students consider the practical application of the fundamental principles of Banking & Finance in an industry environment.

FINS2622
Emerging Capital Markets
School of Banking and Finance
UOC6 HPW3
Prerequisite: FINS1612

Emerging capital markets have become in vogue as a result of a wave of mass financial liberalization, which occurred towards the end of the 1980s. Emerging financial markets behave differently to developed financial markets because of their level of integration (or conversely degree of segmentation) with world markets. A major aim of this course is to examine the issues pertinent to investment in emerging financial markets from both the perspective of international investors and policy makers. These broadly revolve around financial crises, liberalization and capital flows, pricing of political risks and other risks, governance and financial architecture, and regional integration.

FINS2624
Portfolio Management
School of Banking and Finance
UOC6 HPW3
Prerequisite: FINS1613

Modern investment theories are introduced with an equal emphasis on theory and practice. The Markowitz model, capital asset pricing model, and single index model are studied and applied to design portfolios, price and manage risks, evaluate performance, identify mispriced assets, and estimate asset betas. The pricing of stocks, bonds, options, and futures; the impact of tax on the choice of bonds; the theories of the term structure; the duration concept; and the strategic use of options and futures for hedging and investment are also studied. Spreadsheet applications to securities pricing and investment theories are introduced to put theories into practice.

FINS2643
Wealth Management
School of Banking and Finance
UOC6 HPW3
Prerequisite: FINS1613; Prerequisite or corequisite: FINS2624

FINS3100
Industrial Training 2 (Co-op)
School of Banking and Finance
UOC6
Prerequisite:FINS3616

Students consider the practical application of the fundamental principles of Banking & Finance in an industry environment.

FINS3200
Industrial Training 3 (Co-op)
School of Banking and Finance
UOC6
Prerequisite: FINS3100

Students consider the practical application of the fundamental principles of Banking & Finance in an industry environment.

FINS3616
International Business Finance
School of Banking and Finance
UOC6 HPW3
Prerequisite or corequisite: FINS2624

Focuses on the basic theoretical and practical knowledge required for the management of the financial and investment functions of multinational corporations. Topics include international diversification, foreign investment decisions, cost of capital, financial and political risks, hedging strategies, the financial benefits of Euro-currencies and Eurobonds and international equity markets. It is relevant to a broad range of professions including corporate treasury management, corporate finance, international securities trading and investment management. The general emphasis is on the identification and management of opportunities and risk relating to exchange rate fluctuations, international financial markets and government policy changes.

FINS3623
Venture Capital
School of Banking and Finance
UOC6 HPW3
Prerequisite: FINS1613

Examines various aspects of entrepreneurial finance for small and medium enterprises in Australia and considers financial decisions made from start-up until the original shareholders cash out via public offering. Theories associated with entrepreneurship and specifically closely held enterprises are reviewed. In dealing with advanced issues in relation to project selection, business finance and financial management, there is a strong emphasis on encouraging students to understand how to augment traditional finance views with practical issues and problems faced by small to medium sized firms.

FINS3625
Applied Corporate Finance
School of Banking and Finance
UOC6 HPW3
Prerequisite: FINS1613

Focuses on practical applications relating to the theory of financial decision making. Case studies, empirical evidence and current issues in the financial media are used to illustrate key decisions made by managers of the firm. Topics include advanced capital budgeting issues, capital raising including venture capital and initial public offerings, mergers and acquisitions and advanced capital structure and dividend policy issues. One of the aims is to develop students' ability to make judgments in a realistic setting and to develop the capacity to articulate judgments both orally and in writing.

FINS3626
International Corporate Governance
School of Banking and Finance
UOC6 HPW3
Prerequisite: ACCT1511, FINS1613

Corporate governance is fundamental to the existence and growth of public corporations as it encompasses the mechanisms which help suppliers of finance assure themselves of getting a return on their investment. Its practical importance is also evident in the recent mega corporate collapses around the world. This course analyses how different governance mechanisms prevent managerial self-dealing, protect minority shareholders and add value to corporations. Specific topics include: directors responsibilities, board structure; regulations; auditing; executive compensation; financial ownership and control; shareholder activism; hostile takeovers and defence mechanisms; and the difference in governance systems in the US, UK, Australia, Japan, Germany and some Asian countries.

FINS3630
Bank Financial Management
School of Banking and Finance
UOC6 HPW3
Prerequisite: FINS1612, FINS1613

The theory and practice of banking from a financial management perspective; banks and the financial services industry; regulatory restrictions and financial management; asset management - liquidity and loan management; liability and deposit management; capital structure and dividend decisions; and financial management implications of electronic banking, and other developments are studied.

FINS3633
Real Estate Finance
School of Banking and Finance
UOC6 HPW3
Prerequisite: FINS2624

Evaluates real estate financing, the mechanics of the mortgage market, and the application of modern finance theory to the evaluation, selection and management of direct and securitised property investments. Topics include the role of regulation, taxation, government agencies, property trusts, and the banking system on real estate activity. Analyses real estate, diversification aspects, valuation techniques, evaluates lease structures, concepts of rent and yields.

FINS3634
Credit Analysis and Lending
School of Banking and Finance
UOC6 HPW3
Prerequisite: FINS1612, FINS1613

Focus is on latest approaches to loan portfolio selection and credit risk modelling. Topics include: credit scoring; credit ratings and default probabilities; pricing bonds and loans as options; reduced-form models; simulation-based approaches; capital structure and risk return analysis; overview of credit risk markets. Includes Excel-based project on portfolio credit risk..

FINS3635
Options, Futures and Risk Management
chool of Banking and Finance
UOC6 HPW3
Prerequisite: FINS2624

An intermediate course on options, futures and techniques for managing asset risk. Topics covered include an overview of derivative securities, forward and futures contracts (on stock indices, investment and consumptive assets), options (on stocks, stock indices and futures), hedging positions in options and other derivative securities, binomial option pricing, risk-neutral valuation, the stochastic process followed by stocks, numerical techniques in option pricing, options on non-traded assets, exotic options and pricing biases.

FINS3636
Interest Rate Risk Management
School of Banking and Finance
UOC6 HPW3
Prerequisite: FINS2624

Looks at interest rate risk (IRR) and techniques for managing risk. Topics covered include term structure dynamics (including bond price lattices, spot and forward rate models), analytical and numerical techniques, duration measures, interest rate derivative securities (including options, futures, caps, floors and swaps), mortgage-backed securities and their derivatives, portfolio management, value-at-risk, and the interaction between IRR and credit risk. In discussing interest-rate derivatives, the primary emphasis is on the Hull-White model, but other models, such as the models of Ho-Lee, Cos-Ingersoll-Ross and Heath-Jarrow-Morton are discussed.

FINS3640
Investment Management Modeling
School of Banking and Finance
UOC6 HPW3
Prerequisite: FINS2624

Covers the essential analytical and quantitative tools applied in the investment management industry. It provides students with the knowledge and skills required to construct and manage portfolios of financial securities. Examines both index funds and actively managed portfolios, the mix of different types of assets in portfolios, and the role

of derivative securities in portfolio management. Focuses on portfolio theory, investment analysis, quantitative analysis, factor models and portfolio risk management. An essential component involves the use of software programs (MS-Excel and Barra) in applying concepts to the real-world market environment.

FINS3641
Security Analysis and Valuation
School of Banking and Finance
UOC6 HPW3
Prerequisite: FINS2624

Explores techniques, models and industry practices used in the selection of securities for institutional equity portfolios. Both quantitative and fundamental analysis are covered. Considerable attention is paid to recent research, through published journal and working papers on the efficiency or otherwise of financial markets, and to anomalies that form the bases for quantitative stock election models. Students will develop skills in finding recent material not yet in standard text books, thus enhancing their ability to remain current throughout their professional careers. A changing selection of contemporary topics, such as advanced theories of risk, hedge funds, etc. may also be included.

FINS3642
Strategies for Investment Management
School of Banking and Finance
UOC6 HPW3
Prerequisite: FINS3640

Deals with the adoption of financial innovations in funds management with a particular emphasis on the understanding of the characteristics of a large trans-national hedge fund. Covers recent innovations in the development and management of some strategic special-purpose funds, designed for investors interested in particular financial markets eg foreign exchange markets and stock markets. Incorporates extensive use of computer spreadsheets, macros, and programs to aid in the examination of individual stock data and calculations and later hedge a fund via the derivatives market. Involves extensive use of MS-Excel and financial and statistical packages.

FINS3650
International Banking
School of Banking and Finance
UOC6 HPW3
Corequisite: FINS3616

Focuses on providing students with an understanding of the operating environments of international banking institutions. Topics covered are: the nature and theory of international banking, the major functions of international banking (international trade financing, participation in the interbank foreign exchange and Eurocurrency markets, international investment banking services, and sovereign lending), and other important issues (international money laundering, international banking crisis, regulation of international banking, international debt crisis, and offshore banking markets). Some of the topics covered may vary over time.

FINS3651
International Financial Services
School of Banking and Finance
UOC6 HPW3
Prerequisite or corequisite: FINS2624

Designed to acquaint the student with the planning and administration of a worldwide corporate insurance program under conditions of uncertainty. International dimensions of risk management are surveyed, highlighting the importance of differing economic, social, and political environments. Topics include: inter alia; the structure of insurance markets internationally; the economics of international trade in insurance; the integration and globalisation of financial services; the role, importance and functioning of reinsurance worldwide; the legal environment of risk management and insurance internationally; the tax environment for insurance internationally; rationales and nature of government intervention into insurance markets worldwide; regulatory harmonisation in insurance; the demographic and social environment for insurance internationally; the advantages and disadvantages of different social welfare strategies in an international business environment; and global risk management.

FINS3775
Research Methods in Finance 1
School of Banking and Finance
UOC6 HPW3
Prerequisite:Credit or better in FINS2624; Excluded:FINS4775

Provides an introduction to econometric theory and its application in empirical finance. Much emphasis is on the practical aspects. There is extensive use of leading statistical and econometric software that is employed extensively in research and practice.

FINS4774
Financial Decision Making Under Uncertainty
School of Banking and Finance
UOC6 HPW3
Prerequisite or Corequisite: FINS3775 or FINS4775

Provides an intermediate exposition of the fundamentals of portfolio selection and corporate finance: (i) the basics of choice theory; (ii) binomial option pricing; (iii) portfolio theory; (iv) classical, non-game theoretical theories of capital structure and dividend policy and empirical evidence on these theories; and (v) theories and evidence related to mergers and acquisitions.

FINS4775
Research Methods in Finance 1
School of Banking and Finance
UOC6 HPW3
Prerequisite:Credit or better in FINS2624; Excluded:FINS3775

Provides an introduction to econometric theory and its application in empirical finance. Much emphasis is on the practical aspects. There is extensive use of leading statistical and econometric software that is employed extensively in research and practice.

FINS4776
Advanced Topics in Asset Pricing
School of Banking and Finance
UOC6 HPW3
Prerequisite or corequisite: FINS3775 or FINS4775

Provides an in-depth treatment of asset pricing theories, including surveying the evidence from tests of these models. Both general asset pricing techniques and the micro-foundations of these models are covered. Emphasis is on applications of mathematical and statistical tools to provide a rigorous development of each topic. Students are assessed through a variety of means, which may include problem sets, exams, papers, and presentations.

FINS4777
Advanced Topics in Corporate Finance
School of Banking and Finance
UOC6 HPW3
Prerequisite or corequisite: FINS3775 or FINS4775

The main emphasis is exposure to the latest research on selected topics in corporate finance. Topics covered are primarily selected on the basis of the lecturer's area of expertise and include methodological considerations in corporate finance research, corporate restructuring, agency theory and governance, performance measurement, valuation models, dividend policy and repurchases, forecasting, and capital structure. A combination of assessment methods is used, including group projects, case studies and student presentations. Assumes a sound knowledge of the theories relating to the foundations of finance.

FINS4779
Research Methods in Finance 2
School of Banking and Finance
UOC6 HPW3
Prerequisite or corequisite: FINS3775 or FINS4775

A more advanced course in empirical methods in finance, covering general methodological aspects, testing of hypotheses and falsifiability principle. Review of relevant econometric material applications to topics such as generalised beta models of market equilibrium (including CAPM, APT), foreign exchange risk premium, stock price variability and volatility estimation.

FINS4781
Special Topics in Finance
School of Banking and Finance
UOC6 HPW3
Prerequisite: Admission to BCom Honours

This is an optional unit forming part of the Fourth-Year Honours program and is designed in a flexible way to provide students with advanced knowledge in important areas of finance that fit in with the supervisory capacity of the academic staff. The content areas may thus vary from year to year. A more detailed course outline will be provided prior to the commencement of the unit.

FINS4794
Thesis B (Finance)
School of Banking and Finance
UOC18

Note: The thesis is to be approved and supervised by the School of Banking and Finance.

FINS4795
Thesis (Finance)
School of Banking and Finance
UOC24

Note/s: The thesis is to be approved and supervised by the School of Banking and Finance.

FOOD1120
Introduction to Food Science
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW4

This course will provide students with an insight into the breadth and depth of food science, outlining many of the historical, social, physiological, nutritional, industrial, legal and psychological issues affecting food consumption and production. This course will also introduce some of the common scientific principles underpinning many of the practices and challenges relating to food preparation in the home, the food service industry and food manufacturing sectors, highlighting the role of creativity and innovation in meal design and food product development.

FOOD1130
The Food Industry: Professional Perspective and Practice
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

This course will examine the contribution of the breadth of food science and technology to the food industry, and the skills expected of a food science professional. A technical lecture series will demonstrate the integration of all aspects of food science and technology, and their underpinning by the basic sciences, through examination of a hypothetical company producing a selected food product. Field trips will provide early exposure to the food industry. Students will be exposed to the theory of and have the opportunity to practice a range of generic skills relevant to both their University studies and practice in food science and technology, including oral and written communication, team/group work, information literacy, personality types and learning styles.

FOOD1230
Food Choice: Psychology, Preference and Acceptability
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

This course considers factors that influence the choice of foods and eating patterns by consumers, and provides a rational basis for the design, development and marketing of new food products and new processing technologies. It is aimed at students with interest in food and human behaviour, for example, marketing, advertising, food service/ hospitality and psychology, as well as students in food science and technology. Topics covered include: physiology of taste and smell; sensory acceptability of foods in terms of flavour, appearance and texture and its measurement (sensory evaluation); psychological, physiological, cultural, religious, environmental and genetic factors that affect food preference and consumption patterns and behaviour; eating disorders (eg. anorexia, bulimia); diet and consequences for physical and mental activity (eg. sports diets); implications for food product development, process development, marketing, advertising and diet design.

FOOD1360
Food Processing Principles
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

Food processing is introduced in a series of integrated labs and lectures covering the basics of food engineering: heat transfer and fluid flow. This includes heat and mass balances, heat and mass transfer, Fourier's equation, modes of heat transfer, heat exchangers, transient heat transfer and Heisler charts for cans, food properties, physical chemistry of phases in crystalline, steam and enthalpy, thermal death, sterility, Fo, Z and D values, retorting, lethality, texture of solids and liquids, product flow and pumping, non-Newtonian behaviour, esp. viscoelasticity, and intermediate moisture foods. Some example food operations are presented, including mixing powders and slurries, baking, frying, roasting, cooling, thawing, and freezing.

FOOD1370
Food Preservation: Principles and Applications
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

The basis of food science is presented in a series of lectures and integrated labs covering traditional and novel methods of preserving foods for distribution and storage. Food commodities are introduced in groups, including dairy, meat, fish, fruit, vegetables, beverages, eggs, sugars, cereals and lipids. The need for preservation is discussed, including physical, chemical and biological deterioration factors and water relationships. Technologies covered are heating, chilling, freezing, drying, brining, pickling, sugar, radiation, packaging (MAP and CAP), chemical preservatives and novel methods.

FOOD1380
Unit Operations in Food Processing
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6
Prerequisite: FOOD1360, FOOD1370

The principles introduced in FOOD1360 and FOOD1370 are used in studying some of the more important unit operations in the food industry. The procedure used for each unit operation is to firstly describe the process, its applications, effects on the food product and requirements, appropriate process diagrams, mass and heat balances and flows, solving unit operation problems. Unit operations covered are refrigeration, dehydration, evaporation, extrusion, physical separation and comminution.

FOOD1390
Product Design and Development
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6
Prerequisite: CHEM2921.

This course provides a series of lecture and laboratory classes that cover the basic theoretical and practical concepts associated with the design and development of new food products and processes. The product development process: the need for new products, types of new products, the development team, idea generation, steps in the product development process; the role and specific tasks of market research, market research techniques, target markets, limitations of market research. Roles of advertising and supermarkets in new product success; product lifecycles, reasons for new product failure and preventative strategies. Ingredient and additive behaviour and contributions in foods: properties of the major food components in relation to food properties, storage stability and nutritional properties of foods. Impact of new technology. Sensory analysis: basic sensory analysis techniques, expert vs consumer panels, interpretation and implementation of sensory testing data, sensory rankings from different target markets.

FOOD1400
Project
School of Chemical Engineering and Industrial Chemistry
UOC6
Prerequisite: CHEM3811 , FOOD1360 , FOOD1370 , FOOD1380 , FOOD1390 , FOOD2320 , FOOD2330 , FOOD2340

The student undertakes an individual project involving a literature survey, an experimental investigation, the preparation of a detailed report on a selected topic in food science and technology, and presentation of seminars on a literature review and experimental results.

Note: Restricted to program 3060.

FOOD1480
Minor Project
School of Chemical Engineering and Industrial Chemistry
UOC6
Prerequisite: CHEM3811 , FOOD1360 , FOOD1370 , FOOD1380 , FOOD1390 , FOOD2320 , FOOD2330 , FOOD2340

The student will be required to undertake a literature-based study of a research problem, submit a project thesis and present seminars arising from the project.

FOOD1490
Advanced Food Chemistry
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6
Prerequisite: CHEM3811 or equivalent

Chemistry and analysis of food flavours; measurement, fractionation and structural determination of proteins, starch and its derivatives, non-starch polysaccharides, dietary fibre constituents and lipids; detection and measurement of mycotoxins; analysis of selected vitamins; application of advanced separation techniques to food components.

FOOD2320
Food Microbiology
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

This is a lecture-laboratory course that introduces the basic concepts of food microbiology, covering the ecology, biochemistry, isolation, enumeration and identification of bacteria, yeasts, fungi and viruses associated with foods and beverages. Food spoilage: specific food microorganism associations; taxonomy and biochemistry of major spoilage species; chemical and physical changes to food properties; spoilage of specific commodities. Foodborne microbial disease: foods as vectors of disease and food poisoning; statistics and epidemiology; ecology and taxonomy of foodborne pathogenic microorganisms; control and prevention by hygiene, microbiological standards and legislation. Food fermentation: microbial ecology and biochemistry of fermentations; fermentations of alcoholic beverages, bakery products, dairy products, meats, vegetables, cocoa beans, soy sauce; production of food ingredients and processing aids by fermentation. Microbiological examination of foods: sample preparation and sampling plans; sublethal injury; standard methods for determination of total plate counts, indicator organisms, foodborne pathogenic species, principal spoilage species. Microbiological quality assurance: specifications and standards; decision criteria; hazard analysis and critical control point (HACCP) concept; cleaning and sanitation.

FOOD2330
Quality Assurance and Control
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW4

This course aims to provide students with a knowledge base of concepts in quality assurance (QA) and quality control (QC) in the context of the food industry. What are quality, QA, QC?; organisation-wide quality management, quality costs, Total Quality Management and ISO9000-based Quality Management Systems; tools in quality management, brainstorming and other qualitative tools, benchmarking; production-level QA and QC, HACCP, risk analysis and management, statistical quality/process control, sampling and sampling plans, cleaning and sanitation; QA in the laboratory, accreditation, metrology, proficiency testing; regulatory aspects of QA/QC; auditing quality; staff training.

FOOD2340
Food Safety
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW4

This course presents a package of information and exercises designed to demonstrate the public health risk associated with the production and consumption of foods and the strategies adopted by industry, government and consumers to manage and control these risks. Topics covered include: chemical risks - natural, additives and residues; microbiological risks - bacterial, fungal, viral, algal, parasites, prions; nutrition - diet and health; genetically modified foods - concepts and specific safety issues; management of food safety by industry - TQM, HACCP, ISO; management of food safety by government - food law, national and international regulation and issues; legal and insurance issues; consumer concerns - education, social, moral and ethical issues.

FOOD2350
Forensic Food Science
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW3

This course consists of a series of lectures, discussions and assignments that examine a wide range of techno-legal issues which frequently confront companies involved in the manufacture and service of foods and beverages. A portfolio of case studies are used to demonstrate the fundamental and practical aspects of the investigative process: defining the cause of the problem, acquisition of appropriate information and analytical evidence; loss assessment; reporting; communication with solicitors, barristers and insurance companies; appearance at court. Topics covered include: the legal process; prosecution for breach of food safety, quality and labelling regulations; prosecution of fraud, deception and adulteration; compensation disputes between companies when products and processes do not meet contractual specifications; compensation claims from consumers who have experienced foodborne illness; food composition and labelling authenticity, including religious certification for halal and kosher foods, genetic modification using recombinant DNA technology, species homogeneity; sabotage, deliberate adulteration, tampering; protection of intellectual property, patents. The course is aimed at students in food science and technology, but its content and structure are designed to accommodate students with a broader background in science and technology, as well as practicing professionals in the food/ beverage industries, government regulatory agencies and consulting companies.

FOOD2480
Advanced Food Microbiology
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW3
Prerequisite: FOOD2320

This course consists of a series of lectures, discussion groups and visits to local food companies that takes food microbiology from its basic concepts to advanced consideration of current issues on food spoilage, foodborne microbial disease, food and beverage fermentations and the use of microorganisms as processing aids and sources of food ingredients and additives. With a focus on commodity groups it considers industry structure, food properties and processing operations that impact on the growth, survival and biochemical activity of microorganisms as they relate to spoilage, safety and desirable fermentations. Commodities considered include dairy products, fruit and vegetables, meat products (red meats, poultry, seafoods) and alcoholic beverages. Advanced concepts of microbial taxonomy, biochemistry, physiology, detection and enumeration are covered as well as the use of microorganisms as sources of colours, flavours, polysaccharides, vitamins, amino acids and as probiotic and biocontrol agents.

FOOD3220
Nutrition
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6
Corequisite: BIOC2101 or BIOC2181

This course consists of a series of lectures and practical exercises that provide students with knowledge about the occurrence of nutrients in foods and their role in human physiology, health and disease. Structure, properties and sources of nutrients; role of nutrients in human structure and function. Introduction to food groups, tables of food composition, food labels, dietary recommendations; food guides; nutrition in health and disease; nutritional needs of vulnerable groups: infants, pregnant and lactating women, the aged; dietary intolerance, disorders related to the affluent diet including coronary heart disease, dental caries, diabetes, hypertension and cancer; problems of undernutrition including protein, energy, mineral and vitamin deficiencies; physiological and nutritional aspects of dietary fibre, alcohol; assessment of nutritional status using dietary and anthropometric techniques; practical exercises on anthropometric techniques and measurement of nutrient intake using computer systems on an individual and group basis.

FOOD3330
Nutrition for Sports Science
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6
Prerequisite: BIOC2101 or BIOC2181; Excluded: FOOD3220, FOOD3567.

This course consists of a series of lectures and practical exercises that provide students with the knowledge about the occurrence of nutrients in foods and their role in human physiology and health. Structure, properties and sources of nutrients, role in human structure and function. Introduction to food groups, tables of food composition, food labels, dietary recommendations, National physical activity guidelines. Nutrition through life cycle. Dietary intakes of athletes, disorders related to obesity, alcoholism, iron deficiency and calcium imbalance. Effects of exercise on protein and carbohydrate metabolism, fluid imbalance. Dietary supplements and nutritional aids in sports, special needs of athletes.

FOOD3440
Advanced Nutrition
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6
Prerequisite: FOOD3220

This course consists of lecture and discussion classes that build on the basic concepts of nutrition with respect to the food supply, giving advanced treatment of the following topics. Food and nutrition policy:

structure of the population; food supplies, food consumption, nutritional epidemiology; population dietary references; food programs such as food fortification, supplementary feeding schemes, nutritional rehabilitation, nutritionally modified foods, nutritional regulations and standards, nutrition education, dietary and nutrition interventions (ORT, family planning, infection control, growth monitoring); principles, practice and evaluation of applied nutrition programs; advanced assessment methods in nutrition: nutrient bioavailability studies, nitrogen balance tests, vitamin load tests, sodium and potassium excretion, creatinine excretion, fitness assessment, biochemical assessment, design and evaluation of nutritional epidemiology studies, food intake studies.

FOOD4450
Advanced Food Processing
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6

This course consists of lectures and discussion groups covering advanced aspects of modern food processing and preservation. This includes food bulk and thermal properties, rheological properties and models of heat transfer (analytical, graphical and numerical methods, computer packages, microwave, infrared, and radio frequency irradiation), process modelling and control, dehydration, evaporation and distillation.

FOOD5400
Industry Liaison
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6
Prerequisite: 144 Units Of Credit.

This course involves structured inspections of a variety of food processing establishments, production areas and food research institutes and stations within Sydney, NSW and interstate. The aim is to strengthen student understanding of the structure, practical operation and management of the local food industry and to demonstrate how theoretical concepts in food science and technology are applied in a commercial situation. The important linkage between the technical aspects of food production and commercial requirements of food companies will be explained.

FOOD5410
Industry Practicum
School of Chemical Engineering and Industrial Chemistry
UOC24 HPW24
Prerequisite: 144 Units Of Credit.

This course involves a structured program of activity within a food processing or related company as approved by the course coordinator. The aim is to provide a detailed insight into aspects of company structure and activity through project work, reports and seminars.

FOOD9410
Honours Research Project
School of Chemical Engineering and Industrial Chemistry
UOC21

An extensive research project is required on some aspects of food science and technology, including preparation of a literature review, conduct of laboratory-based research, presentation of two seminars, and submission of a thesis based on the results of the research project. Candidates will undertake corequisite formal coursework as approved by the Program Coordinator.

Note: Restricted to program 3065.

FOOD9420
Food Science and Technology (Honours)
School of Chemical Engineering and Industrial Chemistry
UOC24

Advanced training in selected areas of food science and technology: a formal component consisting of lectures, seminars, tutorials and written assignments plus a supervised research program in a specified area of food science and technology. Students intending to do this program should consult with the Program Coordinator about selection of courses in earlier years.

FOOD9430
Food Science (Honours)
School of Chemical Engineering and Industrial Chemistry
UOC24

A research project in a selected area of food science, including preparation of a literature review, conduct of laboratory-based research, presentation of a seminar and submission of a thesis based on results of the research project. Candidates will undertake 24 Units of Credit corequisite formal coursework as approved by the Program Coordinator.

Note: Restricted to programs 3970, and Advanced Science - Life Sciences. Enrolment requires co-requisites: 24 UOC of level III/IV courses as approved by the Program Coordinator.

FREN1101
French Language and Culture 1A
Department of French
UOC6 HPW6
Excluded: FREN1001, GENT0425

Introduction to listening, speaking, reading and writing in French; development of basic competence in everyday practical situations, together with regular study of grammar and initiation to contemporary French culture.

Note: For students with no previous knowledge of French.

FREN1102
French Language and Culture 1B
Department of French
UOC6 HPW6
Prerequisite: FREN1101 or FREN1001; Excluded: FREN1002

Further development of the skills learnt in FREN1101 now in a wider range of practical situations, together with the continuation of the study of grammar and contemporary French culture.

FREN2101
French Language and Culture 2A
Department of French
UOC6 HPW5
Prerequisite: FREN1102 or FREN1002; Excluded: FREN2003

Intensive study of French language, with particular emphasis on aural comprehension, oral expression and the acquisition of elementary writing skills. Initiation into the study of syntax and the various registers of French. Further study of French culture.

FREN2102
French Language and Culture 2B
Department of French
UOC6 HPW5
Prerequisite: FREN2101 or FREN2003; Excluded: FREN2004

Extension of the skills gained in FREN2101 with special emphasis on the study of syntax and an introduction to literary text analysis. There is also further study of French culture.

FREN3101
French Language and Culture 3A
Department of French
UOC6 HPW4

Consolidation of interactive skills and initiation to the study of some forms of spoken and written discourse of general interest, mainly oral discussion and short written narrative texts. Systematic study of French syntax and phonology.

FREN3102
French Language and Culture 3B
Department of French
UOC6 HPW4
Prerequisite: FREN3101 or FREN1011 or FREN3003; Excluded: FREN1012, FREN3004

Extension of the skills gained in FREN3101 with a focus on spoken and written discourse of general academic interest, such as oral presentation and short essay. Further study of French syntax together with systematic literary text analysis.

FREN3103
French Language and Culture 4A
Department of French
UOC6 HPW3
Prerequisite: FREN3102 or FREN1012 or FREN3004; Excluded: FREN1021, FREN2013

Consolidation of all skills and initiation to the study of some forms of spoken and written discourse of vocational interest, mainly interview, oral report and short essay. Systematic study of syntax and contemporary French culture.

FREN3104
French Language and Culture 4B
Department of French
UOC6 HPW3
Prerquisite: FREN3103 or FREN1021 or FREN2103; Excluded: FREN1022, FREN2014

Extension of the skills gained in FREN3103 with focus on some forms of spoken and written discourse of vocational and academic interest such as debate and essay. Further study of syntax and systematic literary text analysis.

FREN3105
French Today
Department of French
UOC6 HPW3
Prerequisite: FREN3004 or FREN3104 or FREN1022 or FREN2014; Excluded: FREN3110, FREN3120

Theoretical and practical study of the patterns of contemporary French. Special focus on the features of spontaneous speech in interaction. Students will practise interactive skills and expository discourse in French. This course is particularly useful for students intending to teach French as a foreign language.

FREN3106
Discourse Studies: Media, Politics and Society
Department of French
UOC6 HPW3
Prerequisite: FREN3004 or FREN3104 or FREN1022 or FREN2014; Excluded: FREN2030

Theoretical and practical study of French in various vocational fields. Topics may include media, political and scientific types of discourse. Students will practise their written skills and gain a better understanding of sophisticated uses of French in contemporary Francophone societies.

FREN3210
French Prose Fiction
Department of French
UOC6 HPW3
Prerequisite: FREN1022, FREN2014, FREN2020, FREN2030, FREN3011, FREN3101 or FREN3104

A close study of three French novels from the realist tradition of the nineteenth century. While studying each work in its historical and social context, the course will also observe the evolution of major themes and/or structural aspects.

FREN3211
Special Reading Program
Department of French
UOC6 HPW3
Prerequisite: FREN1022, FREN2014, FREN2020, FREN2030, FREN3011 or FREN3104

Reading in selected French masterpieces. Students are required to submit an in-depth analysis of work studied.

FREN3214
Modern French Poetry
Department of French
UOC6 HPW3
Prerequisite: FREN1022, FREN2014, FREN2020, FREN2030, FREN3011or FREN3104; Excluded: FREN3201

A close study of the works of two major poets of the 19th century, Baudelaire and Rimbaud. Analyses the historical context and the beginnings of modernism in the work of these two poets.

FREN3312
French Cinema and Society
Department of French
UOC6 HPW3
Prerequisite: FREN1022, FREN2014, FREN2020, FREN2030, FREN3011 or FREN3104; Excluded: FREN3510

A study of contemporary French cinema. The aims of the course are to develop the student's skills in analysing film, and to examine the ways in which French society is represented in fiction films. It will also introduce students to French film theory. Students should note that films will be screened outside class time.

FREN3901
Reading Program 1 (Advanced)
Department of French
UOC6 HPW3
Prerequisite: 36 units of credit including 12 units of French at Distinction level

Any approved Upper Level option from the following: FREN3120, FREN3210, FREN3310, FREN3410, FREN3110, FREN3121, FREN3215, FREN3220, FREN3510 to be taken second year, plus an intensive reading program.

Note: Typically done in the second year, this course is designed for students wishing to proceed to Honours in the Department of French.

FREN3910
Honours Preparatory Seminar
Department of French
UOC6 HPW3
Prerequisite: 36 units of credit in French at Distinction level

Critical readings of French or Francophone texts which raise key issues in each of the three categories of Language, Literature and Culture. There is also an introduction to the nature and philosophies of research, research methods and techniques, and the principles of writing a dissertation and thesis.

Note: Typically done in the third year, this course is designed for students wishing to proceed to Honours in the Department of French.

FREN4000
French Honours (Research) Full-Time
Department of French
UOC24 HPW5
Prerequisite: 54 units of credit in FREN, including FREN3910 at 70% and permission from Head of Department

1. Two seminars (each HPW3 for 14 weeks). 2. A thesis workshop (HPW1 for 14 weeks). 3. A research project (thesis) of 12,000 to 15,000 words, in French, written under the supervision of a member of staff on a subject approved by the Department. Students from A or B streams follow an additional advanced language seminar (HPW3 for 14 weeks). Students from A stream may seek permission from the Head of Department to write their thesis in English rather than French.

FREN4050
French Honours (Research) Part-Time
Department of French
UOC12 HPW3
Prerequisite: 54 units of credit in FREN, including FREN3910 at 70% and permission from Head of Department

1. Two seminars (each HPW3 for 14 weeks). 2. A thesis workshop (HPW1 for 14 weeks). 3. A research project (thesis) of 12,000 to 15,000 words, in French, written under the supervision of a member of staff on a subject approved by the Department. Students from A or B streams follow an additional advanced language seminar (HPW3 for 14 weeks). Students from A stream may seek permission from the Head of Department to write their thesis in English rather than French. Program spread over two years of study.

FREN4500
Combined French Honours Full-Time
Department of French
UOC12 HPW2
Prerequisite: 48 units of credit in FREN, including FREN3910 at 70% and permission from Head of Department

The program usually consists of one session-length seminar in the Department of French, as well as a research project whose subject and nature have been approved by the two departments/Schools concerned. The exact details of the Fourth Year program and its assessment are subject to prior consultation and approval by the Heads of the two Departments/ Schools concerned.

FREN4550
Combined French Honours Part-Time
Department of French
UOC6 HPW2
Prerequisite: 48 units of credit in FREN, including FREN3910 at 70% and permission from Head of Department

The program usually consists of one session-length seminar in the Department of French, as well as a research project whose subject and

nature have been approved by the two Departments/Schools concerned. The exact details of the Fourth Year program and its assessment are subject to prior consultation and approval by the Heads of the two Departments/ Schools concerned. Program spread over two years of study.

FUEL0040
Fuel Engineering for Ceramic Engineers
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW2

An introduction to combustion technology, combustion calculations, burner design, furnace, kiln and boiler thermal design.

GENC2001
An Introduction to the Australian Economy
School of Economics
UOC3 HPW2
Excluded: ECON2104

This course will introduce students to the main issues and problems currently faced by the Australian economy. The aim is to acquaint students with the basics to enable them to understand contemporary policy debates, and to achieve economic literacy. The focus will be on macroeconomic policy debates, with special attention paid to problems associated with economic growth, inflation, unemployment and the balance of payments. In addition, some of the debates associated with aspects of microeconomic reform, such as privatisation and deregulation will be considered.

GENC3003
Personal Financial Planning
School of Banking and Finance
UOC3 HPW2

This course provides you with the knowledge and skills to manage your personal finances and investments both now and after graduation. Topics include buying a house or investment property with confidence, creating financial independence through superannuation, making a savings plan that works, how to invest in shares and managed funds, protecting yourself through insurance, making a will, understanding taxation, practical budgeting that works, identifying strategies for family members approaching retirement and tips for seeking professional financial advice

GENC5001
Introduction to the Internet and Electronic Commerce
School of Information Systems, Technology & Management
UOC3

Students will learn to use the Internet, gaining an understanding of Internet applications such as e-mail, news-groups and navigating the World Wide Web to access information from around the world. Students will also design and implement a simple World Wide Web home page. All students will gain hands-on experience with applications and the information superhighway.

GENC6001
An Introduction to Marketing
School of Marketing
UOC3 HPW2
Excluded: MARK1012

Marketing is one of the core disciplines of successful management today. It impacts on society every day in a myriad of ways - creating new products and services; helping organisations understand what people want and need; helping people find products and services that meet their needs; communicating information that makes people's lives more efficient; creating exchanges that generate employment and wealth. But marketing also raises ethical issues about excess consumption, unhealthy obsessions and addictions, the impact we have on the environment and the communities in which we live.

This course is designed to provide students with an overview of these different aspects of marketing management. Insights are provided into the way in which business, government and not-for-profit organisations manage their marketing efforts. Topics include: the concept of marketing in different types of organisation; how to analyse the market and segment consumers within the market; buyer decision processes, organisational markets and organisational decision processes; the development of the marketing mix; products, brands and services; pricing, channels and promotion (personal selling, advertising, sales promotion and publicity); and marketing strategy within increasingly turbulent and challenging environments.

GENC6002
Marketing and the Consumer
School of Marketing
UOC3 HPW2
Excluded: MARK2051, MARK3072

This course is designed to provide students with an understanding of the relationship between marketing as a business discipline and consumer rights and responsibilities. It looks at marketing from the consumer's point of view, rather than the traditional marketing manager's point of view. The course covers topics such as the "culture" of consumption of products and services in developed economies; the history and development of the consumer rights movement and "consumerism" in the United States and Australia; the philosophical underpinnings of the movement and where it is heading with regard to issues such as personal privacy and anti-globalisation; the opportunities and concerns posed by new interactive and personalisation technologies; and attempts by marketers to respond in multiple ways to all these consumer pressures and challenges. A critical and questioning approach is adopted throughout the course.

GENC6003
Tourism: The Global Future
School of Marketing
UOC3 HPW2

It is claimed that tourism is one of the three growth industries of the new millennium, along with information systems and communications technology. In this course the wider significance of tourism is examined, looking at its economic, social, political and environmental importance. Topics include: tourism through the ages; tourism models and markets; the structure of the industry; the distribution of tourism products, and transport-related issues; governments and tourism - agents of regulation and promotion; the environmental, cultural and economic impacts of tourism, and the dilemmas that can arise when these appear to be in conflict; tourism planning, innovation and technology; special interest tourism, such as eco-tourism; and the future of tourism, particularly as it relates to sustainability issues. The course challenges students to think about tourism in new ways. This is facilitated with fieldwork to meet tourism operators, planners and regulators. The course also highlights career opportunities that tourism has to offer university graduates, and provides a starting point for students planning to take an MCom in Tourism, Hospitality Management and Marketing on completion of their undergraduate degree.

GENC7002
Getting Into Business
School of Business Law and Tax
UOC3 HPW2
Excluded: LEGT1711

This course examines how to set up, manage and develop a business within the limits of the law. The law regulates and provides protection and value to every aspect of the business and its activities. In a step by step method, using case studies, students will be exposed to the ideas and concepts which make up the ingredients of a successful business. Identifying the business opportunity; developing the concept; setting up the vehicle to conduct the business, securing premises; equipment and employees; dealing with creditors, suppliers customers and the government; and protecting the assets of the business are all covered in this course.

GENC7003
Managing Your Business
School of Business Law and Tax
UOC3 HPW2
Excluded: LEGT1711

Business management is the science of managing scarce resources, change and competitive forces in deregulated environment. Within this context the law has emerged as a key player in helping, guiding and prohibiting the behaviour of managers in small to medium businesses. The course examines the regime of laws and regulations, institutions and authorities that govern the function and performance of management in small and large business entities in Australia and internationally. The topics covered include: rights and obligations attached to property; dealing with suppliers, employees and subcontractors; developing legal financial models and business plans and undertaking legal and compliance audits and continuing governance reviews that provide focus to the business entities. The course will provide a substantial range of analytical research and practical skills to empower students to undertake the responsibilities of the contemporary manager.

GENC9002
Web Information Resources
School of Information Systems, Technology & Management
UOC3 HPW2

The World Wide Web offers a wealth of information resources with deceptively simple search engines. The social implications of the Web will be critically examined as a background to the effective utilisation of these resources. This examination will lead to a better and deeper understanding of how these resources are organised and retrieved. Traditional approaches to subject analysis are combined here with comparison of different navigational techniques and an introduction to the variety of resources in the electronic environment.

GEND0201
Graphics and Contemporary Society
College of Fine Arts
UOC3 HPW2

Online Course

During the last two decades of the 20th century computerisation in the graphic design industry brought about profound changes to the way we produce and consume knowledge just as the invention of printing transformed the dissemination of information in Renaissance Europe. Not only did the digital revolution transform the roles, working methods, project management and production processes for designers and printers, the digitisation of text and pictures influenced the aesthetics and formal aspects of the graphic image in print and electronic media, and stimulated discourses on visual experience and reconfiguration of the graphic image.

This fully online course comprises a series of lectures, learning activities and assessment tasks. It introduces topical issues in contemporary graphic design and its significance in society, including form and function in communication design, pictorial and narratives structures in visual communication, systems of icons and symbols as global visual language, and the influence of technology on aesthetics and visual experience. Assessment tasks will include individual and team projects to encourage group interaction and collaborative development of ideas and projects.

Excluded: COFA0201.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0202
Art & Cultures: The Language of Interactivity
College of Fine Arts
UOC3 HPW2

Online Course

The last ten years have seen a proliferation of screen-based interfaces and online content, most of which is interactive in some shape or form. However, interactive media are in their formative stages and although widely experienced, the processes and language of interactivity are still poorly understood. This poverty of understanding is particularly apparent when compared to the shared cultural understanding of the language of the moving image for example, in which elements such as camera angles, lighting, sound and editing are all used to deliver a crafted experience.

This fully online course comprises a series of lectures, learning activities and assessment tasks that seek to discover and understand the underlying 'language' of interactivity. The content includes a broad history of interactive media (from non-computer interactions to wireless devices). It questions existing conventions of interactivity and explores the notions of play and interactive design (in which new ideas are 'found' by generating successive versions of a project).

The course aims to develop a set of ideas, approaches and practices that are essential to the creation of engaging interactive experiences. This includes a series of online lectures and discussions in which you will play an essential role in analysing and defining these experiences. Your assessment tasks will include individual participation and online team projects to encourage group interaction and collaborative processes, which are essential to discovering and defining this new exciting paradigm.

Please note: Whilst there are some technical elements to this course, it is not intended to be a course that teaches Flash programming or web design but rather the ideas that should underpin these, and other practices. Whilst some existing knowledge of Macromedia's Flash or Director will be useful it is not essential for completion of the course.

Excluded: COFA0202.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0204
Seeing Light as a Design Tool
College of Fine Arts
UOC3 HPW2

Online Course

Light. Its essential nature and characteristics are the focus of your study in this course. Light is a core ingredient behind high-end technology such as lasers, optical medical diagnostic tools, live performance event lighting machines, and computers. Light is a design tool unmatched in its flexibility and relative ease of application, and can reveal and enhance our experience of natural and built environments. You will design with light, without the need of sophisticated apparatus, complex equations or a detailed understanding of science. You will consider both the theoretical and practical aspects of light design, and the specific lighting requirements of virtual and real environments.

Your learning in this fully online course will be based on demonstrations and experiential observations that seek to understand the effect of light sources on your perception of space. Learning exercise and assessment tasks will include both individual and joint activities to encourage collaborative learning, and will be supported by online resources. Your activities will include problem solving, critical thinking and establishing a design process.

Your design decisions for a lighting design solution will be examined and related to an environment design project from design initiation through to documentation. This culminates in the production of a lighting design report. Access to a digital camera or a film camera & scanner is a requirement.

Excluded: COFA0204.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0205
Curating Art and Exhibitions
College of Fine Arts
UOC3 HPW2

Online Course

Today's contemporary art practice includes temporary and site-specific projects, screen-based, digital and online art. The role of the curator, whether museum-based or freelance, has changed dramatically with the emergence of these new art practices. This course investigates key exhibitions and art projects internationally, providing a range of approaches to curating art today. It focuses on new models of exhibition-making both in traditional and alternative art venues, including public art.

Throughout the course, exhibitions and art projects in various parts of the world are used as case studies. With assistance from lectures and additional resources, your analysis of these projects will reveal an exciting range of solutions by curators to rapidly evolving media and exhibition possibilities. In addition, you will have opportunities to investigate and discuss new public art projects with reference to cultural and physical contexts.

A series of online lectures and resources is offered in a thematic format over 14 weeks. Your learning will be supported and enhanced by online learning activities, including group discussions and assessable tasks.

Excluded: COFA0205.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0206
The Art of Plants and Nature
College of Fine Arts
UOC3 HPW2

Online Course

Have you ever looked at parts of a flower, and realised that the 'petals' you think you are seeing are actually an arrangement of modified leaves, perhaps not too different from leaves elsewhere on the plant? Have you thought about the pattern of veins on a leaf, the scars on a stem or a plants general growth habit?

This fully online course comprises a series of lectures, activities and assessment tasks that seek to increase your visual awareness of plant structures, the analytical and conceptual means by which you see and define them, the possibilities for pictorial and aesthetic outcomes, and the translation of these understandings into your own art/design products.

The course centres on visual analysis of natural forms including: structure, growth, environmental influence, issues of symmetry, division, and proportions the investigation of botanical form (plant morphology), and an introduction to some of the descriptions and traditions which make up artistic responses to plants and flowers. Practical examinations and studies will be made from: specimen, in situ sources and field studies. This course aims to help you develop imaginative and conceptual processes and skills, and to produce figurative or abstract 2D and 3D responses from your analysis of the systems of plants and nature.

Assessment tasks will focus on individual projects and online team activities that encourage participation and collaboration.

Excluded: COFA0206.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0207
Textiles - Technology and Tradition
College of Fine Arts
UOC3 HPW2

Online Course

In 20 years time, will clothes be intelligent, self cleaning, or grown from a living layer of tissue?

The above statement is a question about the possibilities of where the future of textile design is leading. This allows you to reassess what a textile design can be. This fully online course looks at the relationship between traditional techniques and contemporary technology and how developments across both areas have revolutionised the design process and how such a synthesis opens up new possibilities in defining the boundaries of what constitutes a fabric.

You will learn how to analyse textile design from fundamental theoretical and historical viewpoints; you will be able to identify how contemporary textile design has been influenced by the interrelationship between traditional and technological processes; through experimenting with your own individual projects you will examine the influence of traditional processes on technology and how technology is reinventing traditional techniques. In reaction to these issues you will provide individual responses through practical projects. You will also learn how to appreciate the scope of textile design by exploring the innovative possibilities of future textile developments.

Excluded: COFA0207.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0208
Fashion 1980 - Now
College of Fine Arts
UOC3 HPW2

Online Course

Why do high-heeled shoes feature in the television series Sex and the City? How are fashion, gender and sexuality linked? Why can women now wear a cheongsam dress and trainers? Fashion history and theory is one of the most rapidly developing areas of humanities research, drawing upon new theories of the body, social space, surfaces, ephemerality and popular culture.

This course examines fashion as a vehicle of self-fashioning since the 1980s. It will present a variety of theoretical methods to interpret the fashion choices of post-modern society.

You will study themes including fashion and identity politics; the 'post-subculturalist'; fashion design and the street; gender and consumerism; cross-cultural dressing. You will examine topics including music and dress; dress and sexuality; vintage, retro and second-hand clothing; 'anti-fashion'; 'costume play' and Japanese 'cuteness' (kawaii); and the spectacle of the contemporary fashion parade.

The course will include topics and collaborative assessment in which 'net society' plays a role. Your tasks may range from online diaries to role-plays as a fashion victim having to defend your stance.

Excluded: COFA0208.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0209
Cross Cultural Sculpture
College of Fine Arts
UOC3 HPW2

Online Course

This is a practical, online sculpture course that will introduce you to ways of making contemporary sculpture and installation art through online projects. The two studio projects are designed to help you develop your own future creative enquiries as the activities mimic the processes artists employ to make artworks that are content rich and idiosyncratic. Ordinary skills, such as cutting, assembling, sanding and gluing, painting, sewing, stapling and snap shot photography are required for everyday methods of construction and recording. Materiality will be investigated using culturally encoded found objects and commonplace 'stuff'.

Your art making will be informed by studio theory components that will enhance your awareness and understanding of how and why contemporary artists often blend and quote diverse cultural practices in their artwork. Online group discussions and a collaborative online studio theory project will create a community of scholarship and critical feedback to support your art making.

The interdisciplinary nature of contemporary sculptural practice will be explored in an installation project, with an invitation to experience a diversity of sculptural methodologies. Interdisciplinary approaches will develop from an initial project that creatively investigates the more familiar, object based sculpture. You will need access to a digital camera.

Excluded: COFA0209.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0210
Visual Identity in the Built Environment
College of Fine Arts
UOC3 HPW2

Online Course

It may seem obvious why a fashion boutique stamps a big logo on the front of its commercial premises, however, ask yourself: why do local councils label street signs in their municipality with a council emblem, or why do public parks nowadays have a logo designed to represent them?

Most environments we encounter on a daily basis have been designed to carry a specific visual identity or brand. Some of the more obvious examples include retail stores, shopping malls and themed parks. Today, however, even train stations, public parks and city districts are being visually branded.

In this fully online course, you will examine a range of commercial and non-commercial spaces and consider the way visual identity has been programmed into them. Through these examples you will learn how 'spatial branding' affects the experience of people using a space.

This course includes a series of online lectures, individual and group tasks and site visits (in your locality) that will provide you with insight needed

to identify social, commercial and psychological implications arising from the practice of 'spatial branding'.

Excluded: COFA0210.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0211
Print Advertising for a World Market
College of Fine Arts
UOC3 HPW2

Online Course

When global giants Coca Cola first entered the Chinese market, its people interpreted the English name with a strange Chinese meaning which was 'bite the wax tadpole'. Not surprisingly, Coca Cola began as a poor selling product in the new market. Today, its interpretation has been amended to 'happiness in the mouth' thus receiving far greater commercial success.

This fully online course considers such issues when looking at cross-cultural representation and perception in graphic advertising design. It invites you to analyse some interesting advertising design case studies, with emphasis on print media advertising from magazine ads to billboard posters. Nowadays, with many companies trying to sell their goods in the global market, there is a claim that the developed world has evolved into a global monoculture. Nevertheless, designers and entrepreneurs still need to be aware of cultural nuances.

This online course offers you an opportunity to explore global advertising's graphic design strategies through a series of structured themes. The course will help your understanding through activities that require individual reflection, discussion and project-based collaborative interaction.

Excluded: COFA0211.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0212
Textiles for Interiors - Senses and Spaces
College of Fine Arts
UOC3 HPW2

Online Course

This fully online course will help you learn why textiles are important in the design of interiors. Although their role is often overlooked, fabrics have always played important roles in defining both the atmospheric and spatial qualities of interiors - for example, textiles are sometimes used to filter light and muffle noise.

Exploring various dimensions of visual aesthetics, you will learn about contemporary trends in textile and interior design, and possible futures of textile design using new digital technologies. These will be placed in an overview of the context of an historical timeline. Through personal analysis, shared experiences and observation, you'll understand more about how textiles affect your home and work environments.

This online course offers you opportunities for both individual and collaborative learning activities. These will include problem solving, critical thinking and establishing design outcomes that support you in developing a heightened awareness of the sensory and spatial influences of textiles on interior settings.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0213
Contemporary Aesthetics in Digital Architecture
College of Fine Arts
UOC3 HPW2

Online Course

How will tomorrow's built and landscaped environments look and feel? In these first few decades of the digital age, the planet's leading architects have been discovering the creative potentials of on-screen design tools which behave very differently from pens, slide rules and paper.

In this fully online course, you will examine how emerging convergences of diverse technologies are influencing how architects aim to reinvent the way buildings look and feel – not only to answer humanity's next challenges but to continue telling humanity's stories through aesthetics.

Through reading, images, reflection, discussion, analysis and writing, you will learn how futuristic architects are styling tomorrow's built and landscaped environments. And you'll discover why 21st century architecture will look and feel radically different from the monuments of history.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0214
Creative Thinking Processes
College of Fine Arts
UOC3 HPW2

Online Course

Have you ever had an idea that you wanted to push and develop further, but you weren't sure how to do it? This fully online course will introduce you to some of the many tools that can facilitate creative thinking. The processes of analysis can help to extend possibilities beyond predictable outcomes, and the same thinking tool can be used across many different disciplines to create new, more integrated and original options.

We will explore visual, verbal and physical ways of transforming ordinary ideas into fantastic ones. Using taught techniques such as the Synectic Pinball Game you will learn to understand more clearly what happens when the creative mind is at work.

We will test the principles of interconnectivity, non linear (associative) thinking, and use maps, models and metaphors to develop your creative thinking. Famous creative thinkers like Leonardo da Vinci, Dr. Edward de Bono, George Lucas, Nicholas Roukes, Malcolm Gladwell and Walt Disney use/used a wide range of processes which we will critically explore.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0216
Celebrity and the Face in Australian Cinema
College of Fine Arts
UOC3 HPW2

Online Course

Australian actors, directors and cinematographers, play a disproportionately prominent role in the global film industry, given the relatively small size of the Australian population and film industry.

Where does this immense creativity come from? In this fully online course, you will learn how a particular style of performance and cinematography emerged in Australia in the first century of cinema. From early technical experiments in Australian cinema to the casting of performers whose body types differed significantly from European and American cinema in the same period, you will examine how different ideas of beauty and movement developed in Australian cinema. In more recent cinema, you will assess how these earlier ideas affect performance style when actors go global and become 'stars'.

You will also explore ideas about the image more generally, - the idea of charisma and photogeneity, the importance of the face and the close-up in the evolution of the cinematic image and the links which these ideas have to the history of painting, from the icon to abstraction.

You will be engaged in interactive activities and discussion that will support your development of a deeper understanding of the phenomenon of celebrity and a greater appreciation of Australian cinema.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0217
The Art of Scientific Visualisation
College of Fine Arts
UOC3 HPW2

Online Course

How have imaging and visualisation technologies changed our lives? This fully online course will introduce you to contemporary and historical crossovers and collaborations between art, science and medicine, and how relationships between these disciplines have evolved from the seventeenth century to the present time.

This online course will provide you with opportunities to investigate a vast range of images generated by visualisation techniques in the life sciences; from drawing through to microscopy, anatomical photography, DNA sequencing, radiology and MRI scans.

This course is designed to enhance your interest in and awareness of medical and scientific imaging, and to support you in exploring its interdisciplinary potential with the visual arts. Through a series of lectures, independent research and tasks as well as online group activities, you will become aware of the varied history and current implications of medical imaging.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND0218
Experiencing and Contemplating Art
College of Fine Arts
UOC3 HPW2

Online Course

This online course will help you better understand the processes involved in observing art from different perspectives and enable you to write an informed essay on the exhibition of your choice. It is also a forum for a discussion about art critique and its relationship with art practice and art history.

You will be asked to visit galleries and choose an exhibition, address the ways in which space, placement, context, etc. impact on our response, research the artist(s) and works and relate those findings to broaden and contextualise your understanding of the exhibition and the artwork. You will be shown how to undertake research into art with the goal of improving your capacity to address art in your own lives.

The course will be conducted through a series of individual and group online assignments including research, discussion, reports and analysis, using images of artworks and text. You will be given support and feedback. There are also four lectures which discuss topics such as: subjective and first person accounts in observing art; perceptions and expectations; artists' perspectives and a range of debates on the role of the artist in determining the meaning of the work; can art critique stand the test of time; can art reviewing substitute for art historical writing? These lectures will inform your research.

By the end of this course, you will have a better understanding of artworks and the creative processes of art-making and writing about art. Importantly, through the online interactive interchange of ideas you will have contributed to the discussion in these fields.

Note: This course is conducted via the Omnium system (omnium.edu.au). Students will receive log in instructions via their UNSW email account prior to the commencement of the course. *For international students:* This 3 unit of credit (UOC) online course can only be undertaken in addition to the minimum 18 UOC face-to-face requirement per session.

GEND1202
Drawing the Body: Studies of Surface Anatomy
School of Art
UOC3 HPW0
Excluded: SART 2829.

This course provides an introduction to human anatomy through the studies of comparative anatomy, skeletal structure, musculature and a perspective on the history and philosophy of anatomical images. A practical examination of the structure, form, and function of the body develops an understanding of the human figure. Emphasis is placed on direct observations of the nude. Students draw from the skeleton, casts, and prepared anatomical specimens. A range of approaches are covered that will encourage students to understand the basic anatomical constructs.

Note/s: Lecture/seminar/workshop. Paddington Campus.

GEND1203
Drawing the World From Within/Without
School of Art
UOC3 HPW2
Excluded:SART2832.

Drawing - The initial response to the realisation and transformation of an idea, the delineation of shape or the foundation of form. Based upon practical observation, students are encouraged to understand both the inter-relationship of form and content and the creative possibilities of media and techniques. An awareness of the methods of interpretation and translation through the drawing process is a focus of this course. Drawing as the evidence of inquiry, combined with the development of conceptual skills, forms the central structure of this course.

Note/s: Lecture/seminar/workshop. Paddington Campus.

GEND1204
Studies in Painting
School of Art
UOC3 HPW0
Excluded:SART1502.

Through paintings we can imagine other times, cultures, psychologies. Practical engagement with painting as a creative form involves the individual in selective and particular imaginative, intellectual and perceptual processes. This course provides an introduction to ways of looking, seeing, thinking and using materials to make paintings. The course involves both theoretical and practical exploration of visual elements to construct form-space relationships within a two-dimensional field. Practical studies include the simple preparation of painting supports, the mixing of tones and colours and experience in using a range of basic materials. The subject includes a supervised excursion to the AGNSW.

Note/s: Lecture/seminar/workshop. Paddington Campus.

GEND1205
Making a Print
School of Art
UOC3 HPW0
Excluded:SART1591.

This course will cover theoretical and practical aspects of producing a fine art print. The theoretical component will deal with the context in which artists produce prints; describing the contemporary world in which rapidly developing technology has provided the means of producing multiple, repeatable images very easily via the photocopier, fax machine and computer printer. The basic differences between a 'reproduction', a commercial printed image and a 'fine art print' will be discussed, and the conventions of annotating and numbering a printed edition will be covered. The practical component will enable the student to become familiar with some of the fine art printing techniques, such as etching, relief, lithography and screen print through studying the work of a selection of Australian printmakers and techniques demonstrated. Students will have the opportunity to produce a print using one of the above mediums and to mount and document it appropriately.

Note: Lecture/seminar/workshop.

GEND1208
Studies in Sculpture
School of Art
UOC3 HPW0
Excluded:SART1601.

This sculpture course provides practical experience in the appreciation of space and form. Theoretical and historical information is discussed relating to the discipline as it is practised at present, ranging from skilled crafts to realising concepts. In particular, the use of space as a primary element in contemporary sculpture is investigated. This is developed through an examination of contemporary inter-disciplinary art works. Practical work is structured to provide experience and exploration of the ideas put forward in discussion. Elementary skills are demonstrated in inexpensive materials and students are encouraged to grapple with the handling of space as it encounters form.

Note/s: Lecture/seminar/workshop. Paddington Campus.

GEND1209
Black and White Photography
School of Media Arts
UOC3 HPW2
Excluded:SOMA1521,SOMA2521,SOMA3521.

This course provides an introduction to and overview of the black and white analogue photograph in the context of contemporary visual arts. Demonstrations and workshops to enhance skill acquisition in the use of 35mm cameras and the knowledge of B/W darkroom procedures provide the basis of the practical component of this course. Practical workshops and topics include: 35mm camera operation; B/W film types and formats; basic natural lighting techniques; light metering; film exposure and processing; print production and darkroom procedures; print finishing and presentation. Students undertake a gallery visit to view contemporary photomedia work to support a written research component. Slide lectures and topics introduce the student to the History of Photography and the Photographic Image in Contemporary Visual Arts. Projects are set which focus on the production of photographic images for contemporary visual arts.

GEND1210
Colour Photography
School of Media Arts
UOC3 HPW2
Excluded:SOMA1521,SOMA2521,SOMA3521.

This course provides an introduction to and overview of the colour analogue photograph in the context of contemporary visual arts. Demonstrations and workshops to enhance skill acquisition in the use of 35mm cameras and the knowledge of colour darkroom procedures provide the basis of the practical component of this course. Practical workshops and topics include: 35mm camera operation; colour film types and formats; basic natural lighting techniques; light metering and film exposure, print processing; colour darkroom procedures; print finishing and presentation. Students undertake a gallery visit to view contemporary photomedia work to support a written research component. Slide lectures and topics introduce the student to the History of Photography and the Photographic Image in Contemporary Visual Arts. Projects are set which focus on the production of photographic images for contemporary visual arts.

GEND1211
The Artist's Studio
School of Art
UOC3 HPW0

This course looks at the relationships which have existed between artists, patrons, consumers, dealers, auctioneers and critics, and discusses the directions which the art market may take in the era of the Internet. The lectures are designed for the interested non-specialist and involve visits to artists' studios, galleries, museums, and auction houses. The student will learn how to make informed decisions concerning the collection of art. Topics will include the effects which new technologies have had upon the traditional arts of painting and drawing, the impact on artists of concepts from diverse cultures and the influence of political ideas on the deskilling of the contemporary artist.

Note/s: Lecture/seminar/workshop. Paddington Campus.

GEND1212
Analysing a Picture: Composition and Design in Art
School of Art
UOC3 HPW0

Apart from paints, pastels and pencils, most of us now possess some image-making device, whether it be a camera, a video recorder or a computer with a graphics program. There is a need for understanding key ideas about pictorial composition if we wish to create better images with these tools.

This course is intended to provide an introduction to the analysis of visual works of art for the interested non-specialist. It introduces students to the formal aspects of the visual arts, such as the fundamental elements of colour, shape, size and texture, and explores some of the competing sets of organising principles which have guided artists in the creation of visual images.

Note/s: Lecture/seminar/workshop. Paddington Campus.

GEND2201
Art Therapy
School of Art History and Theory
UOC3 HPW0
Excluded: SAED2476

The aim of this course is to explore the integration of art and therapy in theory and practice. Students will be introduced to the concepts, philosophies and methodologies of Art Therapy as an emerging discipline in its own right. The course will look at the use of art within the traditional frameworks of psychology. It will explore various forms of the visual arts as a medium for self expression, communication and growth. It is intended for the non-specialist interested in the psychological implications and effects of image making.

Note/s: Paddington Campus.

Excluded: SAED2476

GEND2202
Multicultural Contexts
School of Art Education
UOC3 HPW2
Excluded: SAED2475

The aims of this course are to increase students' knowledge and awareness of the cultural diversity of Australian society, develop their sensitivity to the needs of minority groups and explore the implications of multi culturalism for policies and practices represented through the lens of art and art education.

Through lectures and discussion groups, the course will consider Australia's history of multiculturalism and look at the issues and possibilities arising for the visual arts from multicultural education.

Note/s: Lecture/tutorial/seminar. Paddington Campus.

Excluded: SAED2475

GEND2205
Dialogues and Communities
School of Art Education
UOC3 HPW0

This course enables students to become familiar with issues and contexts of contemporary community arts, including cultural development and democracy, cultural resources, real wealth/community value and social capital. Students experience a range of community activities e.g. events, public art/design projects, interest groups together with traditional applications of community arts practice seem as social and cultural development. Students undertake preparation of funding applications, field work in selected community settings and collaborative projects.

Note/s: Lecture/tutorial/seminar. Paddington Campus.

Excluded: SAED2479

GEND2206
The Art Museum and Art Education
School of Art Education
UOC3 HPW0

This course aims to make students aware of the ideology and philosophies of art museums through an understanding the broad educational functions of the museum including the vernacular appreciation of art and the development of a lifelong approach to learning. Students have the opportunity to observe the educational functions of the art museum within a diversity of contexts and systematically investigate the roles which the museum performs within our society. Field work in selected museums and the use of videos, discussion and group tasks course experiences include field work in museums video discussions and group work.

Note/s: Lecture/tutorial/seminar. Paddington Campus.

Excluded: SAED2480

GEND3218
Psychoanalysis and Art
School of Art History and Theory
UOC3 HPW0
Excluded:SAHT2644.

The subject is designed to develop a critical understanding of the relationship between specific theories of psychology, psychonalysis and art practice. The motivation, reception and interpretation of works of art will be studied in the light of such theories as Freud's 'metapsychology', Jung on Dreams, Laura Mulvey's notion of the 'gaze' and Michael Foucault's histories of madness and sexuality. Art works examined will be representative of a wide range of movements and traditions.

Note: HPW2 lecture/tutorial/seminar. Kensington Campus. Exclusions apply to some Faculty of Arts and Social Sciences courses.

Excluded: COFA2256.

GEND3230
Art, Money and Power
School of Art History and Theory
UOC3 HPW2

What is the relationship between art and the economic and political life of our society? Art and power have gone hand in glove from medieval feudalism, through the emergence of mercantile capitalism and centuries of capitalism and colonisation to the global market and cultural infrastructure of today. Those who wielded political and economic power have sought a reflection of greatness, civility, and taste in their art patronage, connoisseurship and collecting.

This course explores the nexus between art, money and power in both historical and contemporary society.

Note/s: Lecture/tutorial/seminar.

GEND3231
Picturing Death: Art and the Human Predicament
School of Art History and Theory
UOC3 HPW0

If we understand death, will we understand life? Many artists have thought so, and in picturing death, they have given us insight into the meaning and value of life. Looking death in the face, artists from different epochs and cultures have produced extraordinary images that are sometimes troubling, sometimes healing; sometimes dispassionate, sometimes deeply moving.

This course explores the art of death, including funerary and memorial images of ancient cultures, images of war and revolution, images giving expression to our experience of AIDS and other catastrophes of the contemporary world. The course ranges from the funerary art of ancient cultures to the contemporary images of Aboriginal artists who express traditional spiritual values in modern forms and media.

Note/s: Lecture/tutorial/seminar. Paddington Campus.

GEND3232
Pornography, Art and Politics
School of Art History and Theory
UOC3 HPW2
Excluded:SAHT2643,SAHT9133.

This course will explore the boundary between art and pornography and the social function of that boundary in western society. It will look at the ways in which bodies are eroticised and/or designated as 'pornographic' or perverse. Concepts such as fetishization, voyeurism, sadism and masochism will be discussed in relation to art history and contemporary art practice. The politics of pornography will be debated in relation to such issues as gender/feminism, child sexuality, censorship and AIDS.

Note/s: Lecture/tutorial/seminar. Kensington Campus.

Excluded: SAHT2643

GEND3233
Scandals of Modern Art
School of Art History and Theory
UOC3 HPW2

From its inception, modern art attracted outrage, rejection and ridicule from some audiences and amazed approval and critical engagement from others. Many artworks now viewed with profound respect were greeted initially with disbelief and affront. Modern art rarely met with polite boredom. The taint of scandal offers a key to the value and interpretation of modern art. This course explores modern art through some of the controversies and reactions of audiences and power-brokers. It considers derisory response to Cubism, Hitler's hostile closure of the famous Bauhaus and his exhibition of 'degenerate art' (and the long queues of people who took the opportunity to see the work of the modern 'masters'), the post-revolution repression of Russian avant-garde artists. Closer to home, some Australian frauds and scandals provide the basis for discussion on Australian attitudes to art, and artists' attitudes to Australia.

Note/s: Lecture/tutorial/seminar.

GEND3238
Memory and Self
School of Art History and Theory
UOC3 HPW2
Excluded: SAHT2213.

This course traces contemporary ideas of body and subjectivity through the work of a range of artists and writers. Its major focus is on the experience of memory and self-understanding. It addresses the questions of how memory is constituted and how it is crucial to our sense of self; of how memory affects our relations to images and objects, and how memory is represented. The course also examines human relations to space, the themes of horror and humour, and the topics of gesture, performativity and mimesis. Contemporary art and writing practices will be used as the basis for a creative engagement with theoretical ideas. Focus texts include writing by Christian Boltanski, Georges Perec, Oliver Sacks, Dori Laub, Julia Kristeva, Jeff Wall, Judith Butler and the stories of the 'stolen children'.

Note/s: Lecture/tutorial/seminar. Kensington Campus.

Excluded: SAHT2213

GEND4202
Design and Human Functioning
School of Design Studies
UOC3 HPW2
Excluded: SDES1103

This course will introduce students to some of the psychological and physical characteristics of individual human functioning as factors in the design of objects, surfaces and spaces. The concepts explored will include the psychology of perception, theoretical approaches to the analysis of human behaviour, basic anatomy/biology/physiology, basic ergonomics and anthropometrics, analysis and measurements of the relationship between the human body and the design of macro and micro environments.

Note/s: Paddington Campus

Excluded: SDES1103

GEND4203
Design Management
School of Design Studies
UOC3 HPW2
Excluded: SDES2171, SDES2116.

This course will develop students' understanding of principles applied to design management, and the place of design practice within the commercial environment both in the public and private sector. Students will cover the above concepts in one session of study. They will also be introduced to the broader question of general management, and the importance of the development of a design culture within organisations whether companies or institutions.

Note/s: Paddington Campus.

GEND4204
Designing: Practical Studies in Design
School of Design Studies
UOC3 HPW0

This course introduces students to the study of the multi disciplinary nature of design. It is organised to extend the student's level of understanding about the way in which concepts and processes in graphic, object and environmens design may be integrated to contribute to the development of richer appropriate design solutions.

Note/s: Paddington Campus.

GEND4205
Design Communications and Presentations
School of Design Studies
UOC3 HPW0

This course examines the issues which affect the communication and presentation of visual information in design and other disciplines which deal with text and images. A series of lectures and tutorials will introduce students to the theories and principles of visual communication and information design. Students from different disciplinary backgrounds will be able to interact, acquire, develop and use skills based on visual thinking and critical analysis to address issues dealing with textural and visual communication in society. The course provides opportunities for students to examine conventional communication methods and to approach creatively the dissemination of visual information in ways which are well conceived, communicative, interactive, responsible, comprehensible and user-friendly.

Note/s: Paddington Campus.

GEND4206
Integrated Design Studio
School of Design Studies
UOC3 HPW0

This course provides students with a study of the multidisciplinary nature of integrated design practice through their involvement in a series of design projects. The aim is to extend students' level of thinking and understanding about the ways in which the communication of concepts and processes

in design may be integrated to contribute to the development of richer, more appropriate design solutions in the commercial context.

Note/s: Paddington Campus.

GEND4207
Designing: Models as a Tool for Design Communication
School of Design Studies
UOC3 HPW0
Excluded: SDES1107.

This course is an introduction to basic model making techniques, materials and equipment. Models are a three dimensional method of expressing design process intent and approach. The students will be made aware of the place of models as a communication tool in an array of design situations. The various types of models required for differing objectives will also be described. The course will consist of model making exercises and visual references through lectures and slide shows. Students will be encouraged to experiment and develop understandings and skills which will enable them to appreciate their designs through practicality. Through the exercises and project work, students from varied disciplines can interact through their creativity and experience working approaches from a discipline other than their own specialist study area. The assessment of this course will consist of a progressive evaluation as well as both verbal and visual presentations of the completed exercises and project.

Note/s: Paddington Campus.

GEND4208
Working with Ceramics
School of Design Studies
UOC3 HPW2
Excluded: SDES1155, GEND1206

This course introduces the student to ceramics through historical, theoretical and practical investigations. An understanding of the ways clay has been used by different cultures at different times will inform the student as to why certain conventions have been established in the medium. An emphasis is placed on the ideas and practices of contemporary ceramics. Practical work is carried out in such a way that demonstration and application will be developed in graduated stages so that the potential for a satisfying result is continually expanded.

Note/s: Paddington Campus.

Excluded: GEND1206

GEND4209
Working with Jewellery
School of Design Studies
UOC3 HPW2
Excluded: SDES1154, GEND1207.

This course introduces students to the work and practice of current Australian studio jewellers and object makers. Through projects and exhibition visits students will gain insight into the concepts and ideas that are currently explored. The course is designed to challenge perceptions of body adornment and traditional notions of jewellery. Through studio activities students will learn the skills of jewellery making processes and techniques, idea generation and their application to the realisation of project work.

Note/s: Paddington Campus.

Excluded: GEND1207

GEND4210
Textiles and Fashion
School of Design Studies
UOC3 HPW0
Excluded: SDES2167.

This course introduces students to contemporary textiles and their relationship to fashion. Theoretical and practical aspects of textiles and fashion are covered through lectures on the concepts, work and ideas of leading textile artists and designers. The theoretical component deals with the context in which contemporary artists work, the conceptual basis for their work and how historical and social references are made.

The practical component enables students to become familiar with some of the elementary techniques used by leading practitioners to make textile and fashion items. The emphasis of the course is on creating textiles and surface designs for textiles and fashion rather than garment construction. Students learn some basic techniques in embroidery and the surface design processes of dyes, dyeing and printed textiles.

Note/s: Paddington Campus.

GEND4211
Design in Performance
School of Design Studies
UOC3 HPW2
Excluded: SDES2177, COFA7061

This course covers the major elements of design in staging large scale events including theatre performance. Theatricalisation and design theming of public occasions, community ceremonies and sporting events is an established design trend. Students are introduced to the design process on which staging of performance events in various contexts are based. Through close examination of the characteristics by which such occasions are represented and communicated to audiences, students systematically investigate the crafts and contemporary theories of staging such events. A design brief is set for students to construct, draw, design and complete.

Note/s: Paddington Campus.

Excluded: SDES2177

GEND4212
Design in Adornment and Costume
School of Design Studies
UOC3 HPW2

This course considers clothing as cultural evidence and through a series of lectures and workshops provides students with the opportunity to both investigate the function and meaning of clothing and examine its codes and cultural significance. Clothing and costume provides a unique area of study. It is a potent combination of function, design and cultural meaning. Students are able to communicate their understandings through drawing, designing, constructing and making in a studio environment.

Note/s: Paddington Campus.

GEND4213
The Arts of Aboriginal People and Torres Strait Islanders
School of Design Studies
UOC3 HPW0
Excluded: SAHT1627.

This course is an ideal means from which to access basic cultural information viewed through art works. No prior knowledge of art or anthropology is necessary to participate in the lectures, museum and gallery visits or any practical work undertaken during the term. The course focuses on one region and a specific art form, like fibre objects or sculpture. Both historical and contemporary work are examined.

Note/s: Paddington Campus.

GEND4214
Surface and Image in Tapestry Weaving
School of Design Studies
UOC3 HPW2

This course will introduce students to tapestry weaving through historical, contemporary and practical investigation. Theoretical and practical aspects of tapestry will be covered through lectures on the concepts, work and ideas of leading tapestry artists. The theoretical component will deal with the context in which contemporary artists work, the conceptual basis for their work and how historical and social references are made through woven tapestry.

The practical component will enable students to become familiar with ways of weaving textured surfaces and transferring images to woven tapestry. Painted, graphic, digitally scanned or text base images will be developed and woven for miniature, shaped or larger scale tapestries.

GEND5201
Landscape Animation
School of Media Arts
UOC3 HPW3
Excluded: 4810 Bachelor of Digital Media and 4800 Bachelor of Fine Arts major Time-Based Art

Students will be taken through a range of workshops and animation techniques specifically designed to experience nature frame by frame. Students will experience five days of animation in the landscape around historic Broken Hill. This unique approach to animation draws upon environmental sculpture as an aesthetic for animation using digital video. Each student will shoot edit and score their own digital animation in the Australian outback. Students will learn valuable skills in digital camcorder and digital editing as well as developing classic animation timing skills.

GENE1011
From Catchment to Ocean
School of Civil and Environmental Engineering
UOC3 HPW2

The environmental amenity of water in catchments, waterways and the coastal zone is under increasing threat from human generated pollutants such as rubbish, heavy metals, pathogens, nutrients, pesticides and other toxic compounds. This subject provides a non-technical introduction to this threat and what can be done about it. The path and transformation of the pollutants from the catchments where we live, to rivers and estuaries, and finally the oceans is covered. Measures for controlling pollutants and disposing of pollutants, inclusion of: catchment management on-site techniques; gross pollutant traps; ocean outfalls; chemical and biological treatment; and wetlands will be covered. Finally, the environmental impacts of these pollutants on our waterways are discussed. In particular, human health issues, eutrophication and ecological impacts will be examined.

GENE1012
Tools for Ecologically Sustainable Development in Corporations and Regions
School of Civil and Environmental Engineering
UOC3 HPW2

A brief introduction to Ecologically Sustainable Development (ESD) principles and the social, economic and political context in which they have arisen, and in which they are implemented. A non-mathematical introduction to developing methods and techniques (tools) being used by regional and corporate environmental managers to implement ESD principles in organisations and regions. These tools include a range of material accounting techniques that can be applied at a product level (Life Cycle Assessment), to a corporate and regional level (Materials Flux Analysis), to a regional and national level (Total Material Requirement, Ecological Footprints, Material Inputs per Service Unit). Physical indicators of the State of the Environment at these levels will be introduced. A comparison will be made with the use of economic indices, such as GDP and current account deficit, used in the National Accounts to control the state of the economy.

This course is offered in winter session 2003

GENE3051
Solar Cars - Speed of Light
School of Photovoltaic and Renewable Energy Engineering
UOC3 HPW2

Solar powered racing cars capitalise on state-of-the-art developments in engineering and technology, especially photovoltaics, aerodynamics, motor design, electronics, automotive engineering, battery technology, communication and global positioning, software technology, and race strategy development. Besides learning about solar racing cars, enrolled students participate in a "virtual" World Solar Challenge race from Darwin to Adelaide (complete with virtual media stops). In addition, enrolled students participate as a team in the design, construction, testing and racing (against their classmates at the end of session) of model-scale solar powered cars from a simple kit. This class is designed to give non-engineering students a broad perspective in basic engineering principles, like problem solving, design, project planning, technical writing and oral presentation. No previous knowledge or experience in any of the above-mentioned areas is assumed.

GENE4001
Biomedical Engineering: Technology in Medicine
Graduate School of Biomedical Engineering
UOC3 HPW2

The objective of this course is to explore current and future biomedical devices, procedures and technology. Students from non-engineering backgrounds will gain an understanding of the history and development of current technologies such as the bionic ear, artificial heart, bone marrow transplantation, and CT and MRI scanning. Trends and possible future developments will be discussed.

Classes will be held in S1 on Wednesdays 10am-12noon.

GENE7001
Oil & Gas: The Lifeblood of Society
School of Petroleum Engineering
UOC3 HPW2

The role of oil and natural gas as our main source of energy. The environmental impact of drilling and production of oil and gas. The role of the Federal and State Governments in the Australian Petroleum Industry. Visit to the Federal Agency in Canberra responsible for monitoring the industry. Visit to a gas field close to Sydney. A practical, hands-on course with presentations by industry experts. Oil/gas companies and the future of petroleum in our lives. Planning, drilling and completion of oil/gas wells. Data acquisition and analysis. Petroleum Economics.

GENE7801
Energy and Mineral Resources - Use or Abuse?
School of Mining Engineering
UOC3 HPW2

This course examines Australia's importance as a vast source of mineral and energy resources. It concentrates on the impact the continued extraction and consumption of non-renewable resources has on our physical, social and political environment. The issues of global warming, native title, recycling and the viability of alternative energy sources are dealt with in detail.

All course material is delivered via WebCT. A number of optional workshops are scheduled throughout the duration of the course to promote discussion on relevant topics and to present additional information.

A more detailed description of this course together with the semester timetable can be found under the timetable information link: **http://webct.edtec.unsw.edu.au/public/GENE7801_S1/index**

GENE8000
Getting the most out of Spreadsheet & Database Applications
School of Computer Science and Engineering
UOC3 HPW2

Spreadsheets and databases are two of the most commonly used and powerful computer tools yet they are often poorly utilised and the reasons for using one rather than the other are poorly understood. Many people purchase Microsoft Office which comes bundled with Microsoft Excel and Microsoft Access - a spreadsheet and a database application - yet while many people have some familiarity with Microsoft Excel, Microsoft Access is rarely utilised. This course aims to explain in straightforward terms the concepts underlying both of these powerful pieces of software so that students can exploit them effectively for both their studies and future careers. It will investigate how to design and implement effective spreadsheet and database applications. Students should also be able to transfer these skills to other, similar spreadsheet and database packages. Students will be expected to have personal copies of Microsoft Excel and Microsoft Access on their own computers.

Note(s): This course may not be taken by students enrolled in a CSE program or major.

Further Information: CSE class page **www.cse.unsw.edu.au/~ge8000**

GENE8001
Designing and Creating Computer Games
School of Computer Science and Engineering
UOC3 HPW2

Students will work in groups to create a computer game of their choosing using "Game Maker". (see http://www.gamemaker.nl.). With Game Maker, students can use simple drag-and-drop actions to create professional looking games without having to write any code in a traditional programming language. Each week, there will be a one hour lecture followed by one hour of supervised group work on the game. Lectures will cover both the art (e.g. liberal arts, the social sciences, and psychology) and science (e.g. computer graphics, artificial intelligence, human-computer interaction, security, distributed programming and simulation) of computer game design.

Note(s): This course may not be taken by students enrolled in a CSE program or major.

Further Information: CSE class page **www.cse.unsw.edu.au/~ge8001**

GENL0230
Law in the Information Age
Faculty of Law
UOC3 HPW0

This course will give students an overview of the operation of new media and communications services under Australian law, examining both the legal requirements and the policy reasoning behind the way in which media and communications are regulated. It will cover five broad areas: how laws are made, changed, interpreted and enforced; electronic commerce and what it means for business, consumers and the community; the laws governing licensing, ownership and control of

telecommunications, radiocommunications and broadcasting enterprises, and whether these laws are appropriate and effective to deal with new technologies and services; restrictions on media and online content, including classification and censorship, and regulation of content; and protecting intellectual property and reputation, covering copyright, trademarks and defamation

GENL0250
Sport, Law and Society in Australia
Faculty of Law
UOC3 HPW2

The rise of organised sport coincided with Australia's development as a nation playing a major role in developing Australian identities. As one of Australia's major cultural practices, participation and success in international sport became an essential element in projecting Australia on the global stage. In the late twentieth century sport became one of nation's fastest growing industries. This course explores the history of Australian sport and the development of a body of law to underpin its place and function in Australian society. Topics include sport and Australian nationalism; the rise of organised sport in Australia; development of sports governance; the intersection of sport and the law in issues of race, gender, ethnicity and religion; the debate between amateurism and professionalism; Australian sport on the global stage; doping and the law, the court of Arbitration for sport; the impact of corporate interest in Australian sport.

GENL1020
World Religions: Customs and Laws
Faculty of Law
UOC3 HPW2

Religion constitutes a significant factor in our understanding of how a society orders and regulates itself. This course offers students a general introduction to five of the world's major religions with a special focus on the manner in which their specific customs and laws impact upon the behaviour of their adherents. The religions studied are Hinduism, Buddhism, Judaism, Christianity and Islam. In each case, we explore the distinctive religious customs and rules, which shape the activity of believers in such areas as worship, dress, diet, marriage and family, work and recreation, birth and death. A major focus of the course is the social relevance of religion in today's society. Its aim is to deepen the student's appreciation of the rich mosaic, which characterises the practical and legal dimensions of the world's great religions.

GENL1060
Moral and Legal Foundations of Human Rights
Faculty of Law
UOC3 HPW2

Moral and Legal Foundations of Human Rights will examine the philosophical and religious origins of the contemporary human rights discourse, and the development of national and international human rights instruments. The course will evaluate the effectiveness of historical and contemporary approaches to human rights protection. The course will critique the Western bias of current human rights language, and explore the notion of rights in non-Western religions and societies.

Topics covered include the moral and religious foundations of human rights; the development of historical and contemporary human rights documents; the notion of rights in relation to universalism, cultural relativism, pluralism and multiculturalism; the effectiveness of current human rights protection; the problems of language in the current human rights discourse, and alternatives.

GENL1061
Religion and Terror
Faculty of Law
UOC3 HPW2

Religion and Terror examines the link between religion and terrorism which can be found in the rhetoric of some world leaders, and in the popular media. It assesses the reality of the link, and the reasons it is made. It will do so from two interrelated perspectives: ideology (general) and the nature of religious conviction (individual). The course will investigate the history of religion and terror; examine the issue of motivation and justification for the use terror in religious conflicts; and explore the relationship between religious conviction and behaviour. It will evaluate the effectiveness of the rhetorical use of religion in armed conflict.

GENL2020
An Introduction to the Australian Legal System
Faculty of Law
UOC3 HPW2

This course provides a basic understanding of the Australian legal system. It deals with the principal institutions of the legal system, particularly the courts; the legislature and the executive arms of government; the judiciary; the legal profession; the doctrine of precedent; sources of Australian law including the past and present status of Aboriginal customary laws; the origins of common law; the colonialisation of Australia; classifications within the common law; the jurisdictions of Australian courts and consideration of alternative methods of dispute resolution.

Assessment: Class participation and take-home exam.

GENL2031
Cyberspace Law
Faculty of Law
UOC3 HPW2

This course surveys how cyberspace (the social space created by computing networks such as the Internet) is being regulated by law and other means, and examines how successful is this regulation. The course takes an Australian perspective, but with a strong emphasis on the development of international regulatory mechanisms. Responses to problems by technical controls will be compared with legal controls. As a survey course, the precise topics to be covered will change from year to year but may include topics such as: theories of cyberspace regulation; governance structures of the Internet - the ICANN example; domain names, identities and reputations; encryption and public key infrastructure (PKI); copyright - can copying be controlled by cyberspace?; content control through censorship and defamation; computer crime and investigation; privacy and surveillance; e-commerce, contracts and consumer rights; and jurisdictional problems and borderless transactions. There will be a team teaching approach with a number of lecturers.

GENL5020
Business Fundamentals
Faculty of Law
UOC3 HPW2

This course introduces students to the fundamentals of business law. The course provides an overview of the interrelationship of laws governing business in Australia and critically evaluates those laws.

Contracts are entered into every day. Most of you will become professionals subjects to a duty of care towards your clients. You are also consumers who have the benefit of certain rights afforded by the Trade Practices Act. As entrepreneurs, professionals and/or employees you are also entitled to the benefit of intellectual property protection for your creative or inventive effort or for the good you will have acquired individually or through your business. The aim of the course is to empower students in everyday situations through the study of the law of contract, negligence, defamation, trade practices law and the law of intellectual property such as copyright, patents and trademarks.

Assessment: Take home or 2 hour examination (in last lecture) 60%; class participation/project, team and individual problems 40%.

GENL5030
Understanding Tax
Board of Studies in Taxation
UOC3 HPW2
Exclusion: enrolment in program 3502, 3543, 3979, 3571 or 3971

Understanding Tax is for students who want a non-technical, practical introduction to our tax system. Whatever career or lifestyle you're contemplating, tax will be an important consideration in decisions you make -- whether it's about buying or renting accommodation, amounts that have to be disclosed to the Tax Office, expenses that can be claimed as deductions, how to fill out a tax return, investing in shares, how much tax you have to pay, whether there are acceptable ways of minimising your tax liability, and what you can do if you're unhappy about a Tax Office decision. The course will be taught in two-hour classes made up of a lecture followed by discussions and practical exercises.

GENM0123
Children - Growing Up in Society
School of Women's and Children's Health
UOC3 HPW2

An introduction to normal growth and development in children and to their interactions with society. Topics include children and the media (advertising and violence), children and sport, childhood accidents, status of children in different cultures, poverty and childhealth, exploitation of children, behaviour disorders, nutrition, adolescence. In short, how can we ensure that children have an optimal relationship with society?

GENM0201
Human Origins, Human Problems
School of Medical Sciences
UOC3 HPW3
Excluded ANAT2600, ANAT2610

We will be considering what studies of primate behaviour tell us about the behaviour of ancient and modern humans and looking for the origins of some modern human problems (warfare, child abuse and infanticide) in our primate heritage. The course will examine the neurological and structural basis of language and speech and look at how the human brain and hand have become adapted for tool use. Other issues to be examined include the origins and structural adaptations involved in upright walking, problems of human childbirth, hominid reproductive strategies, modern human variation, human prehistory in Australasia and the human face as a means of communication and recognition. The course involves both lecture and laboratory class sessions. The latter will use models and anatomical material to illustrate important aspects of human evolution.

Course dates: Summer 20th - 24th February, Winter 10th - 14th July

GENM0202
Frontiers in Brain Research
School of Medical Sciences
UOC3 HPW3
Excluded: ANAT3411.

We take for granted the notion that the human brain is the seat of our consciousness and yet very much remains to be learned about how the living brain actually works. Brain disease and mental illness are some of the most important health problems in our community and yet the causes of many of these diseases remain unknown. This course will allow the student to explore the current state of knowledge on the structure and function of the human brain and to learn about current thinking concerning the causes of brain-related illness. Topics include: cellular architecture of the brain; structural and functional differences between the left and right brain hemispheres; developmental abnormalities of the brain; language and the brain; fear and anxiety and the brain; the addicted brain; spinal cord injury and hopes for repair; degenerative brain disease; gender in brain structure and function; and mad cow disease. Students will also have the opportunity to consider ethical issues associated with the treatment of brain diseases (e.g. fetal nerve tissue transplantation in the treatment of degenerative brain disease) in the course of the lecture and laboratory sessions.

Course dates: Winter 17th - 21st July.

GENM0510
Using the Media: Promotion Through Mass Media and Multi Media
School of Public Health and Community Medicine
UOC3

This is an intensive course in the understanding of mass media and ways of dealing with it and using it to advantage. An introductory analysis of mass media is followed by instruction and training in preparation of material for dissemination in mass media. The course material is supplemented by lectures from outside experts who are engaged in media liaison in TV, print and radio on a regular basis. An optional segment deals with the use of the internet as a mass medium. Tutorials are led by students themselves. All participants are encouraged to express their thoughts and opinions about media and also to interact with other students, who are drawn from a wide variety of faculties in the University. Assessment is based on a journal and a media project which are handed in a month after the classes are complete.

GENM0512
(Mis)representation of Health
School of Public Health and Community Medicine
UOC3 HPW2

Students will examine how health issues pertaining to, for example, medicine, nursing, hospitals, the environment, death and dying, surrogacy and new technologies, are presented in the print media, television news, documentaries, web sites, soaps and fiction films. Having critically appraised the prerogatives of the media, students will examine the institutional and discursive imperatives under which the media operate in its various forms (print and elctronic, mass and new). Against this background we examine how these imperatives may lead a particular form of the media to down play complexity and over-simplify, trivialise, and or sensationalise issues to the detriment of informed public debate. The consequences of these limitations will be related to the ways in which we think about and debate health and illness in the public sphere.

This subject will develop knowledge and skills in:

- explaining how health care is represented in news items, documentaries, web sites, films, soaps, dramas, with specific focus on their 'politics of representation';
- situating representations about health care in a historical and socio-cultural perspective;
- assessing how the prerogatives and established practices of the media institutions which produce the representations in question for the appearance of what is produced;
- addressing health care's tragic choices and wicked problems and the moral, practical and political complexities which constitute them.

GENM0518
Health and Power in an Internet Age
School of Public Health and Community Medicine
UOC3 HPW2

Australia spends $60 billion a year on health care and its average health indicators are among the best of any country in the world. None the less, some Australians are much less healthy than others. In exploring the question of why this is so, the couse examines concepts of power and wealth in society and how the distribution of power and wealth in society is reflected in the health of different social classes and ethnic groups. It also traces how modern understandings of health are moving towards a more wholistic model, the challenge of alternative models of health, how the internet is bringing about changes in power relationships in the health fiels and explores controversies over childbirth.

GENM0701
Contemporary Bioethics
School of Public Health and Community Medicine
UOC3

Bioethics is the process of reflecting on health issues and moral implications, in individual and social contexts. The course concentrates on contemporary dilemmas which are common in health care. Consumer and professional perspectives on the dilemma are presented, and students are encouraged to use ethical frameworks as tools in the development of an argument. Topics for discussion include: the development of bioethics for health professions and consumers; health care information and privacy and confidentiality; safety and autonomy for patients and carers; resources and justice; life decisions; research and health care and advisory bodies.

GENM0703
Concepts of Physical Fitness and Health
School of Public Health and Community Medicine
UOC3 HPW2

The students will be exposed to theory and concepts relating to the development and maintenance of physical fitness and general health. Components will include aerobic fitness and conditioning, resistance training, flexibility training, and appropriate nutritional practices. Lifestyle management issues (exercise, smoking, obesity etc) will be discussed with benefits and consequences of those actions used to direct decision making. Popular misconceptions will be addressed during the course of the subject, with research findings used to dispel these myths.

GENR0003
Spirit, Myth and Sacredness in Architecture
Interior Architecture Program
UOC3 HPW2

The aim of the course is to investigate the sources from which architecture and design have extracted meaning throughout history. The specific focus of the lecture series will be the interrelationship between myth, religion, philosophy and architecture. Case studies demonstrating symbolic traditions will be drawn from both Eastern and Western design, including examples as diverse as the Greek Temple, the Jewish synagogue, the Christian church and the Chinese palace complex. The diversity of subjects and themes will highlight the complexity and sophistication characterising design traditions of the past, and reveal the intricate role architecture has played in the expression of a society's belief systems.

GENR0006
The City: Sydney
Landscape Architecture Program
UOC3 HPW2

The city is the habitat of modern society. While architects make substantial contributions to the form of the city, they have relatively little influence

over the success or failure of cities. There are much stronger forces at work than architecture. Buildings make the best contribution to the human habitat when they support the patterns and systems of life in the city. By providing an introduction to those patterns and systems, this subject gives students a basis for making buildings work with the city rather than against; Sydney is used as the example. Each lecture is given by an authority in the topic.

GENR0008
History, Theory and Interpretation: Art and Architecture
Architecture Program
UOC3

This course aims to deepen an understanding of basic theoretical concepts in the history of art and design; to gain familiarity with some key writings by artists, art historians and art critics; to develop strategies for evaluating theoretical arguments against appropriate visual works; and to develop competence and confidence in evaluating works of art/design and interpretive strategies developed for our understanding of them. Key concepts to be investigated are: style, 'connoisseurship', formalism, iconography, sociological perspectives, semiotics, gender, sexuality, cultural studies, modernity and post modernity. The subject has been developed around a seminar structure which will encourage students to learn through looking, reading, thinking and informed arguing. All students will be required to purchase a reader.

GENR0012
Great Buildings of the World
Interior Architecture Program
UOC3 HPW2

The aim is to acquaint students with a dozen or more great buildings which were supreme achievements of their time and a timeless contribution to the cultural heritage of the human race. These span from antiquity to the present day, and across different cultures and spiritual traditions. A single building will be presented in each lecture, within its physical, mental and spiritual context; and seminar discussions will debate the symbolic significance of the building and its lasting influence on civilisation. Buildings will include the Acropolis, the Pantheon, the Alhambra, the Forbidden City, the Temple of Ise, the Dome of the Rock, the Crystal Palace, the Pyramid of Cheops, Borobudur, Falling Waters, and the Sydney Opera House.

GENR0015
City Planning Today
Planning and Urban Development
UOC3 HPW2
Excluded: Program 3360.

The way our cities look and operate, their cultural and community life are all considered by town planners. The course deals with the fundamentals of urban planning: its language; its rules and regulations; its controversial nature and the way it operates in practice. It looks at how and why urban planning came into being; how the legal and administrative system works; how the political system operates; and how planners deal with issues - from designing the city to balancing the many conflicts which arise over development projects. Lectures are given by staff of the Faculty of the Built Environment as well as planning practitioners. This course will give you the skills, the understanding and the enthusiasm to play an active role in shaping your city!

GENR0017
Principles and Philosophy of Design
Interior Architecture Program
UOC3 HPW2

The currently popular pseudo-elitist view of art and design is rejected in favour of the proposition that the artist is not a special kind of person but that every person is a special kind of artist. Design is not something which is practiced by the elite few who call themselves designers but by all of us all of the time. This course looks closely at the principles which underpin design in its broadest meaning and application, from the most simple, seemingly intuitive to the most complex of decision-making processes. These principles are studied within a philosophical framework strongly linked to the 'perennial philosophy' which may be found in all cultures and at all times and which has been particularly championed in our age by such writers as A.K. Coomaraswamy, Frithjof Schuon and Rene Guenon, and based heavily upon the work of the late Visiting Professor Peter Kollar.

GENR0019
Critical Perspectives on Twentieth Century Art and Design
Architecture Program
UOC3 HPW2

This course is designed to introduce students to some of the key interpretive strategies used in art history and cultural studies over the last hundred years, with an emphasis on current lively debates. The lectures will explore and question some of the layers of interpretation of artists' works from the time they were made to the present. European, north American and Australian art and design will be examined through various filters such as modernism, postmodernism, internationalism, nationalism, regionalism, gender and identity.

In visual and cultural studies there is no single correct interpretation of a particular art work or movement. This course has been designed to enable you to become aware of the plurality of interpretations and to appreciate (if not always endorse or adopt) the arguments for contesting interpretations of objects and events.

GENR0027
Photography, Society, and the Built Environment
Faculty of the Built Environment
UOC3 HPW3

This elective will give students an individual opportunity to use a camera as a visual research tool in the exploration of society and the built environment. The course involves theory and practice. A series of lectures covering different aspects of social documentary: a brief history of this genre, photojournalism, the photo-essay, street photography, oral history, the family album; and an introduction to some contemporary photographers detailing the urban environment through pattern or landscape.In Photography there is an intimate link between the image and the original. Light acting on and transforming emulsion still seems magical, or thousands of pixels transferred digitally to catch a moment in time is extraordinary. The ability to freeze frame movement in space, hold still light in time, document our communities today for tomorrow, record our visual reality is a powerful tool. With this power comes certain responsibility.

GENS0450
Measuring up the Universe
Faculty of Science
UOC3 HPW2
Microscopes, telescopes, sextants, chronometers, computers, scales and the standard meter. Scientific instruments of the past influenced the evolution of all areas of science and many aspects of daily life. This course looks at topics ranging from Galileo's telescope to the development of barometers. Lectures are supplemented by the examination of items in a historical collection in the Faculty of Science and by visits to museums. The course is 'hands-on' with short written assignments and frequent feed-back in place of exams. Students will learn techniques for studying the history of science and technology and thier impact on cultural and economic development both internationally and in Australia.

GENS0501
The Marine Environment
School of Mathematics
UOC6 HPW4
Excluded: GENS4625, MSCI2001,GENB5001 Not available to students in Science Programs

This course covers aspects of both the physical and biological environment of the sea and their inter-relationships. It depicts marine science as a body of knowledge and a process of continual enquiry and testing of ideas. It considers human impacts on the marine environments and how the principles and methods of science in general are used to predict and to solve the problems created by human activities. This course includes discussion of: i) the marine environment, its physical, geological, chemical and biological characteristics and their interactions; ii) the sea as a source of human food. Attention is given to aspects of marine productivity, fisheries and mariculture and how science can assist in management for a sustainable yield; and iii) the effects of development, especially industrial development on the marine environment and how science can contribute to providing solutions to these problems created by development. Throughout the course emphasis is placed on case studies. Field excursions are used to supplement the lectures and to encourage further discussion of the problems created by human interference in the environment and their possible solutions.

GENS1002
Consumer Chemistry in the Marketplace
School of Chemistry
UOC3 HPW2
Excluded: GENS4625

This course seeks to provide students with an interesting overview of the chemistry which they will encounter in everyday life. Emphasis will be placed on the types and functions of chemicals used in some typical consumer products. The subject matter is grouped into areas of application which have a common theme and each will form the topic for a given lecture period.

GENS1004
Science and the Cinema
School of Chemistry
UOC3

Imagine Keanu Reeves, Uma Thurman, Elizabeth Shue or Lisa Simpson as scientists. Well Hollywood has in a series of movies which use real scientific concepts as an integral part of the plot. Often the script writers stretch these concepts beyond the realms of reality to make the movies even more exciting. In this general education course you will view at least six movies which deal with a range of scientific issues (and we don't just mean science fiction here!). You will be given some lectures of the basics of the science involved in a given movie, discuss how faithfully the movies portray the science and look at some of the social and ethical issues related to the science that are explored in the films. There will be an opportunity to debate scientific and ethical issues raised by the movies. Not only that but you will get to meet some of the movies stars currently masquerading as chemists in the School of Chemistry. Movies you will see include Gattica (starring Ethan Hawke, Jude Law and Uma Thurman), The Saint (with Val Kilmer and Elizabeth Shue), Chain Reaction (Keanu Reeves and Rachel Weisz), Jurassic Park (Sam Neill, Jeff Goldblum and Laura Dern), an old classic Man in a White Suit (starring Sir Alec Guinness) and more. So come along, see some movies and you might learn some basic stuff about how to make your own genetically modified organism, alternative sources of energy and how science could save the world if only the world wanted saving.

GENS2002
Mathematics in Art and Architecture
School of Mathematics
UOC3 HPW2

There will be alternating Art and Architecture lectures/tutorials and Mathematics lectures/tutorials. The Art and Architecture lectures will present the appearance and/or major influence of mathematical concepts in art and architecture, and the following mathematics lectures will illuminate these concepts. The mathematical content will be: Surfaces, Platonic solids, conics, rotational, developable and minimal surfaces, topology; Symmetry, space filling; projective geometry, perspective; ratios, proportions, spirals; fractals, chaos theory; the computer in art. The mathematics tutorials will discuss problems and exercises in the conventional manner, while the art and architecture tutorials will involve students in discussion of visual material. If possible, there will be visits to museums and galleries.

Assumed knowledge: This course assumes a mathematical knowledge equivalent to that of the NSW School Certificate. In particular, students will be expected to do simple manipulations of algebraic expressions (including substituting values for the variables) and be familiar with the concept of graphing of curves.

Note: This course only runs in Summer and/or Winter sessions.

GENS2005
History of Mathematics
School of Mathematics
UOC3 HPW2
Prerequisite: Any Level 1 Mathematics course or ECON1202 or ECON1203; Excluded: MATH3560.

Classifications of mathematics, ancient and modern; Counting, navigation and measurement in pre-literate societies; Babylonian mathematics on calculating lengths and areas; The 'Greek miracle': round earth, logic, Pythagoras' 'All is number'; Hippocrates of Chios on areas of lunes: proof; Euclid on axioms, on idea of deductive structure; Ptolemy's geocentric astronomy; Ancient Chinese simultaneous linear equations; 16th C solution of cubic equations; Copernicus' heliocentric astronomy; 17th C mathematical laws: Galileo, Kepler, Snell, Hooke, Boyle; development of calculus: Topology: Euler on the bridges of Konigsberg; Statistical inference, 'average man', Galton and correlation; Abstract set theory; Formal (symbolic) logic in 19-20th C, and its role in computing software; Operations research, e.g., stock-cutting and hunting submarines; Chaos, fractals and self-organisation; Social context of mathematics.

GENS3501
Metals, Ceramics, Plastics - Building the Twenty First Century
School of Materials Science and Engineering
UOC3 HPW2

This course is designed to introduce students with a non-technical background to the science of advanced materials, with particular emphasis on how they function and where they are used.

The following topics are included: Surfaces are not superficial; Zeolites: crystals with holes; New forms of carbon: buckyballs, nanotubes and buckycondoms; Conductors and superconductors; Polymers: how to make them and what they can do; Synthesis of materials; Hot metal: its production and use; Making metals strong: the tricks of the blacksmith exposed; Why steel rusts but gold does not; Solar cells, lasers and transistors: how they work; Composites: making plastics strong; Ceramics: from earthenware to space; Smart materials.

Consideration of these materials includes examination of how they have impacted on and contributed to society over the last 100 years, and how they may help shape social and technological development in the future.

Note: 28 hrs/week lecture/tutorials. Offered over 5 days on a full-time basis in the summer recess, 13-17 February 2006. Includes field trip to Powerhouse museum.

GENS3502
Materials in Sport
School of Materials Science and Engineering
UOC3 HPW2
Excluded: MATS1111, MATS1002.

This course explores the application of materials in sporting and leisure pursuits. The role of advanced materials in enhancing performance in sports such as cycling, golf, surfing, skiing and rowing is examined. The conflict between materials development and sporting tradition in sports such as cricket and baseball is studied. We also investigate the role of nanotechnology in improving performance in tennis.

Course outline: materials properties and type; case study of materials in cycling; biomechanics and footwear; materials for golf clubs and cricket bats; nanotechnology and tennis; materials fabrication and surfing; materials and watersports; winter sports and advanced composites.

The course includes laboratory classes and a number of guest lectures.

Note: The course is not available to program 3135 and 3138, nor to students in programs for which courses MATS1111 or MATS1002 are prescribed.

GENS4001
Astronomy
School of Physics
UOC3 HPW2
Excluded:PHYS2160, PHYS3160

The course provides a general overview of astronomy, issues important to this area of science and its role in understanding our place in the cosmos. The following areas will be covered: the solar system and its exploration; stars and their life histories; extragalactic astronomy. Two night time observing sessions are included in the full-session courses, to introduce students to the techniques of astronomical observation and measurement.

GENS4003
Cosmology
School of Physics
UOC3 HPW2
Excluded:PHYS2160, PHYS3160

The course examines the development of cosmology from early times to the present day, its influence on scientific thinking, and how advances in science and technology have furthered its understanding. The issues confronting cosmology as a modern science are also explored.

GENS4008
Nuclear Arms and the New World Order
School of Physics
UOC3 HPW2

Students are invited to study and discuss various questions concerning nuclear weapons. We look at the international political system, warfare and the arms race. We ask how a nuclear bomb actually works, and what are its effects. We study nuclear strategies, and review attempts to control nuclear arms. Finally, we discuss mechanisms of collective security which may eventually remove the threat of nuclear arms entirely: the European Union, the United Nations, and the 'New World Order'.

GENS4010
Science and Religion
School of Physics
UOC3 HPW2

In many people's minds there is a conflict between religious faith and scientific knowledge. Some of these supposed areas of conflict will be explored, including creation, miracles and suffering, mind and consciousness, and modern environmental and bioethical problems. A mainly Judaeo-Christian perspective will be used but references to other teachings (Buddhist, Taoist, Islamic etc.) will be included.

Note: This course will be taught via web delivery.

GENS4011
Science of Music
School of Physics
UOC3 HPW2

Why are some sounds harmonious? How do musical instruments work? How do we hear and comprehend music? How and why does music work? The science of music addresses these and other questions in lectures and in experimental sessions. The science of music is one of the oldest experimental sciences and has been a paradigm for science for much of our history. By looking at developments in the science of music in particular, this course also gives an introduction to the history and nature of science in general, and the way in which it interacts with other aspects of culture and society.

GENS4014
Are We Alone? The Search for Life Elsewhere in the Universe
School of Physics
UOC3 HPW2
Excluded: PHYS2170

A free-ranging review of all aspects of the mind-boggling question: "Are we alone?". The material will include discussions on the origin and survival of life, current hi-tech searches for radio signals from extra-terrestrials, discoveries of new planetary systems, possible types of life-forms, Einstein's relativity, space-travel, and much more. A team or researchers will present lectures, and often disagree with each other. The controversies and the science behind the disputes will be clearly presented.

GENS4015
Brave New World: Science Fiction, Science Fact and the Future
School of Physics
UOC3

This wholly Internet-delivered course aims to give a big picture overview of the physical sciences at the dawn of the 21st century and beyond. The most common interface between the general public and science is often through science fiction; hence, science fiction is used as a teaching aid to stimulate student interest and as a starting point from which to communicate the science, and its likely future development. This course also examines the interaction between science and society, encouraging students to consider how culture influences science and vice versa.

The areas covered are: the physics of space and time; astronomy; space travel and exploration; astrobiology: life in the Universe; computers & robotics, artificial intelligence & human intelligence; the future of the human race.

GENS5001
Flight and Civilisation
Department of Aviation
UOC3 HPW2

Aviation has had a tremendous influence on the development of the world in the Twentieth Century. It has significantly reduced transport times and opened new markets for both business and pleasure. The course explores the development of aviation from the first flight up to the present day and into the future. It considers the many components of the industry ranging from the principles of flight, aerodynamics and design to the importance of flight safety and air traffic control. The importance of aviation as a means of transportation, communication and employment are examined from technological, economic, social and environmental perspectives. A field excursion is used to supplement the lectures by examining aircraft at an operating airport and in the Department of Aviation flight simulator at Bankstown.

GENS5002
Aviation: Contemporary Issues in a Complex Socotechnical System
Department of Aviation
UOC3

Aviation is a high-profile industry that influences modern society at many levels. The aviation system comprises a complex array of human and mechanical interactions - known as a sociotechnical system - providing a myriad of social and technical challenges. Additionally, many seemingly unrelated industries and groups are influenced by aviation.

This course provides the opportunity for students to challenge industry dogmas and consider solutions to the problems facing contemporary aviation. By utilising the variety of skills and backgounds that General Studies courses bring together, students develop an understanding of the main issues in complex, highly reliable mass-transport systems.

The course also allows students to investigate how the key issues interrelate both within the industry and with entities external to aviation; this course does not simply focus on problems for the industry, but collates the issues that affect the providers, users and third parties involved in the system.

The course is built on four major areas: competition, capacity, safety and the future.

GENS6011
The Consumers Guide to DNA
School of Biotechnology and Biomolecular Science
UOC3 HPW2
Excluded: BIOC2201, BIOC2291, GENB1001

DNA is the genetic information store of almost all organisms. Rapid advances in DNA technology have led to the discovery of new genes, the deliberate transfer of DNA between different organisms, the cloning of whole animals, genetic engineering of new species and the creation of new pharmaceuticals. Many of the fruits of these developments are now or will soon be available to the general public. Medicine is coming to rely more on DNA analysis for genetic testing and gene therapy. Techniques of DNA manipulation have led to a better understanding of diseases like AIDS and cancer. The Human Genome Project has yielded a new view of human biology. The social, ethical and legal ramifications of these technologies are immense - we will all need to make informed decisions about these issues. This course will explore DNA-based technologies and their products with the aim of creating a deeper understanding of their implications for individuals and society.

GENS6012
Diet-Food, Fact, Fiction and Fallacy
School of Biotechnology and Biomolecular Science
UOC3
Excluded: BIOC2101, BIOC2181, BIOC2312, BIOC2372, GENB1002, BIOC1221, BIOD1319, BIOD1320, MFAC1501, MFAC1508.

This course aims to consider the human diet and to discuss popular opinions and misconceptions about diet, and why many of these are scientifically incorrect.

The course will summarise how fat, carbohydrate and protein provide metabolic energy and how metabolic fuels are stored in the body. This information provides the basis for discussing how the body adapts to starvation, how the body's fuels are used during exercise and whether 'diets' are useful for losing weight.

The function of vitamins and micronutrients are described and megadoses of vitamins discussed from the perspectives that 'if some is good, is more better?' and 'can vitamins be toxic?'.

The course will cover a selection of topics relevant to Australian contemporary society, including obesity and weight loss, the significance of dietary cholesterol in relation to heart disease, the debate over saturated and polyunsaturated fats, diabetes, fad diets and other food fallacies, glycogen-loading for athletes and fun runners, and some common metabolic diseases.

Note: X2 = web mode and approximately 6 mornings of lectures and tutorials in July.

GENS6013
Plants & People: Murder, Magic, Medicine
School of Biotechnology and Biomolecular Science
UOC3 HPW2
Excluded: GENB1003

For a very long time mankind has used plant extracts for a wide variety of purposes. Our ancestors found these extracts efficient as medicines, poisons, narcotics, hallucinogens or stimulants. Their experimentation has led to the development of many compounds still used in the food, cosmetic and pharmaceutical industries. Many plant species remain undiscovered or poorly characterised, and much native folk medicine has yet to be fully investigated. This course will explore primarily the

relationship between human culture, the folk use of plant extracts and the development of modern drugs. More recent issues such as the value and use of genetically engineered plants will also be covered. There will be a Saturday field trip to the Royal Botanic Gardens, Sydney.

GENS6014
Genes and Society
School of Biotechnology and Biomolecular Science
UOC3 HPW2
Excluded: GENB1004

This course provides an introduction to the molecular studies of genes in humans as they relate to health, ill-health and behaviour as well as an overview of the scope and direction of gene manipulation and the Human Genome Project, together with their supporting technologies. The consequences of all this are the ethical and moral dilemmas, and challenges that society has to deal with, these including the confidentiality of genetic tests, use of such tests in the workforce and the insurance industry, DNA database for criminal investigation, the justification of a genetic defect for terminating a pregnancy, the patenting of our genes, improving the human gene pool, gene therapy, designer babies, cloning humans (?), who makes the decisions, etc.

GENS6033
HIV and Other Unconquered Infections
School of Biotechnology and Biomolecular Science
UOC3
Excluded: GENS6033, GENB3003

This course, delivered via the web, examines some of the great microbiological challenges that face us today, and their social and economic ramifications. An important focus of the course is the Human Immunodeficiency Virus, but it also considers conditions as diverse as Mad Cow Disease, Ebola haemorraghic fever, and Hepatitis C. It seeks to explain how, for example, HIV infection is detected, how the HIV virus destroys the immune system, and the social and financial implications of the HIV pandemic world-wide. Students are also introduced to the general nature of antibiotics, and to the challenge of emerging antibiotic resistance. All modules within the course address both the scientific and social aspects of the diseases under discussion. The course builds upon the General Education Course "Great Epidemics in History", however, each course can be taken independently. No prior knowledge of biology is assumed. Tutorials, films and other web-based activities will provide many opportunities for students to explore the controversies relating to HIV policy, use of antibiotics, and management of emerging diseases.

Note: Distance (web) mode

GENS6071
Technological, Social and Business Aspects of Alcohol
School of Biotechnology and Biomolecular Science
UOC3
Excluded: GENB7001

Consumption of alcoholic beverages has been part of human activity for thousands of years. This course aims to look at various aspects of these products, including an historical and current perspective. The science, technology and commercial aspects of the manufacture of beer, wine and spirits will be emphasised. The quality attributes of flavour, aroma and appearance of alcoholic beverages will be investigated. The impacts of alcohol on human health and society will be considered. The course involves some practical work. A number of lecturers from industry and affiliated research centres contribute to this course.

Note: Four full days of lectures/practicals in Summer Session (X1). **Note**: Final assessment marks won't be available until May. Students wishing to do a summer session course to graduate in April or May, please do not enrol in this course.

GENS7201
Australian Wildlife Biology
School of Biological, Earth and Environmental Sciences
UOC6 HPW3
Excluded: BIOS1101, BIOS1201, BIOS1401, LAND1151, GENB2001
Not available to students enrolled in Science Programs

The conservation of natural ecosystems is a topic of immense social significance. This is particularly true in Australia, since not only our animals and plants are unique, having evolved for millions of years in isolation from life on other continents, but our ecosystems are considered some of the most fragile on earth. In this course the broad spectrum of the Australian flora and fauna is explored via lectures and hands-on experience in practical classes and a weekend excursion. As well as providing a basic grounding in Australian biodiversity, the factors that have shaped it are examined, as well as the challenges faced in its future survival. The influence of people, both indigenous and newly-arrived, is also considered, especially in regard to conservation problems that are of current interest either because of their inherent ecological significance or because they exist within a complex social framework. The knowledge gained in this course will help you to make intelligent and useful contributions to the discussion of a wide range of ecological issues.

Note: There will be a one weekend excursion to the UNSW field station at Smith Lake near Seal Rocks, on the Central Coast (Friday night to Sunday afternoon). Some personal expense will be incurred.

GENS7602
Viewing the Earth Through a Geological Window
School of Biological, Earth and Environmental Sciences
UOC3
Excluded: GEOL1111/GEOS1111, GEOL1211/GEOS1211.

The plate tectonics model. An introduction to resources and the geological processes that control their formation. Application of satellite and airborne imagery in viewing the Earth's surface, environmental assessments and resource discovery. Tutorial sessions on methods of processing satellite imagery and maps. Field excursions examining the influence of geology on landscape and land use. Visit historical mine workings. Four-day short course delivered during July break.

Note: Students will incur some costs associated with field excursion.

GENS7604
Energy Resources for the 21st Century
School of Biological, Earth and Environmental Sciences
UOC3
Excluded: GEOL1111/GEOS1111

This course explores the relative roles of coal, uranium, oil and natural gas as our main energy sources, including current usage patterns and projection of energy needs and resources in the 21st Century. It also covers: a brief history of the international coal, oil and natural gas industries and the organisations involved in their development; the distribution of coal, oil and gas resources in Australia and world-wide, together with their economic, environmental and political significance; alternative sources of energy and improved ways of using conventional energy sources. Four-day short course delivered during July break.

GENS8001
Risk Perception and Reality
School of Safety Science
UOC3

Decisions which affect businesses and the community are often made with a very uncertain knowledge of the future. Decisions are made (or often not made) based on distorted perceptions of risks. This course looks at objective and subjective views of risks that are important to business, the environment, the community and the wider social context. The Australian standard on Risk Management will be reviewed and applied to a number of areas selected by students. The class will consider case studies of major natural and man-made disasters and personal risks and discuss how the risks could have been better managed and how they relate to emergency and contingency planning.

Note: Short course mode only (compulsory 5-day workshop plus assessable tasks completed subsequently).

GENS8002
Sports Performance and Injury Prevention
School of Safety Science
UOC3 HPW2

This course is an introduction to the study of human movement with a focus on sports performance and injury prevention. Lectures will provide the student with a back-ground in anatomy, fundamentals of biomechanics and exercise physiology. Laboratory participation will provide practical experience in methods of performances analysis. There are no mandatory pre-requisites, but a background in science would be helpful to the student.

Note: Assignment and laboratory participation.

GENS8003
Work and Safety
School of Safety Science
UOC3

Workplace injuries and deaths are a great financial and social burden. Work and Safety is a course that explores the interactions between humans, work and safety and the concept of 'duty of care'. It concentrates on identification of workplace hazards, their associated risks to health and how they can be controlled. This is a practical course with great value for future employment as it equips students with fundamental principles of work and safety awareness. It provides tools for students to discharge their legal and social obligations in Occupational Health and Safety. This course is offered by either class attendance or web mode see www.safesci.unsw.edu.au/ge. Students in their final years at University are preferred.

GENS8004
Ergonomics, Productivity and Safety
School of Safety Science
UOC3

The course is designed to provide students with the basic concepts and principles of ergonomics/ human factors design so that they are able to understand the problems of human-technology interface in the workplace. It looks at the role of ergonomics with reference to the social context, especially in enhancing productivity and safety in the workplace, and emphasises the social role of ergonomics in creating jobs and workplaces that increase workers' safety and satisfaction.

The course discusses topics such as origins and development of ergonomics, fundamentals of ergonomics, socially centered design, human error reduction and safety, environmental ergonomics, human performance analysis, ergonomics and industrial productivity, macro-ergonomics, cost-benefits analysis, ergonomics, OH&S Law, work stress, etc. Case studies from manufacturing, construction, service and other industries are used to demonstrate the role of ergonomics in improving workplace productivity and safety.

The course is available by web mode in all sessions. See www.safesci.unsw.edu.au/ge/

GENS8005
Environmental Management in the Workplace
School of Safety Science
UOC3

Environmental problems are seen by society as a failure of technology and industry to play their part in prevention. This course explores the full range of environmental problems that occur in industry. Students develop skills to examine and also play an active role in solving these problems. Students gain an appreciation of environmental laws that affect business operations, the concept of 'due diligence', the development of environmental management systems and fundamental principles of best practice, and of meeting new and changing social expectations in managing environmental problems.

The course is available by web mode in all sessions. See www.safesci.unsw.edu.au/ge/

GENS9001
Psychology of the Individual and the Group
School of Psychology
UOC6 HPW4
Excluded: GENB4001, PSYC1001 Not available to students enrolled in Science Programs

After a brief historical introduction this course will examine the development of humans into distinct individuals who nevertheless function in a social environment. There will be emphasis on the cognitive and social development of the individual through childhood and the development of individual differences in the areas of abilities, personality, attitudes and values will be stressed. Finally, the nature and measurement of the social influences on our behaviour will be considered.

GENS9002
Psychology of the Body and the Mind
School of Psychology
UOC6 HPW4
Excluded: GENB4002, PSYC1011 Not available to students enrolled in Science Programs

This course will begin with an introduction to the physiological basis of behaviour. The biological approach will continue through consideration of basic questions in perception, conditioning and learning, and motivation and emotion. These will lead to a discussion of abnormal behaviour and of the question of what it is that makes us uniquely human.

GENS9007
The Psychobiology of Sex, Love and Attraction
School of Psychology
UOC3 HPW2
Excluded: GENB4007, PSYC2001

This course is an introduction to the study of sex, love and attraction in humans and other animals. Although a broad-based perspective is taken throughout the course (using comparative, historical and cross-cultural approaches), evolutionary interpretations are emphasised. The goal of the class is to increase our understanding of the powerful influences sex, love and attraction have on our, and on other animals' lives.

GENS9008
Stereotyping and Prejudice
School of Psychology
UOC3 HPW2
Excluded: GENB4008, PSYC2001

This course is an introduction to the psychological study of stereotyping and prejudice. The course will consider how stereotypes develop, how they are applied to others and with what consequences, and how they change. The course will also examine the roots of prejudice, and will consider the broad spectrum of what it means to be prejudiced, from unconscious forms to modern day hate groups.

GENS9009
Sport and Exercise Psychology
School of Psychology
UOC3 HPW2
Excluded: PSYC2001, PSYC2126

This course aims to increase understanding of how psychological factors influence involvement and performance in sport and exercise settings. In addition to being able to identify what general psychological theories and principles are relevant in specific sport and exercise situations, the course provides an overview of contemporary theory, research design, methodology and analytical techniques appropriate to sport and exercise research.

GENT0201
Communication Skills
School of English
UOC3 HPW2
Excluded: ENGL1004, ENGL2503, ENGL3502 and GENL0220

Examines the factors involved in any communicative event and develops practical skills in effective oral and written communication. Aspects covered include: theoretical models of communication, interpersonal skills, issues of gender and cultural difference, power and solidarity, resolving conflict, oral presentations, writing effectively in a variety of contexts, visual aspects of communication.

GENT0209
Great Books
School of English
UOC3 HPW2
Excluded: All ENGL courses

Introduces students to a number of texts that have been designated as 'great books' - either because over time they have achieved the status of classics, or because they have won major literary prizes in our own time. Students will read the set books and try to decide what it is that makes a book 'great'. There will also be some discussion of the social, pedagogical and economic mechanisms at work in the making of literary reputations.

GENT0310
Opiate of the People? Religion and Western Society, 1500-2000
School of History
UOC3 HPW2
Excluded: All HIST courses

Topics to be covered include: the medieval church and the Reformation; religion and culture contact in the New World; the Enlightenment and the emancipation of the Jews; religion in an age of Revolution; the role of religion in USA and Australasia; religion and totalitarianism; postwar and contemporary developments.

GENT0312
Dressed to Kill: Dress and Identity in History
School of History
UOC3 HPW2

Focuses on the many meanings of dress from daily attire, national dress, and religious costume, to high fashion across a wide gamut of cultures. Specific topics include gender and identity, dress and citizenship, inventing national dress, mass manufacturing, uniforms, haute courture, and issues of tradition and modernity as shown through the human body. The relationships between cocealment and etiquette, cloth, holiness and magic, dress and undress, and the manipulation of costume for political agendas will also be explored. Case studies will be taken from world history particularly Europe and Asia from approximately the last four hundred years.

GENT0404
Gods, Heroines and Heroes in Greek Myth and Modern Culture
School of Modern Language Studies
UOC3 HPW2
Excluded: EURO2105

The Greek myths have had a profound and lasting influence on our culture. Partly because the way they comment on the human condition is very adaptable, they continue to be a major source of inspiration to contemporary artists, philosophers, writers and film-makers. An understanding of this influence greatly enhances our appreciation of modern culture. An introduction to the nature of myth, to the creation myths, the stories of the gods and their interaction with humans, and to some of the great cycles - Oedipus, Orpheus, the Trojan War. In order to provide a focus, the myths will be discussed in terms of stories of families and family groups. Reference will be made to contemporary works incorporating new versions of the stories, especially films.

GENT0405
An Introduction to "...Isms": Ideas That Have Shaped Our World
School of Modern Language Studies
UOC3 HPW2

Introduces students to a number of major intellectual and political movements, focussing mainly on the twentieth-century. Such notions as Fascism, Marxism, Existentialism, Surrealism, Feminism and Postmodernism will be considered, with reference to key texts, in order to give students a general understanding of some of the major elements of these movements. Students will be provided with extensive bibliographic information to allow them to pursue any particular interest they may identify.

GENT0413
Introduction to Modern Japan
Department of Japanese & Korean Studies
UOC3 HPW2
Excluded: GENC8003, IBUS2103, JAPN2500, JAPN3500, JAPN3601, JAPN3900

The West has long held a particular fascination for Japan and its people and culture. This fascination arose partly because of Japan's two centuries of self-imposed isolation during the 17th and 18th centuries and following the Meiji Restoration, despite rapid modernisation, and the preservation of many aspects of traditional culture. This course provides an introduction to the language and culture of Japan. Topics include Japan's cultural history, its languages and writing system, Japan's people and geography, traditional arts and aspects of Japanese society including psychological makeup, social stratification and customs.

GENT0414
Korea at a Glance
Department of Japanese & Korean Studies
UOC3 HPW2
Excluded: KORE2500, KORE3900, GENC8002

An introduction to Korean society, history, culture, politics and economy, with an emphasis on the relationship between the economic development and socio-cultural aspects. Topics include societal trends and social stratification, family life and the role of women, demographic change, education and schooling, historical impact, electoral politics and political corruption, interest-group representation, the role of the state, the role of media, economy, business and employment practices, industrial groupings, crime and underworld of Korea, and traditional and modern art forms.

GENT0420
Along the Silk Road: Conquerors, Traders and Explorers
Department of Chinese & Indonesian Studies
UOC3 HPW2
Excluded: CHIN2310

Introduces students to the many cultural influences, which contributed to the formation of the ancient world along the 'Silk Road'. The 'Silk Road' has been the link between the great civilisations of Europe and Asia. Travelled by conquerors, missionaries, traders and explorers, the 'Silk Road' carried ideas, religion, arts, technologies, cuisines and diseases, as well as silk and trade goods of all descriptions.

GENT0421
Chinese Cinema
Department of Chinese & Indonesian Studies
UOC3 HPW2
Excluded: CHIN2302

Since the mid-1980s, films from China have received critical acclaim in many circles and substantial scholarly response, both from within and outside Chinese Studies. Analyses significant feature and documentary films from China, beginning with examples of the cinema of the 1930s and 1940s, and highlights from the cinema of the hard-line Communist period. Examines examples from the ideological thaw in the late 1970s, the New Wave films of the 1980s and several avant-garde films from the 1990s.

GENT0436
Chinese Language for Beginners A
Department of Chinese & Indonesian Studies
UOC3 HPW2
Excluded: All CHIN courses

Introduces Chinese language and culture to beginners and background speakers without any knowledge of Chinese characters. Teaches Mandarin pronunciation through the pinyin script and basic knowledge of Chinese characters.

GENT0437
Chinese Language for Beginners B
Department of Chinese & Indonesian Studies
UOC3 HPW2
Excluded: All CHIN courses

Teaches Chinese language and culture to beginners and background speakers with a limited knowledge of Chinese characters. Teaches Mandarin pronunciation and basic skills in pinyin and character writing.

Note: Students enrolled in Faculty of Arts and Social Sciences degree programs who have completed GENT0436 cannot enrol in this course.

GENT0501
Life-Giving Songs: Music in Australian Aboriginal Society
School of Music and Music Education
UOC3 HPW2
Excluded: All MUSC and MUSI courses, AUST2026

The sonic resources, musical styles and social functions of traditional and popular Australian Aboriginal music; the distribution of musical styles in various parts of the continent; the relationship between music, dance and ceremonies, the anthropologically claimed links between music, social organisation and land occupancy, and the way these musical styles and their encoding of social and ritual structures are articulated in sound recordings and films.

GENT0503
Jazz and Popular Music Studies
School of Music and Music Education
UOC3 HPW2
Excluded: GENP0250, all MUSC and MUSI courses

Provides an opportunity for the formal study and discussion of personalities and elements that have shaped and enriched twentieth century jazz and selected popular musics (with emphasis given to the popular music of the non-western world). Through a chronological study of music trends, students become familiar with the significant innovations of each of the evolutionary stages of each genre. Through application of some of the methods of ethnomusicology and cultural studies, an understanding of the social ecology of each genre will be sought.

GENT0504
Performance and Practice of Music A
School of Music and Music Education
UOC3 HPW2
Excluded: All MUSC and MUSI courses

Designed to enable students to gain experience in performing music, thereby developing the technical, artistic and socially co-operative skills

necessary to perform music as a member of a group. Students will have opportunities to specialise in either choral, wind ensemble, or orchestral performance. Knowledge of repertoire and of the principles of musical interpretation is developed. Content includes critical appraisal of music being studied and activities designed to extend and enrich students' understandings of different genres of music.

GENT0505
Performance and Practice of Music B
School of Music and Music Education
UOC3 HPW2
Excluded: All MUSC and MUSI courses

As for Performance and Practice of Music A, but with completely different repertoire.

GENT0506
Music Technology
School of Music and Music Education
UOC3 HPW2
Excluded: All MUSC and MUSI courses

Introduction to the theory and practice of digital sound recordings. Examines issues in psychoacoustics and music composition techniques, as well as developments in electronic and related technologies in making, storing, altering and reproducing music in electronic and digital forms. A variety of softwares will be examined. The practical, lab oriented, focus of the course consists of developing skills and understanding in digital audio and MIDI (Music Instrument Digital Interface) recording and sequencing. Course contents include a project where the student can learn how to create, edit produce and burn their own music CD.

GENT0604
Critical Thinking and Practical Reasoning
School of Philosophy
UOC3 HPW2
Excluded: All PHIL courses

In this course we investigate thinking, arguing and reasoning, and try to get better at them. Skills in these areas are like any other human skill in that, whatever our level of natural talent may be, developing it is a matter of practice and study. Lectures focus on the sorts of moves and techniques which get used in moral, political, social and academic arguments. We will learn how to understand them, evaluate them, and, where necessary, resist them.

GENT0606
The Use of Language, Images and Symbols
School of Philosophy
UOC3 HPW2

The leading question we consider: How do language, images and symbols function as a means of communication? Our central concern is with the basis of meaning and we study the way our use of words, symbols and images gives them the meanings they have for us. The conscious use of signs and symbols is compared with the role of symbols in the unconscious and their relation to metaphor and analogy. Our use of language, talking and writing, is often contrasted with real action. We nevertheless can do a lot using language. The following questions will be explored: How do we manage to say what we mean? What is involved in meaning what you say? How do we often succeed in communicating much more than our words mean?

GENT0707
Globalisation and the Nation State
School of Politics and International Relations
UOC3 HPW2
Excluded: All POLS courses

An interdisciplinary introduction to 'globalisation' and the issues surrounding it. Concentrates on the question of whether or not globalisation is making, or will make, the nation state redundant. Attempts to answer this question by using theories and concepts from economics, history and politics.

GENT0803
Introduction to Australian Cinema
School of Media, Film and Theatre
UOC3 HPW4
Excluded: GENS4507, SOCA1005, all MDCM and MEFT courses

Provides students with an introduction to the issues that arise in the study of national cinemas. Structured around concepts, such as ideology, mediation, representation and identity, which are exemplified by looking at different media forms. Investigates the cinema as a cultural industry that does more than merely reflect or report on society.

Note: Contact hours include screening.

GENT0804
Internet and Cyberculture
School of Media, Film and Theatre
UOC3 HPW2
Excluded: All MDCM and MEFT courses

Introduces critical perspectives on Internet histories, explores the conventions for production and use of online content and applications; examines the industrial and workplace implications of new technologies; and traces changes in political landscapes with new information infrastructures.

GENT0902
Witches, Quacks and Lunatics: A Social History of Health and Illness
School of History and Philosophy of Science
UOC3 HPW2
Excluded: GENS5522, all HPSC courses, all HPST courses

If you felt sick in the past, who did you consult? The local witch, the alchemist, the seller of pills and potions which claimed to cure everything? Find out why very few people before the 20th century ever consulted a doctor and why, in some times and places, it was probably better not to.

GENT0903
Environmental Conflicts
School of History and Philosophy of Science
UOC3 HPW2
Excluded: GENS4529, all HPSC courses, all SCTS courses

Explores the social, historical and political aspects of environmental conflicts and 'sustainable development'. These can be understood through the history of environmentalism in the twentieth century, and the study of political and social controversies arising from the push for a 'sustainable' society. Implications at the local, national and international level are examined through specific areas of conflict, for example fossil fuels and the politics of energy, the politicisation of hazardous chemicals, sustainable urban design, and the politics of trees. Uses a 'hands-on' case study approach.

GENT0911
Maniacs, Murderers and Medical Detectives
School of History and Philosophy of Science
UOC3 HPW2
Excluded: All CRIM courses, SLSP2820

Examines the ways in which many people in the past "got away with murder" and in what ways the detection of crime and the subsequent conviction of criminals have been influenced by developments and discoveries in medical science. Explores these questions using an historical perspective to explain how the public understanding of science and medicine went hand in hand with increasingly sophisticated methods of murder, and hence increasingly efficient methods of scientific detection. Topics include: over-confident poisoners; weapons and wounds; craniometry and the "criminal type"; the 19th century "epidemic" of matrimonial murder; doctors as murderers; science in the courtroom.

GENT1202
Social Aspects of Deviance
School of Sociology and Anthropology
UOC3
Excluded: SOCA2208 and SOCA3410

Provides a broad overview of current theories of how deviance is maintained or controlled and provides a closer look at some selected aspects of deviance. The sociology of deviance studies the making and breaking of rules in society. Deviance includes both legally proscribed activities such as arson, vandalism, and assault; and socially sanctioned activities, states and phenomena such as rudeness, promiscuity, acne, obesity, stupidity, pollution and pornography. In a changing society, new forms of deviance may emerge (smoking, sexual harassment) and other activities gain social acceptance (e.g. higher education for women, ethnic diversity).

GENT1205
Experiencing Anthropology Through Fieldwork
School of Sociology and Anthropology
UOC6
Excluded: SOCA2204, SOCI3710, GENT1204

Provides training in and use of ethnographic fieldwork methods in the context of a developing country with an understanding of village vs urban life and how development organisations impact. Ethnography is a part of the methodology of both sociology and anthropology as well as other social science research. Interview techniques and technologies, cultural mapping, methods of recording field data and participatory community development research are amongst the procedures to be explored. Field visits to regional, government and non-government organisations form a part of the research to understand how such institutions impact on village life.

Note: This course will be taught in November-December. Students must contact Grant McCall (G.Mccall@unsw.edu.au) prior to the commencement of Session Two.

GENT1206
Australian Feminist Issues
School of Sociology and Anthropology
UOC3 HPW2
Excluded: ARTS3010

Australian women were among the first in the world to organise to demand the right to vote and to stand for Parliament and have gained major changes in matters affecting the family, religion, employment, property, sexuality, education and health. Sets current demands within the social context of past failures and achievements. Addresses both general concerns and principles of Australian feminism and their application to a sample of specific issues involving personal and public life of women and girls.

GENT1207
Crime, Sex and Gender
School of Sociology and Anthropology
UOC3
Excluded: SOCA3409, WOMS2007, WOMS3006

Examines social implications of the role of law in defining the limits of gender and sexuality, regulating gender and sexual relationships, and in reinforcing particular gender and sex based interests. The intersection of criminality and sexuality demonstrates legal limits of public and private in intimate matters of identity, relationship, and pleasure. Provides an overview of major issues and theories, and may also deal with some specific examples such as pornography, rape, discrimination, AIDS transmission, moral danger, prostitution, abortion, and underage pregnancy.

GENT1209
Migration and Australian Society
School of Sociology and Anthropology
UOC3
Excluded: SOCA3407, SOCI3614, AUST2011

Examines racial, ethnic and social issues surrounding migration to Australia. Topics may include an ecologically sustainable population; globalisation and international migration flows; brain drain to and from Australia; multiculturalism; criteria in determining migration policy; settlement issues; skilled migrants; refugees, international aid and social justice; identity, ethnicity and community.

GENT1301
Contemporary American Film
Media, Film and Theatre
UOC3 HPW4
Excluded: GENS5180, all FILM, MEFT and THFI courses

From the late 1960s to the present day, America has produced powerful independent films that make up the New Hollywood. This course focuses critically on the diverse range of films, filmmakers and genres of contemporary American cinema from 'Easy Rider' to Tarantino. It takes an analytical approach to the study of the formal systems of narrative and filmic style

GENT1401
Biopsychosocial Study of Humour
School of Social Work
UOC3 HPW2
Excluded: GENP0350

Examines humour from a biopsychosocial perspective. The large number of theories on humour from a variety of perspectives are considered, but the course focuses mainly on theories relating humour to health, well-being and coping. The increasing use of humour in health care and related contexts is critically examined. Students study the research literature on the putative effects of humour on physiological arousal, physiological functioning, immune function, depression, anxiety and coping under stress. In order to understand humour it is necessary to consider individual differences in terms of taste, sense of humour and ability to generate humour. These factors are also considered. Students are required to collect and present humour material, and discuss this in tutorials.

GENT1403
Global Crisis: Transition to a Sustainable Society
School of Social Work
UOC3 HPW2
Excluded: GENS4529

Examines the argument that our industrial-affluent society is not sustainable and that we must face up to fundamental change in coming decades. The first half analyses major global problems such as the environment, resource depletion, Third World poverty and social breakdown, and explains these primarily in terms of the over-consumption by rich countries. Critical attention is given to the present economic system and to the values of consumer society. The second half presents a vision of a sustainable alternative society, based on more simple lifestyles and self-sufficient communities. There will be a short visit to an alternative lifestyle educational site 45 minutes from the city.

GENT1501
Gifted and Talented Students: Recognition and Response
School of Education
UOC3 HPW2
Excluded: EDST1205, EDST2050

Explores the concept of giftedness, beginning with an analysis of its historical and cultural roots and leading through to a focus on different domains and levels of giftedness. Introduces some of the objective and subjective methods of assessing the abilities and achievements of gifted students. Examines cognitive and affective development of gifted students as well as empirical research on optimal contexts for learning for students of high intellectual potential.

GENT1502
Student Learning Thinking and Problem Solving
School of Education
UOC3 HPW3
Excluded: EDST1301, EDST2090

Examines how we reason, think, and solve problems. How should we communicate with people to help them understand and learn? Answers are sought in the context of theories of mental processes.

Note: Runs for 9 weeks only

GENT1503
Introduction to Educational Psychology
School of Education
UOC3 HPW3
Excluded: EDST1101

An introduction to the study of Educational Psychology which examines some aspects of development and of learning and instruction. Topics include: cognitive development; development of memory; the role of knowledge; problem solving and thinking; an introduction to instructional methods.

Note: Runs for 9 weeks only

GENT1507
Learning Process and Instructional Procedures
School of Education
UOC3 HPW2
Excluded: EDST1103, EDST1201, EDST2010

Covers critical areas of classroom instruction and provides a solid grounding in the cognitive psychology of school subjects. Topics include cognitive processes involved in writing, reading, mathematics and science.

GENT1508
Managing Stress and Anxiety
School of Education
UOC3 HPW2
Excluded: EDST1304, EDST2041

Examines the concepts of emotion, stress and anxiety and their effects on physical and mental health. Discusses a range of physiological and psychological aspects, and the impact of the individual's state on performance outcomes. Includes possible stress management procedures.

GENT1512
Personality, Mood and Learning
School of Education
UOC3 HPW3
Excluded: EDST1452, EDST2052

A study of the nature and measurement of a variety of personality characteristics, moods and attitudes commonly encountered in learning situations and their effect on learning. Relationships between personality and subject preferences and possible subsequent occupations.

Note: Runs for 9 weeks only

GENT1513
Culture, Identity & Education
School of Education
UOC3 HPW3
Excluded: EDST1207, EDST2070

Examines how the processes of schooling have interacted with issues of identity and diversity. Looks at the historical dynamics of migration and settlement and how their growth has affected the rhetoric of Australian nationalism. How have the issues of race and culture been addressed in our schools? Explores how multiculturalism has influenced educational perceptions at a policy level and examines the interpretations of that policy in the context of the public school classroom.

Note: Runs for 9 weeks only

GENT1520
Motivation in Learning and Teaching
School of Education
UOC3 HPW3
Excluded: EDST1402, EDST2044

Explores the relationship between power and knowledge in systems of education; its ideological processes and its historical and social context. Many theorists have articulated the role of ideology in schools, school administration and social culture. Studies how and why schools are considered political agents exploring the notions of empowerment, libertarian pedagogy, social and cultural reproduction, social control theory and the dynamics of public policy. Australia, in particular NSW, is used as a case study.

Note: Runs for 9 weeks only.

GENX0101
Indigenous Australia - Travelling Through Time
Nura Gili (Indigenous Programs)
UOC3 HPW2
Excluded: ATSI2001, ATSI2002, AUST2004, AUST2005, GEND3214

Examines the relationships of Aboriginal people to this place we now call Australia. Moves through the history of Indigenous Australians up until the 1960s. Designed to give a broad general knowledge and understanding of the diversity of Indigenous societies. The impact of colonisation on Aboriginal people and the effects of government policies will be a theme.

GENX0102
Indigenous Australia - From the Present to the Future
Nura Gili (Indigenous Programs)
UOC3 HPW2
Excluded: ATSI2001, ATSI2002, AUST2004, AUST2005

Focuses on the political and social issues that have impacted on Indigenous Australians. Government policies on citizens' rights, education, employment, health, housing, and connection to land have been central to the changing circumstances of Aboriginal and Torres Strait Islander peoples. These and other major issues from the 1960s to the present will be examined.

GENX0103
Aboriginal Heritage: From Diggings to Display
Nura Gili (Indigenous Programs)
UOC3 HPW2

Focuses on the role of museums, art galleries and cultural centres in the display and representations of Indigenous peoples and their culture. A critical introduction to heritage of both pre-contact and contact Australia and its relationship to perpetuating myths through display are examined. Disciplines of anthropology, ethnography, archaeology, and museum curatorial studies are examined. Particular attention is given to material culture and the politics of display in museums and keeping places.

Note: Includes museum/gallery visits.

GENX0104
Aboriginal Popular Culture - We Hear the Songs, See the Dance and Live the Culture
Nura Gili (Indigenous Programs)
UOC3 HPW2

Examines the way in which Australia's popular culture is filled with representations and misrepresentations of Indigenous Australians. Focuses on the role of media, film, photography, newspapers, and other written texts in creating, replicating, reproducing and manufacturing stereotypes which represent and misrepresent Aboriginal identity and culture. Also covers the contemporary expressions of Aboriginal art, music and literature.

Note: Includes a half-day excursion to examine a number of forms of Aboriginal popular culture.

GEOH1601
Australian and Global Geographies: Integration and Divergence
School of Biological, Earth and Environmental Sciences
UOC6 HPW4

The geography of indigenous and invasion Australia. Patterns and consequences of economic and cultural diffusion and change. Socio-economic impacts of industrial change. Emergence of global information economies, telecommunications networks. Landscapes of production and consumption. Transformations of gender roles and influences of feminism. Changing patterns and impacts of migration. Re-assessments of national identity, multiculturalism, and reconciliation. The global diffusion of popular culture and the reaction in Australia. Impacts of globalisation on material well-being and cultural diversity. Introduction to spatial analysis and GIS with particular emphasis on economic and social patterns and change. Workshops, field trips and skills development for understanding contemporary urbanisation.

GEOH2001
Field Research
School of Biological, Earth and Environmental Sciences
UOC6 HPW3
Excluded: GEOG2001

An introduction to field research in geography. Usually composed of a four day field trip in the mid-semester break. Field methods and skills in both physical and human geography. Workshops in report writing, critical analysis, and research practice.

GEOH2611
Geographies of the Asia-Pacific
School of Biological, Earth and Environmental Sciences
UOC6 HPW3

The Geographies of the Asia-Pacific introduces a region that is as diverse as it is vast. This course draws on geography's renewed interest in locality, or context specificity. These 'new location studies' are informed by the 'cultural turn' and link broader structures to processes in local settings. This course aims to encapsulate some of the shared histories, the various experiences of colonisations, and some of the more contemporary consequences, as well as provide details about the uniqueness of context, of places and peoples.

GEOH2641
Australian Urban Environments
School of Biological, Earth and Environmental Sciences
UOC6 HPW4

This course examines human environments in Australia. Theoretical frameworks include political ecology, economic and poststructuralist geography. The course begins by exploring ideologies of human-nature relations. Urban and natural landscapes, the built environment and planning principles are all considered as cultural constructions - as concepts linked to ideologies of human-nature relations. The course considers environmental impacts of urbanisation, population growth and economic production that stem from different articulations of human-nature relations, and discusses forms of resistance, theories of environmental justice and participatory decision-making that seek to transform human-nature relations. Practical classes include field exercises and introductory Geographical Information Systems (GIS) workshops.

GEOH2801
Geographical Information Systems
Built Environment Geography
UOC6 HPW4

An introduction to Geographical Information Systems (GIS) and their applications in urban studies, planning, public management, public health, environment planning, and business contexts. A solid understanding of fundamental concepts, principles, and functions of GIS, and of types of spatial data, their entry, analysis and display into a GIS. Overview of technical and institutional issues in GIS development. Teaching will involve lectures and computer laboratories.

GEOH3101
Advanced Geographic Data Analysis
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Prerequisite: GEOG2101 or BIOS2041 or SLSP2001

Applications of multivariate techniques commonly used in geographical enquiry. Explorations of spatial analysis methods and advanced models in a GIS environment. The collection, assembly, analysis and presentation of quantitative and spatial data. Preparation for reading more advanced geographical and statistical literature.

GEOH3111
Advanced Qualitative Method for Geography
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Excluded: GEOG3611

Application of interview techniques. Construction of interview guides. Landscape interpretation. The collection, assembly, analysis (NVIVO) and presentation of qualitative data.

GEOH3621
Place, Identity and Difference
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Excluded: GEOG3166.

Issues of place, identity, territory and representation. Case studies cover a range of axes of difference including religion, place, gender, sexuality, nationalism and popular culture. Key theories of identity. Creative and official representations of places and of peoples. The deployment and representation of cultural difference.

GEOH3641
Regional Australia: Geographies of uneven development
School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Key concepts and theories in regional economic geography. Theories of location and regional development, spatial interaction, uneven development, and structural change. Economic and regional problems in Australia. Field work, workshops and practical skills in regional and spatial analysis. This course is taught as a field school in winter session.

GEOH3651
Geographies of international migration and settlement: remaking nations in the Pacific Rim
School of Biological, Earth and Environmental Sciences
UOC6 HPW4

An international and cross-institutional discussion of the theory and experience of international migration and settlement. Analyses of: immigration policies; international migration patterns; settlement policies; outcomes and experiences; international regimes regulating migration, and; changing global demographics. Case studies of Australia, Canada and Singapore. Mixed tutorial groups (with students from Singapore, Vancouver and Sydney).

GEOH3661
Cities and Urbanism
School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Geographers, and others, are interested in urbanism: the ways we live in cities as individuals, and in groups. Cities and Urbanism provides an overview of urban theory, and in particular the concept of 'urbanism'. It considers how urbanism is studied and theorised, over time and in different disciplines. During the quantitative revolution, the study of urbanism declined. It then re-emerged with the 'cultural turn' in human geography and other disciplines and now includes the benefits of, for example, a postcolonial perspective. This course is designed for human geographers, urban sociologists, urban/town planners, architects and anyone interested in theorisations of 'the city'.

GEOH3671
Transport, Land Use and Environment
Built Environment Geography
UOC6 HPW6
Prerequisite: 6 Units of Credit of Level 1 Geography courses or PLAN1011; Excluded: GEOG2071, GEOG3181, AUST2031.

Introduction to the complex interactions between transport, land use, and the environment in urban areas. Special focus on the long term environmental consequences of transport decisions. Introduction to the various methods used to analyse and predict the consequences of policy changes. Australian cities as case studies.

GEOH3911
Environmental Impact Assessment
School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Environmental Impact Assessment (EIA) is an important part of environmental decision making throughout the world. This course will provide students with an understanding of: the Commonwealth and NSW legislative framework for EIA; guidelines for EIA; ecologically sustainable development; impact evaluation in terms of environmental and socio-economic criteria; procedures, techniques and issues in EIA; and, future directions. Case studies of environmental impact statements (EIS) from the physical and human environment are used throughout the course. The course is valuable to students interested in environmental management.

GEOH3921
Coastal Resource Management
School of Biological, Earth and Environmental Sciences
UOC6 HPW4

This course focuses on coastal resource assessment and management. Topics include: Australian coastal zone policy, coastal erosion and conservation, soil and water acidification, global shrimp farming issues and management, oyster farming, causes of fish kills and fish disease outbreaks, estuary management, coastal water resource management, recreational and commercial fisheries, and coastal wetlands. The course considers Australian and global perspectives on current and emerging coastal resource management issues. Students will participate in group work to develop skills in resource management.

GEOH4418
Honours Geography
School of Biological, Earth and Environmental Sciences
UOC24 HPW0

A 24 uoc research project in physical geography to be completed within a single session.

Note/s: Plus BEES4511, and 18 UOC from BEES4521, Stage 3 courses in physical Geography (GEOS) not completed previously or other science courses at Stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of Stages 1-3 of Advanced Science study plans in Geoscience, completion of Stages 1-3 of the Environmental Science degree or a Major in Physical Geography or Earth Environmental Science with a Credit average or better in stage 3 Physical Geography courses.

GEOH4871
Transport Applications of Geographical Information Systems
Built Environment Geography
UOC6 HPW4
Prerequisite: GEOG3671.

Introduction to the concepts and applications of Transport Information Systems (GIS-T). Topics covered include network structures, data structures, transportation related referencing systems. Applications of urban transport planning models, vehicle routing and logistics. Location and allocation analysis.

GEOL4131
Advanced Topics in Applied Geology - A
School of Biological, Earth and Environmental Sciences
UOC12 HPW8
Prerequisite: 24 Units Of Credit Of Level 3 Geology or Physical Geography Courses; Excluded: GEOL4102.

Instruction by lectures, tutorials and assignments in advanced aspects of geological science and its applications. Students will individually select modules and subjects, which may include subjects drawn from

outside the School or Faculty, approved by the School. Modules will cover a number of specialised fields including mineral exploration, mine geology, sedimentary basin studies, geophysics, environmental geology, hydrogeology, data processing methods, as well as fundamental geology topics. Some modules may be delivered at other universities through the Sydney Univerisities Consortium of Geology and Geophysics.

Note: Some fieldwork may be involved; students may need to meet personal costs.

GEOL4141
Advanced Topics in Applied Geology - B
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Prerequisite: 24 Units Of Credit Of Level 3 Geology or Physical Geography Courses; Excluded: GEOL4102.

Instruction by lectures, tutorials and assignments in advanced aspects of geological science and its applications. Students will individually select modules and subjects, which may include subjects drawn from outside the School or Faculty, approved by the School. Modules will cover a number of specialised fields including mineral exploration, mine geology, sedimentary basin studies, geophysics, environmental geology, hydrogeology, data processing methods, as well as fundamental geology topics. Some modules may be delivered at other universities through the Sydney Universities Consortium of Geology and Geophysics.

Note: Some fieldwork may be involved; students may need to meet personal costs.

GEOL4203
Field Project (Part-Time)
School of Biological, Earth and Environmental Sciences
UOC12 HPW10

A major field and laboratory project spread over two sessions for part-time study, which may include geological mapping and interpretation of other geological data (possibly including satellite imagery, geophysical datasets, geochemical or geohydrological information). The project may involve aspects of resource development, engineering or environmental geology, regional geology and groundwater studies.

Note: Geological field work of up to six weeks duration may be required. Students may incur personal costs.

GEOL4204
Geology Honours Research Project
School of Biological, Earth and Environmental Sciences
UOC24 HPW18

A major field and laboratory project, which may include geological mapping, laboratory experimental work and processing of earth science data (possibly including satellite imagery, geophysical or geochemical datasets, or hydrogeological information). The project may involve aspects of resource development, engineering or environmental geology, regional geology and groundwater studies. The results of the project will be presented in the form of an honours thesis. Projects may receive external support from companies or government agencies.

Geological field work of up to six weeks duration may be required. Students may incur personal costs.

Note: Plus BEES4511, and 18 UOC from BEES4521, GEOL4131, GEOL4141 or other science courses at stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of stages 1-3 of Advanced Science study plans in geoscience or geophysics, completion of stages 1-3 of the applied geology degree or a major in geology or earth environmental science with a credit average or better in stage 3 geology courses.

GEOL4205
Research Project Geology Honours 18uoc
School of Biological, Earth and Environmental Sciences
UOC18

An 18 uoc research project in Geology to be completed within a single session.

Notes: Plus BEES4511, and 18 uoc from BEES4521, GEOL4131, GEOL4141 or other science courses at stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of stages 1-3 of Advanced Science study plans in Geoscience or Geophysics, completion of stages 1-3 of the Applied Geology degree or a Major in Geology or Earth Environmental Science with a credit average or better in stage 3 geology courses.

Geological field work of up to 6 weeks duration may be required and students may incur personal expense.

GEOL4206
Research Project Geology Honours 12uoc
School of Biological, Earth and Environmental Sciences
UOC12 HPW12

A 12 uoc research project in Geology to be completed within a single session.

Note: Plus BEES4511, and 18 uoc from BEES4521, GEOL4131, GEOL4141 or other science courses at stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of stages 1-3 of Advanced Science study plans in Geoscience or Geophysics, completion of stages 1-3 of the Applied Geology degree or a Major in Geology or Earth Environmental Science with a credit average or better in stage 3 Geology courses.

Geological field work of up to 6 weeks duration may be required and students may incur personal expense.

GEOL4207
Research Project Geology Honours 6uoc
School of Biological, Earth and Environmental Sciences
UOC6 HPW6

A 6 uoc research project in Geology to be completed within a single session.

Note: Plus BEES4511, and 18 uoc from BEES4521, GEOL4131, GEOL4141 or other science courses at stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of stages 1-3 of Advanced Science study plans in Geoscience or Geophysics, completion of stages 1-3 of the Applied Geology degree or a Major in Geology or Earth Environmental Science with a credit average or better in stage 3 Geology courses.

GEOS1111
Fundamentals of Geology
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Excluded: GEOL5200, GENS7601, GENS7602, GENS7604, GEOL1111

This course provides a sound basis in geology to those wishing to pursue professional careers as geologists, mining and petroleum engineers and environmental earth scientists, It will also be of interest to those who wish to understand more about the nature and origin of earth materials. The fundamental properties of minerals and rocks and the processes by which they form are described. Geological history and structure and consequences for the formation and preservation of mineral, coal and petroleum resources are considered. Methods for the analysis, description and definition of geological materials and resources are provided.

Note: Up to two days field work is required and will involve some cost to students.

GEOS1211
Environmental Earth Science
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Excluded: GENS7601, GENS7602, GENS7604, GEOL1211

This course takes a modern approach to studying the history of change on planet Earth. The origins of the continents, oceans, atmosphere and the planet itself are considered from a variety of perspectives. The beginnings of life and evolution of selected fauna and flora are investigated from genetic and fossil evidence. The relationships between Earth's geological enviroments and their associated life forms are explored. The effects of change, both natural and induced by humans, on soil, water and the landscape are examined. The course is delivered by experts from across the range of earth and environmental sciences.

Note: Skills in environmental earth science will be acquired through problem-solving laboratory tutorials and a four day field study camp. The field camp is compulsory and will involve some cost to students.

GEOS1701
Environmental Systems and Processes
School of Biological, Earth and Environmental Sciences
UOC6 HPW5
Excluded: GEOG1701, GEOG1721, GEOG1031, GEOG1073, GEOG1711,GEOS1711

An introduction to the role of environmental processes in shaping the patterns of the physical environment and the operation of global environmental systems. Topics include earth, atmosphere and biosphere systems, weather and climate, water resources, soils and land degradation, fluvial and coastal processes and landforms, biodiversity and Australian biotic patterns. A major theme of the course involves the sustainable interaction of humans with their environment and the causes of environmental crises. Instruction is given on practical methods involved in applied geography and environmental sciences including mapping, analysis of aerial photography, field techniques and remote sensing.

Note:Students are required to take part in a one-day field trip and students will incur personal costs. Details will be provided during the first week of the course.

GEOS1711
Planet Earth (Physical Geography for Environmental Engineers)
School of Biological, Earth and Environmental Sciences
UOC3
Excluded: GEOG1711, GEOG1701, GEOS1701

An introduction to the role of environmental processes in shaping the patterns of the physical environment and the operation of global environmental systems. Topics include earth, atmosphere and biosphere systems, weather and climate, water resources, soils and land degradation, fluvial and coastal processes and landforms, biodiversity and Australian biotic patterns. A major theme of the course involves the sustainable interaction of humans with their environment and the causes of environmental crises. Instruction is given on practical methods involved in applied geography and environmental sciences including mapping, analysis of aerial photography, field techniques and remote sensing.

GEOS2071
Life through Time
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Excluded: GEOL3121

The course offers an overview of life through time with a focus on Australian prehistory. The nature, functional morphology and evolutionary history of invertebrates, vertebrates and plants are presented in the context of Australia's evolving habitats and climates. Processes and places of fossilisation, evolution, time scales, approaches to assessing relationships and the plate tectonic history of the continent of Australia are important components of this overview of the history of Australia's unique biota. Practical work on the most important groups of fossils is an essential part of the course.

Note: Up to 4 days of fieldwork at selected fossil sites will be part of the course and students will incur some personal costs.

GEOS2171
Earth Structures
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Pre-requisites: GEOL1111/GEOS1111 or GEOL1211/GEOS1211
Exclusions: GEOL2171

Most regions of the Earth's crust have been deformed over many millions of years, resulting in a complex three dimensional form. This course seeks to unravel this history through use of remotely sensed geophysical imagery and field mapping data. This course will demonstrate how large scale regional structures are inferred or measures from surface outcrop mapping.

Note: A four day field mapping camp is an essential part of the course and will involve some cost to students.

GEOS2181
Earth Materials
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Pre-requistes: GEOL1111/GEOS1111 or GEOL1211/GEOS1211 or GEOS1701 Exclusion: GEOL2181

An introduction to the nature and analysis of minerals, rocks and soils. Atomic structure, composition, properties and classification of minerals, with special reference to the rock-forming minerals and the clay minerals. Mineral analysis techniques including chemical methods and X-ray diffraction; application of isotope studies including an introduction to radiometric dating. Genesis, analysis and classification of igneous, metamorphic and sedimentary rock types; chemical weathering and rock formation. Optical properties of minerals and rocks under the polarising microscope.

GEOS2291
Ground and Surface Water
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Exclusion: GEOL2291

An introduction to the interaction between water and the surficial environment, and the nature of water resources in Australia. The hydrologic cycle, geological and geomorphological controls on water flow and accumulation. Groundwater chemistry, salinity and contamination; the nature, development and sustainability of Australian groundwater resources. The application of environmental geophysics and drilling methods in groundwater studies and mapping of contaminants, including downhole logging techniques, electrical and seismic methods.

Note: Field work at dryland saline and contaminated sites, and students may incur personal costs..

GEOS2711
Australian Climate and Vegetation
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Prerequisite: GEOG1701; Excluded: GEOG2711.

Contemporary climatic patterns and controls in Australia. Development of the Australian vegetation. Elements of the Australian vegetation and their distribution. Climate change with particular emphasis on the Quaternary. ENSO phenomena and climatic variability in Australia. Fire and vegetation interactions. The impact of European occupation in Australia.

Note: Field-work is an important component of the course and will involve expense to individuals.

GEOS2721
Australian Surface Environments and Landforms
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Prerequisite: GEOS1701; Excluded: GEOG2721.

The study of surface processes and landforms; especially those formed by river systems and coastal environments. The nature of surface deposits, sediments and soils and the interrelationships with landforms in different environmental settings. An emphasis on contemporary processes and factors of landform creation, as well as changes to landforms and surface deposits over time and in response to human modification of the landscape. Field and laboratory based work will provide practical experience in physical landscape evaluation and land management techniques.

Note: Students will incur personal costs associated with a three day field trip to the Kiama/Robertson district on the South Coast. Details will be provided during the first week of the course.

GEOS2811
Remote Sensing Applications and Digital Image Analysis
School of Biological, Earth and Environmental Sciences
UOC6 HPW4

Computer based techniques for digital image display, analysis and interpretation including the acquisition and processing of optical, hyperspectral, thermal and radar remotely sensed imagery will be introduced. Laboratory work will use practical techniques including image enhancement, geometric correction, mapping. Classification and data interpretation will be developed with a focus on the use of earth-resource imagery for a wide range of environmental applications including geology, vegetation and forestry, agriculture, oceanographic and regional and urban analysis.

GEOS2821
Geographic Information Systems and Science
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Excluded: GEOG2821

There has been a rapid growth in the use of digital spatial data in many areas of resource management and the environmental sciences. The aim of this course is to provide both a solid theoretical understanding and a comprehensive practical introduction to the use of geographic information systems and science in the analysis of digital spatial data, simple modelling using digital spatial data, and in decision support using commercially available software. Topics covered in the course

provide a comprehensive overview of the analytical treatment of digital geographic information including: sources; storage, representation and visualisation; analysis to generate new information and knowledge; and their dissemination through avenues such as the internet.

GEOS3131
Field Methods and Mapping
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Pre-requisites: GEOL1111/GEOS1111 or GEOL1211/GEOS1211 or GEOS1701 Excluded: GEOL3131

This course provides opportunity to undertake an extended field mapping exercise in a seleted area of the state. The course will cover practical geological mapping techniques, general field skills, and the integration of stratigraphic, lithological, structural and palaeontological concepts. Use of remote sensed and geophysical imagery of the area to be mapped will be included. This course may be run in conjuction with other universities.

Note: A field mapping camp, up to 6 days in duration, forms the principal component of the course and students will incur some personal costs.

GEOS3141
Mineral and Energy Resources
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Pre-requisite: GEOL1111/GEOS1111 or GEOL1211/GEOS1211 or GEOS1701 or GEOL5321 or GEOL5200. Excluded: GEOL3241, GEOL3101, GEOL5300, GEOL3201, GENS7604

The course provides an introduction to the nature and formation of mineral and energy resources. It is designed for those students wishing to work in the future as professional geologists, resource engineers and in other fields of geoscience. It covers: the geological setting, characteristics and genesis of major categories of metallic resources, the nature and origin of coal-bearing sequences and the generation, migration, entrapment and degradation of petroleum. Laboratory study of hand specimens, thin and polished sections is undertaken. Exploration and development methods are described.

Note: Up to four days of fieldwork is a compulsory part of this course for which students will incur personal costs.

GEOS3251
Field Studies: Geological Terrains
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

Examination of geological features of selected geological terrains. Course will involve a series of preliminary readings and tutorials, an extended field excursion incorporating geological mapping and terrain evaluation, as well as a major field report. Course may be delivered in cooperation with other universities, government agencies or companies.

Note: Involves geological fieldwork of up to 12 days duration. Students will incur costs.

GEOS3281
Environmental and Contaminant Geochemistry
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Excluded: GEOL3281

This course examines the characteristics, source and fate of metals and organic contaminants in natural and urban environments. Primary and secondary dispersion of elements and weather processes. Principles of vapour, water, soil, drainage sediments, rocks and vegetation geochemistry as applied to environmental assesments; aqueous geochemistry and contaminant modelling, with reference to Australian case studies. Introduction to sampling, analytical techniques and design of environmental surveys.

Note: Fieldwork of up to 3 days duration will involve geochemical surveys at a contaminated site and students will incur some personal costs.

Assumed knowledge of level 1 geology, geography or chemistry.

GEOS3300
Mine Geology
School of Biological, Earth and Environmental Sciences
UOC3 HPW4
Prerequisites: GEOL1111/GEOS1111 or GEOL5200 Excluded: GEOL3141, GEOL5300, GENS7601, GENS7602

Taught in Weeks 1 - 10, this course provides an introduction to the nature and formation of mineral deposits and coal resources. It covers the geological setting, characteristics and genesis of major catergories of metallic and non-metallic mineral resources, the nature and origin of coal-bearing sequences and the relevance of geological factors to their extraction and use. There is an introduction to stereographic projection analysis in understanding slope stability. This course includes a laboratory study of hand specimens. Exploration and resource assessment methods are also described.

GEOS3321
Fundamentals of Petroleum Geology
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Excluded: GEOL1111/GEOS1111, GENS7601, GENS7602

Introduction to the earth sciences; nature and properties of rocks and minerals; sedimentation and sedimentary enviroments; stratigraphy and the geological time scale; geological maps and structures; introduction to plate tectonics. Nature and geological properties of petroleum; petroleum generation, migration, entrapment and degradation; sedimentology of petroleum-bearing sequences; primary and secondary porosity; structural and stratigraphic traps; formation waters; coal-bed methane, oil shale and other non-conventional petroleum sources; geological and geophysical methods in petroleum exploration and development; regional geology of selected petroleum basins.

Note: The one day field excursion is a compulsory part of the course and students will incur some personal costs.

GEOS3331
Petroleum Reservoir Geophysics
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
GEOL5321or GEOL1111/GEOS1111 or GEOL1211/GEOS1211
Excluded: GEOL5332

The applications of geophysics in 3D mapping of geological structures. Interpretation of 2D and 3D seismic reflection data, including horizontal and vertical slices, presentation parameters, horizon autotracking, fault mapping, stratigraphic and structural interpretation, reservoir evaluation. Inversion of seismic reflection data to determine petrophysical properties. Analysis of direct hydrocarbon indicators

GEOS3341
Special Topics in Petroleum Geoscience
School of Biological, Earth and Environmental Sciences
UOC3 HPW3

Instruction by lectures, tutorials and assignments in aspects of geoscience and their application to the petroleum industry. Individual students will select modules, covering topics such as sedimentary rocks and clay minerals, groundwater hydrology, geophysics, coastal monitoring and environmental assessment, complemented by a relevant project task.

GEOS3731
Catchment and Coastal Geomorphology
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Excluded: GEOG3025, GEOG3731.

This course provides a lecture and field-based study of the processes responsible for shaping and modifying Australian and global landforms. An overview of the theoretical framework of geomorphology will provide the foundation for the theme of the course "from catchment to coast". Topics covered include catchment hydrology, slope evolution, erosion and sediment transport, fluvial systems and coastal processes and landforms. Application of geomorphology to land and resource management will be emphasised.

Note: Field data form the basis of laboratory work and the compulsory field trip to collect these data will involve expense to individual students.

Assumed knowledge: GEOS2721

GEOS3761
Environmental Change
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Excluded: GEOG3062, GEOG3761.

The nature of environmental change on the land, oceans, biosphere and atmosphere. Evolution of the continents, oceans, life and atmosphere. Techniques for environmental reconstruction and chronology building. Quaternary climatic change and modelling. Human impact on the atmosphere and climatic consequences.

GEOS3811
Advanced Techniques in Remote Sensing
School of Biological, Earth and Environmental Sciences
UOC6 HPW6
Excluded: GEOG3032, GEOG3811.

Theory and application of state-of-the-art remote sensing technologies including hyperspectral and radar remote sensing systems; standardisation of datasets using geometric, radiometric and atmospheric correction techniques; use of spectrometers, radiometers, scatterometers and spectral libraries in remote sensing analysis; introduction to geophysical remote sensing; fusion of multi-resolution imagery; mini-project work in either vegetation/land use applications. soils/geology applications or fluvial/marine applications.

Assumed knowledge: GEOS2811

GEOS3821
Remote Sensing and GIS Applications
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Excluded: GEOG3821

The fields of Geographic Information Systems and Remote Sensing have expanded considerably over the past decade and the world has become very much richer in digital geographic information. Vast amounts of geographic data are routinely collected and new sources of remotely sensed hyperspectral, radar and geophysical data are now available. These complex data, although providing previously unattainable information about the Earth, also reduce the efficacy of many traditional methods of analysis. An increased requirement to build applications-specific solutions and simulations has therefore become imperative in the context of the need to plan for eg. a changing climate, optimise agricultural productivity for an increasing population, and to provide niche marketing analysis for business. This course explores a range of highly complex, often non-deterministic, problems in GIS and Remote Sensing. It explores a true enabling technology for the natural sciences in addition to a rich source of computational and representational challenges for the computer sciences. Topics covered include: classification methods, dynamic spatio-temporal modelling, error analysis and data accuracy, geostatistics, hyper-dimensional analysis, and network analysis. This course emphasises a range of GIS and Image Processing approaches via a disparate selection of real-world applications.

Assumed knowledge: GEOS2811 or GEOS2821

GEOS4415
Physical Geography Honours
School of Biological, Earth and Environmental Sciences
UOC6

A 6UOC research project to be completed in one session

GEOS4416
Honours in Physical Geography Research Project 12uoc
School of Biological, Earth and Environmental Sciences
UOC12

A 12 UOC research project in physical geography to be completed within a single session.

Note: Plus BEES4511, and 18 UOC from BEES4521, Stage 3 courses in physical Geography (GEOS) not completed previously or other science courses at Stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of Stages 1-3 of Advanced Science study plans in Geoscience, completion of Stages 1-3 of the Environmental Science degree or a Major in Physical Geography or Earth Environmental Science with a Credit average or better in stage 3 Physical Geography courses.

GEOS4417
Research Project Honours in Physical Geography 18 UOC
School of Biological, Earth and Environmental Sciences
UOC18

A 18 uoc research project in physical geography to be completed within a single session.

Note: Plus BEES4511, and 18 uoc from BEES4521, Stage 3 courses in physical Geography (GEOS) not completed previously or other science courses at stages 2 to 4 (not completed previously) approved by the Honours coordinator. Entry requires the completion of stages 1-3 of Advanced Science study plans in Geoscience, completion of stages 1-3 of the Environmental Science degree or a Major in Physical Geography or Earth Environmental Science with a credit average or better in stage 3 Physical Geography courses.

GEOS4418
Honours Geography
School of Biological, Earth and Environmental Sciences
UOC24

A 24 uoc research project in physical geography to be completed within a single session.

GEOS4721
Current Issues in Land Management
School of Biological, Earth and Environmental Sciences
UOC6 HPW4
Excluded: GEOG4320.

The aim of this course is to examine the major forms of land degradation and practical solutions to land management problems. This course aims to consolidate the current level of knowledge of national and global land degradation issues, but with an emphasis on eastern Australia. The main issues covered will include vegetation clearance, desertification, salinisation, global climate change and greenhouse, soil health, and wind and water erosion. The format will comprise formal lectures, some by visiting experts, and student presentations.

Note: A one week compulsory field trip provides an opportunity to visit farms and research institutions in Cowra, Young and Wagga Wagga and to discuss land degradation and conservation issues with land management agencies and local landholders.

Assumed knowledge: GEOS2721

GERS1400
Introductory German 1
German Studies
UOC6 HPW6
Excluded: GENT0426

Aims to provide students who have little or no previous knowledge of German with basic communicative skills in listening, speaking, reading and writing. Incorporates an introduction to the culture of the German-speaking countries into language study.

Note: Excludes students qualified to enter GERS1600 or GERS1700.

GERS1401
Introductory German 2
German Studies
UOC6 HPW6
Prerequisite: GERS1400

Further consolidation and development of language skills acquired in GERS1400 or an elementary German language course of comparable format.

GERS2400
Intermediate German 1
German Studies
UOC6 HPW5
Prerequisite: GERS1000 or GERS1022 or GERS1401; Excluded: GERS2021

Designed for students with HSC German or two semesters of elementary German at tertiary level. Develops and extends skills in listening, speaking, reading and writing German and provides an introduction to German Studies. Includes 1hour per week lecture on cultural aspects of German-speaking countries.

GERS2401
Intermediate German 2
German Studies
UOC6 HPW5
Prerequisite: GERS2400 or GERS2021; Excluded: GERS2022

Further develops and extends language skills acquired in GERS2400 and continues introduction to German Studies. Includes 1 hour per week discussion or German literary texts.

GERS3410
Advanced German 1
German Studies
UOC6 HPW4
Prerequisite: GERS2401 or GERS1601; Excluded: GERS2605, GERS1700

Designed for students with advanced German language skills. Extends and consolidates these skills through the study of authentic German texts discussing contemporary issues in German-speaking societies. Includes 1 hour per week lecture or individual project.

GERS3411
Advanced German 2
German Studies
UOC6 HPW4
Prerequisite: GERS3410 or GERS2605; Excluded: GERS2606, GERS1701

Further extends and consolidates advanced German language skills and discussion of contemporary issues in German-speaking societies. Includes 1 hour per week discussion of German literary texts or individual project.

GERS3700
Advanced German 3
German Studies
UOC6 HPW3
Prerequisite: GERS2701; Excluded: GERS3141, GERS3142.

Designed for students with very advanced German language skills, including native speakers. Concentrates on aspects of advanced German grammar and/or techniques of translation. Includes 1 hour per week lecture on cultural aspects of German-speaking societies or individual project.

GERS3701
Advanced German 4
German Studies
UOC6 HPW3
Prerequisite: GERS2701 or GERS3700

Further concentrates on aspects of advanced German grammar and/or techniques of translation. Includes 1 hour per week discussion of German literary texts or individual project.

GERS3800
Modernism & Cultural Innovation in Weimar Germany
German Studies
UOC6 HPW3
Prerequisite: GERS2401 or GERS3411 or GERS3701

Explores the social and historical foundations of the Weimar Republic and its innovative and modernist cultural scene, including visual arts, film, architecture, music, literature, theatre and the new media (radio, journalism), as well as developments in social and cultural theory.

GERS3801
Language & Society in the German-speaking Countries
German Studies
UOC6 HPW3
Prerequisite: GERS2401 or GERS3411 or GERS3701

Explores norms and varieties of the German language and their relationship to different regions and population groups.

GERS3802
German Culture and Society:19th and 20th Century
German Studies
UOC6 HPW3
Prerequisite: GERS2401 or GERS3411 or GERS3701

Explores aspects of German culture and society in the 19th and 20th century through the study of selected texts.

GERS3803
Post-war German Literature and Culture: Hans Magnus Enzensberger
German Studies
UOC6 HPW3
Prerequisite: GERS2401 or GERS3411 or GERS3701

Explores the essayistic work of one of the leading social theorists and cultural critics of postwar Germany, covering a wide range of topics, including media theory, multiculturalism, globalisation, war and violence.

GERS3900
German Studies Pre-Honours Program 1
German Studies
UOC6 HPW3
Prerequisite: 36 units of credit including 12 units of credit of German at credit level

An advanced seminar on selected topics on the literature, culture, history, language and society of the German-speaking countries. Particular emphasis will be placed on research methodology and critical writing.

GERS3901
German Studies Pre-Honours Program 2
German Studies
UOC6 HPW3
Prerequisite: 36 units of credit including 12 units of credit of German at credit level

An advanced seminar on selected topics on the literature, culture, history, language and society of the German-speaking countries. Particular emphasis will be placed on research methodology and critical writing.

GERS4000
German Honours (Research) Full-Time
German Studies
UOC24 HPW5
Prerequisite: 54 units of credit in German Studies at an average of 70%, including GERS3900 and GERS3901

Two seminars on literary, linguistic or historical topics; and practical language work as required. A thesis of approximately 15,000 - 20,000 words on a topic approved by the Coordinator.

GERS4050
German Honours (Research) Part-Time
German Studies
UOC12 HPW3
Prerequisite: 54 units of credit in German Studies at an average of 70%, including GERS3900 and GERS3901

Two seminars on literary, linguistic or historical topics; and practical language work as required, but taken part-time over two years. A thesis of approximately 15,000 - 20,000 words on a topic approved by the Coordinator.

GERS4500
Combined German Honours (Research) Full-Time
German Studies
UOC12 HPW2
Prerequisite: 48 units of credit in German Studies, including GERS3900 at 70% or better

Two seminars on literary, linguistic or historical topics. Of these, one is shared with the other School or Department. Practical language work as required. A thesis on a topic approved by the two Schools/Departments concerned.

GERS4550
Combined German Honours (Research) Part-Time
German Studies
UOC6 HPW2
Prerequisite: 48 units of credit in German Studies, including GERS3900 at 70% or better

Two seminars on literary, linguistic or historical topics. Of these, one is shared with the other School or Department. Practical language work as required, taken part-time over two years. A thesis on a topic approved by the two Schools/Departments concerned.

GLST1100
Introduction to Globalisation
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law program; Excluded: SOCA1006, INST1003

Considers how the transnational flows of people, goods, culture and capital are changing the significance of locality and national societies in shaping social life. Examines questions of belonging by looking at migration, refugees and citizenship. Looks at the emergence of global culture through a study of the emergence of global and multicultural cities, new patterns of consumption for pleasure, and the role of media and communications in globalisation. Explores the issues of global governance and examines the cultural and political responses to globalisation in anti-globalisation movements, fundamentalism and economic strategies.

GLST1200
Women, Gender & World History

School of History
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law programs; Excluded: HIST1020, WOMS1003

Looks at world change from ancient times, with reference to premodern women, male-female relations, sexuality and social constructions of gender. Emphasis will be placed upon patterns of change from prehistory through to modernity but with the recognition that even 'revolutionary' change has not necessarily involved progress for women. Topics include: androcentric periodizations of history; debates about early 'matriarchies'; patriarchal controls placed upon women, their sexuality and fertility; different social constructs of feminine and masculine roles and identity; and the importance of culture and class in determining social roles, male-female relations and differences between women.

GLST2101
(Un)Making the Third World: History and Global Development B
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law programs, 36 units of credit; Excluded: COMD2010, HIST2040, HIST2060, SPAN2424, SPAN2428

Explores the history of dictatorship and democracy in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. In geographical terms, the focus is on Latin America with a particular focus on Argentina, Brazil, Chile, Peru, Mexico, Cuba, Guatemala and Colombia. The historical trajectories, current circumstances and future prospects of these nation-states will be examined in relation to themes such as authoritarianism, violence, terror, fear, democracy, liberty, freedom, nationalism, revolution, US hegemony, neo-liberalism and globalisation.

GLST2102
(Un)Making the Third World: History and Global Development A
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law programs, 36 units of credit; Excluded: COMD2020, HIST2061, INST2000, SPAN2429

Explores the history of underdevelopment and development in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. Themes include: colonialism, nationalism, decolonisation and post-colonial states; the history and politics of development in the Cold War and post-Cold War era; the state and economic development; the role of international organisations such as the World Bank and the IMF; and the question of globalisation. In geographical terms, the focus is on sub-Saharan Africa, especially the Democratic Republic of the Congo; the Middle East, especially Egypt; South Asia, especially India; Southeast Asia, especially Indonesia; and Northeast Asia, especially South Korea.

GLST2103
The United States and Changing Global Orders
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law programs, 36 units of credit; Excluded: HIST2510, SPAN2431

Examines the role of the USA in the world in the context of the history of changing global orders. Drawing on diplomatic history, international history, international relations, international political economy, and social and cultural history, the main themes include: westward expansion, 'Manifest Destiny', theories of imperialism, US-Soviet rivalry, and debates about globalisation and the character and future of the contemporary global order centred on the USA.

GLST2104
Globalisation and Uneven Development
School of Politics and International Relations
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law program, 36 units of credit; Excluded: INST2400, SLSP2701

Examines the problems and political prospects of 'Third World' or 'Less Developed' countries in the context of the development of a global economic and communications system. The first part examines the historical development of the system, the second part looks at its current structure and functioning and the third part considers the specific role of less developed countries and regions within the global system.

GLST3000
Global Studies and Global Transformations
School of Modern Language Studies
UOC6 HPW3
Prerequisite: 96 units of credit in Program 3415, 4768, 3424 or 4765; Excluded: INST3000

Provides a detailed examination of the key theoretical debates in the emergent fields of international, transnational and global studies. Discusses the growing array of conceptual and empirical efforts to explain the dynamics of global transformations in the post-Cold War era. Provides Global Studies students with the opportunity to evaluate their time overseas and link it to a detailed discussion of historic and contemporary processes of global transformation.

GMAT0411
Surveying in Building and Construction
School of Surveying & Spatial Information Systems
UOC3 HPW3

Overview of services provided by Surveyors/Geomatic Engineers. Linear and angular measurement. Setting out. Levelling; laser levelling. Electronic tacheometry. Earthwork surveys. High-rise building surveys; quality assurance. Basic land law and cadastral surveying; subdivision surveys.

GMAT0442
Surveying for Civil Engineers
School of Surveying & Spatial Information Systems
UOC3 HPW3

To provide civil engineering students an introduction to and understanding of the basic principles of surveying as it applies to civil engineering works. Topics include: Linear and angular measurement (band and electronic distance measurement): Levelling principles and applications including laser levelling and bar code levelling; 3D coordinate systems; Traversing and control surveys, "field-to-finish" electronic detail surveys, electronic data recording; horizontal and vertical curves and construction survey set outs; areas and volumes, surveys to monitor deformations of structures and mine walls; GPS (satellite positioning); and an introduction to consulting services available from Surveyors and Geomatic Engineers.

GMAT0443
Surveying for Mining Engineers
School of Surveying & Spatial Information Systems
UOC3 HPW3

To provide the fundamental principles and demonstrates the relevance of surveying to mining engineering. Topics include: Principles of surveying; levelling principles and techniques; contouring; theodolites: angle measurements, instrument and survey errors; distance measurement techniques; coordinate calculations; control surveys; traversing; area and volume calculations. Also an introduction to: GPS satellite positioning; deformation monitoring surveys; map projection coordinates and calculations; correlation of surface surveys with underground surveys; shaft plumbing; transfer of height and coordinates; concept of azimuth. Awareness of other contemporary surveying topics.

GMAT0491
Survey Camp
School of Surveying & Spatial Information Systems
UOC3 HPW3
CoRequisite: GMAT0442

A one-week field camp (on campus, usually in mid-year recess) for students studying GMAT0442 Surveying for Civil Engineers.

GMAT0753
Introduction to Spatial Information Systems
School of Surveying & Spatial Information Systems
UOC3 HPW3
Prerequisite: CIVL2710, MATH2869, MATH2019

To provide Environmental Engineers with an overview of the resources and analytical tools in Spatial Information Systems applicable to their discipline, and to provide an understanding of the roles of other professions in SIS. An introduction to coordinate reference systems, with particular reference to Australia. Overview and background of spatial information systems. Explanations of definitions and terminology of LIS and GIS. Introduction to remote sensing. Sources of spatial information, field surveys including GPS, maps, aerial photography, satellite imagery. Introduction to image analysis techniques for remote sensing. Introduction to geographical information systems for display, management and analysis of spatial information. Modelling and analysis techniques and software for GIS. Application of above to environmental engineering. A view of the future.

GMAT1100
Principles of Surveying
School of Surveying & Spatial Information Systems
UOC6 HPW5

Induction to Surveying and Spatial Information Systems: to gain exposure to the range of topics covered in Surveying and Spatial Information Systems, hands-on experience with the School's facilities and laboratories, and to develop teamwork amongst the students. Horizontal reference frames and positions. Tubular bubbles, surveying telescopes. Theodolites; direction measurement. Distance measurement with steel tapes, bands and electronic tacheometers. Total stations. GPS positioning. Detail surveys. Levelling, level runs, instrument errors and tests. Field techniques and data recording. Use of minor survey equipment. Reconnaissance surveys: field sketches and planning. Recovery sketches.

GMAT1150
Survey Methods & Computations
School of Surveying & Spatial Information Systems
UOC6 HPW5
Prerequisite: GMAT 1100

Principles of calculations. Intersection, resection, trilateration, traverse measurements and calculations. Missing data problems. Traversing, types of traverses, errors in traverses, errors detection and adjustment. Road intersections. Area calculations. Subdivision calculations. 2D similarity transformations and PO adjustments. Spherical trigonometry. Contour surveys. Detail surveys, radiations, use of theodolite and EDM, field procedures, electronic tacheometers and electronic fieldbooks/data recorders, field sketches, principle and computation of free stationing.

GMAT1200
Visualisation of Spatial Data
School of Surveying & Spatial Information Systems
UOC6 HPW4

Principles of visual communication. Drafting, plotting, contouring, field sketches. Computer painting, drawing and CAD. Cartographic design. Map use. Charts and graphs. 2D-3D visualisation. Engineering drawing: orthographic and pictorial. Descriptive geometry. Web page design. Interpreting technical drawings; cadastral and engineering. Powerpoint presentations. Sun direction calculations and shadow diagrams.

GMAT1300
Computing Applications in Geomatics
School of Surveying & Spatial Information Systems
UOC6 HPW4

Applications of computing technology to Geomatics including the development of proficiency with commonly used software packages. Overview of hardware, operating systems, networks, the internet, applications software, and peripherals including storage media, printers, scanners, digitizers. Use of word processors, spreadsheets, databases, presentation packages, graphics and visualisation packages, publishing and multi-media, browsers and email. The application of these packages to various aspects of Geomatics including data input, data manipulation, data management and storage, data presentation and communication.

GMAT1400
Land Studies in Geomatics
School of Surveying & Spatial Information Systems
UOC6 HPW5

What is "Land"? Topographic and geomorphological descriptions of land. Land cover classification: soils and vegetation. Land use: rural and urban land. Land value and land economics. Land as a recreational resource, national parks, and ecological issues. Land as Real Estate. Land ownership and rights to use and redevelopment. Land from the cultural, social and spiritual perspectives. Native and other forms of "title". Land, water and air space rights. Law of the Sea and sovereign rights over marine resources. State, Local and Federal Government jurisdictions over land. Professional communications will be an integral component of the subject. Students will be expected to analyse the subject material and prepare appropriate responses, including: poster presentations, addresses to a mock local government council meeting, PowerPoint presentations, and application of research methodology for the WWW and subsequent preparation of reports.

GMAT2100
Electronic Surveying Instrumentation:Principles & Practice
School of Surveying & Spatial Information Systems
UOC6 HPW5
Prerequisite: GMAT1100, GMAT1150 Co-requisite: MATH2829

Precise digital levelling (bar code) instruments and techniques; design, accuracy, errors. Precise levelling techniques, design and location of bench marks. systematic and random errors, motorised levelling. Electronic theodolites, construction, circle reading, level sensors, centring systems, constrained centring, electronic data recording. Sources, testing and elimination of errors in electronic theodolites, eccentricities of alidade and horizontal circle. Vertical circle and level sensor errors; circle graduation errors. Centring and levelling of theodolites. Precise horizontal angle measurement, definition of an arc of directions, observation procedures, elimination of errors, National and State specifications; precise zenith angle measurement. Trigonometric heighting, effects of earth curvature and refraction, observation procedures, precision of computed heights; EDM-height traversing.

GMAT2110
Electronic & GPS Positioning Technologies
School of Surveying & Spatial Information Systems
UOC6 HPW5
CO.GMAT2100,GMAT2300, PRE. GMAT1100,GMAT1150

Principles and applications of EDM: basic working principles; phase measurement techniques, coefficient of refraction, flight-time measurement in short range pulse distance meters, working principles of microwave distance meters; wave propagation in atmosphere, atmospheric transmittance and range equation; measurement of atmospheric parameters, velocity corrections; geometric reductions, reductions of distances to the spheroid, analysis of errors, corrections to EDM measurements; elctro-optical distance meters; calibration of electro-optical instruments; reflectors; field procedures. GPS surveying; the GPS signal and measurement characteristics; GPS instruments; GPS planning, field and office procedures; GPS observations and equations; baseline measurements; networks; presentation of GPS measurements, datums, coordinate systems and heights; data acquisition from maps and images.

GMAT2200
Geographic Information Systems & CAD
School of Surveying & Spatial Information Systems
UOC6 HPW5
Corequisite: GMAT 2110, GMAT 2700

Inputting both spatial and attribute data to the GIS. Transformation of data between coordinate systems, such as digitizer coordinates, geodetic and geographic coordinates, and map projection coordinates. Editing data and creating topologically clean data. Tagging spatial data with attributes, linking spatial data to attribute databases. Use of basic analysis functions: spatial selection, attribute selection, making reports of spatial and attribute data, interfacing to the system using a high level language. Surveying CAD familiarisation with at least one CAD package commonly used in engineering surveying. Data entry for detail survey. Editing and setting attributes within the package. Contouring. Plan drawing. Demonstration of alternative CAD packages.

GMAT2300
Analysis of Observations
School of Surveying & Spatial Information Systems
UOC3 HPW3
Prerequisite: MATH 1231, GMAT 1150; Corequisite: MATH 2019.

Least squares principles and reasons for applying least squares solutions. Modelling observations, observation equations, parametric method, condition method. Linearisation of equations. Derivation of least squares; methods of forming normal equations. Worked examples in various areas of geomatics. The derivation of variance-covariance matrices. Analysis of variance-covariance matrix, application of statistics and error analysis in geomatics; error ellipses. Determining input into least squares using typical adjustment software. Introduction to advanced least squares.

GMAT2350
Computing for Spatial Information Sciences
School of Surveying & Spatial Information Systems
UOC3 HPW3
Corequisite: GMAT1300

Principles of program design. Algorithm development and programming languages. Procedural programming and event driven programming.Variable types, input, output, event, syntax, loops, condition statements, procedures, forms and controls, menus and multiple document interface. Applications and GUI; application development in common programming languages. Exercises in program development relevant to Surveying and Spatial Information Systems throughout the course.

GMAT2700
Geometry of Coordinate Reference Systems
School of Surveying & Spatial Information Systems
UOC6 HPW5

Cartesian coordinate systems, applications of Cartesian coordinate transformations in geomatics. Mathematical transformations between geodetic, Cartesian and topocentric coordinate systems, ellipsoid geometry, orthometric and ellipsoid height systems; Keplerian orbit representation and the transformation of Keplerian elements into other satellite coordinate and velocity representations. Map projections and ellipsoidal geometry, principles of map projections, surveying and mapping projections, transverse Mercator projection, ellipsoidal computations. Corrections to field observations. Geodetic and astronomical reference systems; the relationship between natural and geodetic reference systems, deflection of the vertical; geoid models and reference ellipsoids, height systems, celestial coordinate systems. Geodetic coordinate systems and datums; definition of AGD, GDA and AHD.

GMAT3100
Surveying Applications
School of Surveying & Spatial Information Systems
UOC6 HPW5

This course introduces the student to a wide variety of surveying applications undertaken as part of engineering projects. The student will be expected to perform common engineering surveying tasks such as the determination of volumes as well as the design, computation and set out of horizontal and vertical curves, roads, buildings and large structures. In addition, selected topics of specialist survey applications will be dealt with using lectures, site visits, guest speakers and technology demonstrations. Topics will be selected from the following areas of special surveys: mining surveying (including Azimuth transfer, north-seeking gyro theodolites, plumbing of shafts and high structures), industrial surveying, tunnel engineering, hydrographic surveying, alignments, monitoring of deformations and settlement of terrain, structures and machines, design of precise engineering networks, dimensional measurement.

GMAT3150
Field Projects
School of Surveying & Spatial Information Systems
UOC6

At camp, a survey project of substantial extent is carried out involving detail surveys, contour surveys and the setting-out of a road. The processing of the field data and the preparation of plans and reports is done during session.

Note: Students are required to attend a one week survey camp during the mid-year recess equivalent to 3 contact hours per week followed by three hour per week processing during session.

GMAT3200
Geospatial Information Techniques and Applications.
School of Surveying & Spatial Information Systems
UOC6 HPW5

Concepts and definitions of spatial systems, coordinate systems, mapping and spatial issues with maps, data structures including vector, raster and surface modelling. An overview of the components of the technology, database management in the context of spatial data, database design, data acquisition techniques including overviews of digitizing, scanning, field survey and remote sensing, the data conversion process, data management, display of geo-spatial data, cartography, colour and 3D views. Analysis of geospatial problems including components of data acquisition and database development, spatial analysis and display, and customising and performing advanced analysis using macro languages and integrating with other software, using the World Wide Web to disseminate information. Management and institutional issues including how the technology and data is used by various organisations and government departments, geo-spatial data issues for government and industry, standards, Metadata, legal issues associated with these systems, intellectual property, copyright, liability, project management and implementation of these systems.

GMAT3400
Cadastral Surveying 1
School of Surveying & Spatial Information Systems
UOC3 HPW3

The legal system in Australia and NSW; the nature of land law including land tenure, estates in land, interests in land. Land title systems. Land administration in Australia and NSW. Boundary surveying principles. Cadastral mapping in NSW.

GMAT3410
Land Economics & Valuation
School of Surveying & Spatial Information Systems
UOC3 HPW2

The surveyor's role in the economic use of land. Variation of land use and land value. Temporal change of land use due to supply and demand, and its effect on land development and urbanisation. Location theory, public measures for directing land use, introduction to valuation; factors affecting value of land, valuation principles and practice.

GMAT3450
Cadastral Surveying 2
School of Surveying & Spatial Information Systems
UOC3 HPW3

Survey investigation for both artificial and natural boundaries; survey and title searching. Field note preparation for cadastral surveying. Survey marking and preparation of plans of survey. Study of appropriate statutes and regulations. Cadastral survey techniques for urban and rural properties; the status of roads in NSW, strata plan surveys, identification surveys, consents for MHWM, railways, rivers, kerbs in Sydney. The role of coodinates in cadastral surveying.

GMAT3500
Photogrammetry and Remote Sensing
School of Surveying & Spatial Information Systems
UOC6 HPW5

Introduction to geometric and spectral properties of remotely sensed images. Analogue and digital images - photography, electro-optical and microwave systems. Introduction to the physics of visible, infrared and microwave remotely sensed imagery. Atmospheric effects. Image geometry - central projection, scan and microwave systems. Concept of stereovision. Inner orientation of central projection, collinearity equations, deviations from collinearity. Exterior orientation of sensor systems; object geometry from overlapping images, for block photography for aerial and close range applications. Digital photogrammetric workstations and their functions. Photogrammetric project planning. Image interpretation.

GMAT4000
Thesis Part A
School of Surveying & Spatial Information Systems
UOC3 HPW2

GMAT4000 is to be taken in the second last session required for the completion of all requirements for the award of the BE degree. Generally, the thesis involves directed laboratory, investigatory, design, field or research work on an approved subject under the guidance of members of the academic staff. Time devoted to the thesis is two hours per week in Session 1 (Part A) for library methodology instruction and preliminary work. Each student is required to prepare a thesis proposal with literature review and a short seminar as part of the requirements for GMAT4000 Thesis Part A. Satisfactory performance in course GMAT4000 is a prerequisite for progress to GMAT4001.

GMAT4001
Thesis Part B
School of Surveying & Spatial Information Systems
UOC9 HPW8
Prerequisite : GMAT4000

Satisfactory performance in course GMAT4000 is a prerequisite for GMAT4001. GMAT4001 is to be taken in the last session required for the completion of all requirements for the award of the BE. Generally, the thesis involves directed laboratory, investigatory, design, field or research work on an approved subject under the guidance of members of the academic staff. Session 2 (Part B) is for the major part of the thesis work. Students are required to report on their work at a thesis conference in Week 15, Session 2 and to present a written report on the work undertaken in this course. A supervisor guides each student, but the successful completion of the project, the writing of the thesis and the submission of two bound copies by specified deadlines, for example, are the sole responsibility of the student. Students are required to submit a log book and report detailing at least 60 days of professional practice (industrial training).

GMAT4020
Project in Surveying and Spatial Information Systems
School of Surveying & Spatial Information Systems
UOC6 HPW5
Prerequisite: GMAT3150

Projects will involve small groups of students working as a team to complete the execution of specially designed multi-faceted selected tasks in Surveying and Spatial Information Systems. Topics may be the remote sensing analysis of the environment from satellite images, a digital photogrammetric mapping task, setting up a precise geodetic control network, the use of precise GPS techniques to map the local road network and insert this data into a GIS system, a precise engineering survey or the development and analysis of a geospatial database of a region. Students will be required to present the results of their project in a well written report and verbally at the annual thesis conference (Week 15, Session2).

GMAT4400
Land Management & Development Project 1
School of Surveying & Spatial Information Systems
UOC6 HPW2

Design and studio project for a residential neighbourhood development. Constraint and site analysis: preparation of maps of land use, vegetation, surface and soils, drainage and terrain, slopes, climate and aspect; composite overlay maps. Structure plan design: residential precincts, schools, commercial areas, industrial areas, active and passive recreation, pedestrian ways and road hierarchy. Continuation of design and studio project for a residential neighbourhood development. Plan of detailed lot layout: consideration of access, grades, drainage reserves, parks and pedestrian ways.

GMAT4410
Land Subdivision & Development
School of Surveying & Spatial Information Systems
UOC3 HPW3

Subdivision and development control in New South Wales. Administration of subdivision and development under Local Government and environmental planning and assessment legislation; procedures and legal controls. Statutory requirements for land development and subdivision of land, particularly as they apply to broad-acre subdivisions.

GMAT4450
Land Management and Development Project 2
School of Surveying & Spatial Information Systems
UOC6 HPW2

Engineering design and plans: catchment details, road longitudinal and cross-sections, drainage layout, flow schedule, hydraulic grade line calculations, longitudinal sections of kerb profiles. Detention systems, infill subdivisions, shadow diagrams, driveway designs.

GMAT4700
Project Management 1
School of Surveying & Spatial Information Systems
UOC3 HPW3

Types of business, ethics. Organisational and management principles. Goals, strategies and actions. Phases of a project: feasibility study, pilot project, contract work, final report, and control. Principles of project management: organisation, management, planning responsibilities, information control. Communication: meeting, negotiation, conflict, dialectic for managers. Financial management reporting, accounting systems, cash flow, cash flow analysis. Budgeting (financial, personnel, equipment), personnel planning. Management of the project resources.

GMAT4750
Project Management 2
School of Surveying & Spatial Information Systems
UOC3 HPW3

Aims and forms of project organisation. Preparation of contracts and specifications: contract law, subcontracting, contract work, bidding. Project scheduling, control and documentation. Project teams in a corporation. Psychology of professionals. Qualifications of a project manager. Decision making process in project management: authority, power, interaction, leadership, assignments. Human resource management: small group behaviour, learning curve, management of teams in professional practice, professional liabilities and responsibilities. Case studies in the application of project management.

GMAT4850
Surveying and Spatial Information Systems for Sustainability
School of Surveying & Spatial Information Systems
UOC3 HPW3

A brief introduction and relevance to Surveying and Spatial Information Systems (SIS). Why are we concerned about sustainability? Principles of sustainability (inter- and intra-generational equity, conservation of biodiversity, the precautionary principle, internalisation of environmental costs). Conservation of biodiversity and ecological integrity. Why is maintenance of biodiversity and ecological processes (free goods!) important? Current trends in impacts on global biodiversity. Special features of Australian biodiversity and ecosystems and our special responsibilities. The precautionary principle in sustainability. A key issue in the move to sustainability: energy use - forms and conservation in transport and settlement and impact on climate change (Enhanced Greenhouse Effect). The influence of Surveying and SIS. The Enhanced Greenhouse Effect. A systems approach in applying the sustainability principles in the practice of Surveying and SIS . Implementing sustainability - how? Monitoring and reporting progress to 'sustainable futures'. State of the Environment reporting - roles and examples. The 'sustainable' organisation. Meeting community expectations. Transparency, trust and public participation. Putting the pieces together for environmental applications. Looking to the future.

GMAT4900
Principles of GNSS Positioning
School of Surveying & Spatial Information Systems
UOC6 HPW3

This course will introduce the student to reference coordinate systems and time systems, satellite orbital motion, signal propagation and satellite tracking observables. The principles of positioning using the current two Global Navigation Satellite Systems (GNSS) will be studied: the U.S. developed Global Positioning System (GPS) and Russia's Global Navigation Satellite System (GLONASS). The mathematical models for pseudo-range and carrier phase-based modes of positioning, for both single receiver (absolute) positioning and relative positioning implementations, will be developed. These principles will be illustrated using the Matlab GNSS toolkit, which allows the student to develop algorithms for real and simulated data processing. Local, regional and wide area differential positioning will also be considered. Land, marine and airborne positioning applications will be discussed.

GMAT4910
Modern Navigation & Positioning Technologies
School of Surveying & Spatial Information Systems
UOC6 HPW3

This course presents an overview of the various satellite-based and non-satellite navigation technologies and some of their applications. Particular emphasis will be placed on the role such positioning technologies will play in Intelligent Transport Systems (ITS). Various user receiver configurations, system augmentations and implementation issues will be analysed. These include: differential GPS (DGPS) schemes and services, real-time systems and their communication links, pseudo-range and carrier phase-based techniques, pseudolites, and combined GPS/GLONASS positioning. In addition, the role of other sensors (such as gyros, accelerometers and inertial navigation systems (INS)) and ancillary data (such as digital maps) can play in ITS positioning/navigation will be discussed. Data fusion techniques for integrating GPS (or GLONASS) with INS, such as Kalman Filtering, will be presented. Students will gain hands-on experience with a variety of navigation receiver and sensor technology.

GREK1301
Introductory Modern Greek 1A
Modern Greek Studies
UOC6 HPW5
Excluded: GENT0427, GREK1001

Aims to enable students to communicate in a Greek-speaking environment, to discuss everyday topics, and, for example, to read and write a simple letter.

Note: Intended for students without any knowledge of Greek.

GREK1302
Introductory Modern Greek 1B
Modern Greek Studies
UOC6 HPW5
Prerequisite: GREK1301 or GREK1001; Excluded: GREK1002

Further consolidation and development of language skills acquired in GREK1301.

GREK2301
Intermediate Modern Greek 2A
Modern Greek Studies
UOC6 HPW5
Prerequisite: GREK1302, GREK1002; Excluded: GREK1101, GREK2010

Aims to enable students to understand and use Greek accurately, and to develop structural understanding of the language to a point where it can become a practical asset. Includes a review of Modern Greek grammar. Equal emphasis is given to the four basic skills of comprehension, speaking, reading and writing. Reading will be taught partly through a selection of simple literary texts and songs.

GREK2302
Intermediate Modern Greek 2B
Modern Greek Studies
UOC6 HPW5
Prerequisite: GREK1101 or GREK2301; Excluded: GREK1102

Continues with the development of comprehension, speaking, reading and writing skills acquired in GREK2301.

GREK3301
Advanced Modern Greek 3A
Modern Greek Studies
UOC6 HPW4
Prerequisite: GREK2302 or GREK1102 or HSC Modern Greek; Excluded: GREK1200, GREK1201, GREK2003

Aims to enable students to advance their ability to understand and use Greek accurately, and to develop a structural understanding of Greek to the point where it can become a professional asset. Includes a review of Modern Greek grammar. Reading will be taught partly through a selection of literary texts.

GREK3302
Advanced Modern Greek 3B
Modern Greek Studies
UOC6 HPW4
Prerequisite: GREK3301 or GREK1201; Excluded: GREK1202, GREK2004

A continuation of GREK3301 with further consolidation and development of language skills.

GREK3401
Advanced Modern Greek 4A
Modern Greek Studies
UOC6 HPW3
Prerequisite: GREK3302 or GREK2022 or GREK1202; Excluded: GREK2203, GREK3001

An intensive study of the Greek language through texts in different styles and registers (including literary works and journalism). Develops the ability to assimilate texts at various levels of complexity, and cultivates discursive competence in spoken as well as written Greek.

GREK3402
Advanced Modern Greek 4B
Modern Greek Studies
UOC6 HPW3
Prerequisite: GREK3401 or GREK2022; Excluded: GREK2204, GREK3002

A continuation of GREK3401.

GREK3500
Traditional Greek Culture
Modern Greek Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GREK2202

Introduces a variety of folksongs, proverbs, popular tales and shadow theatre (Karagiozis) and explores Greek society, aspects of which still play an important role in people's living.

GREK3501
Pandora's Box
Modern Greek Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GREK3205

Mythical heroes and heroines in Greek tragedy are treated as human archetypes which are demythologised and brought down to earth. The tragedies generate universal truths and illuminate aspects of the human condition. Examines gender issues in five tragedies and gives students the opportunity to observe the consistency with which basic attitudes of men and women have endured through the centuries in western society.

GREK3502
Greek Women Writers
Modern Greek Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GREK3202

Examines a number of literary texts written by women within the framework of feminist literary criticism.

GREK3503
The Modern Greek Experience
Modern Greek Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excludued: GREK2201

Examines the society and historical experiences of Greeks in the twentieth century, through literature and film.

GREK3504
Greek Music: From Homer to Haroula
Modern Greek Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Considers the evolution of Greek music from ancient times to the present, including music in antiquity, Orthodox (Byzantine) church music, folksong, rebetika (the Greek "blues"), the national school of symphonic music, and popular composers from the 60s on, such as Theodorakis and Hadjidakis, with emphasis on their setttings of modern poetry. Considers the relation between music and society, processes of cultural continuity and change, and elements of diversity and unity within and between musical cultures.

GREK3505
Born to the Purple: The Byzantine World (330-1453)
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2202

Examines the Byzantine world, from its origins in the late antique world, through the Middle Ages, to its political and cultural legacy in the early modern world. Focuses on political, social and religious developments in the Byzantine state and church, the manner in which Byzantine culture received and redeployed its Classical heritage, and its place between the European, African and Asian worlds.

GREK3506
The Modern Greek World (1453 - Present Day)
Modern Greek Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2203

Examines the contemporary culture of Greece and Cyprus within its historical context. Considers the meaning of events such as the fall of the Byzantine Empire in 1453, the effects of western rule and Ottoman domination, the influence of the European Renaissance and Enlightenment, the movement for independence, the Asia Minor catastrophe, the Nazi and Fascist occupation and the military dictatorship of 1967-74.

Note: This course is compulsory for students who wish to major in Modern Greek. Taught in Greek.

GREK3900
Culture, Ethnicity & Identity in Greek Australian Literature
Modern Greek Studies
UOC6 HPW3
Prerequisite: 36 units of credit including 12 units of Greek at credit level; Excluded: GREK3203

Provides a study of Greek society and culture in Australia, together with a study of prose, poetry and drama texts written in Australia. Special emphasis is placed on the way socio-cultural and historical phenomena are represented in the works by Greek Australian literary writers.

Note: Option for Honours.

GREK3901
The History and Development of the Greek Language
Modern Greek Studies
UOC6 HPW3
Prerequisite: 36 units of credit including 12 units of Greek at credit level; Excluded: GREK3204

A study of the historical development of the modern Greek language and the socio-cultural significance and implications of 'diglossia' in the 19th

and 20th century Greece. Students will be required to study selected literary texts in Katharevousa (puristic Greek), Medieval Demotic Greek and Demotic (spoken Greek).

Note: Option for Honours.

GREK4000
Modern Greek Studies Honours (Research) Full-Time
Modern Greek Studies
UOC24 HPW5
Prerequisite: 54 units of credit in GREK with an average of 70%

The Honours program involves two session-length seminar courses, for which students are required to complete coursework, and a thesis of between 15,000 - 20,000 words on a topic approved by the Unit.

GREK4050
Modern Greek Studies Honours (Research) Part-Time
Modern Greek Studies
UOC12 HPW3
Prerequisite: 54 units of credit in GREK with an average of 70%

The Honours program involves two session-length seminar courses, for which students are required to complete coursework, and a thesis of between 15,000 - 20,000 words on a topic approved by the Unit.

HESC1501
Introductory Exercise Science
School of Medical Sciences
UOC6 HPW6

This course provides an overview of exercise science. Students will be introduced to the areas of exercise physiology, biomechanics, motor control, and exercise behavioural science. Basic concepts and theories in each of the areas will be outlined together with an overview of measurement techniques and basic statistics.

HESC1511
Lifestyle, Kinanthropometry, and Health
School of Medical Sciences
UOC6 HPW6
Pre req: HESC1501

This course will introduce students to the literature examining the effects of physical activity on health. In particular, the effects of exercise on lifestyle diseases will be described. The relation between structure and function within the context of physical movement will also be discussed. Health based screening and intervention techniques will also be outlined with students undertaking a personalised lifestyle change project.

HESC1531
Exercise Behavioural Science
School of Medical Sciences
UOC6 HPW6
Pre req: HESC1501

This course provides an overview of exercise behavioural science based on the concepts introduced in PSYC1001 Psychology 1A. It aims to acquaint students with those aspects of exercise behaviour that have relevance to health and exercise science. Topics covered include psychological responses to injury, exercise addiction, exercise motivation, the effect of exercise on the stress response, the exercise immune response, exercise and cognition, exercise and perception, and the effect of exercise on mental health.

HESC1540
Growth, Development, and Physical Activity
School of Medical Sciences
UOC3 HPW3
Prerequisites: HESC1501

This course will provide an introduction to the development of bones, joints, muscle tissue, nervous tissue, circulatory, and respiratory systems with reference to physical activity. The determining factors in growth and physical activity throughout the lifespan will be discussed and reviewed from multiple perspectives.

HESC2501
Exercise Physiology
School of Medical Sciences
UOC6 HPW6
Prerequisites: BIOC2181, ANAT2111, PHPH2501

This course focuses on how human structure and function is influenced by work and physical activity. Areas to be studied include energy metabolism and liberation, endocrine physiology, applied muscle physiology, and applied cardiopulmonary physiology. The unit includes a number of laboratories covering different areas of exercise physiology.

HESC3504
Physical Activity and Health
School of Medical Sciences
UOC6 HPW6
Prerequisites: HESC1501, HESC1511, HESC2501

This course will introduce students to the literature examining the effects of physical activity on health. In particular, the effects of exercise on cancer, heart disease, vascular disease, lower back pain, stroke, hypertension, obesity, immune function, sleep, stress, and depression will be described. Health based screening and intervention techniques will also be outlined with students undertaking a supervised lifestyle change project through the Lifestyle Clinic.

HESC3521
Advanced Exercise Physiology
School of Medical Sciences
UOC6 HPW6
Prerequisites: PHPH2502, HESC2501

An advanced course linking previous physiological principles with aerobic and anaerobic based energy systems and metabolism. The course examines endocrine physiology and biochemistry of energy systems during exercise and looks at the responses and the adaptations that occur with exercise. The course will also cover ergogenic aids and associated detrimental physiological and pathological factors.

HESC3531
Cardiac Rehabilitation and Exercise
School of Medical Sciences
UOC6 HPW6
Prerequisites: PHPH2502, HESC2501

This course provides in-depth examination of cardiac rehabilitation and the cardiopulmonary system and exercise. Performance of the cardiopulmonary system in healthy and diseased people will be discussed. Extensive practical components involve cardiopulmonary and ECG assessment and related exercise clinical skills. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC3561
Research Topics in Health and Exercise Science
School of Medical Sciences
UOC6 HPW6
Prerequisite: HESC2501

Initially, in this course a research review will be carried out. Then the student will learn a range of research skills and techniques in their chosen area. The student will both observe and practice data collection in the laboratory of their choice. A report is to be written in the form of a research review and a summary of the skills and techniques acquired.

HESC3571
Motor Control and Dysfunction
School of Medical Sciences
UOC6 HPW6
Prerequisites: ANAT2111, PHPH2502, SESC2451

This course presents a broad overview of how humans plan and execute movement at a systems level of analysis. Emphasis is placed on the relationship between motor behaviour and the way in which the nervous system is organised. The implications of nervous system organisation for motor learning and the treatment of a range of neuro-motor disorders are discussed.

HESC3581
Physical Activity in Special Populations
School of Medical Sciences
UOC6 HPW6
Prerequisites: PHPH2502, HESC2501

The focus of this course is on special populations and their special needs for engaging in physical activity. The course will introduce students to the literature examining the effects of physical activity on health. In particular, the influence of physical activity on the health of children, women, ageing adults, pain, arthritic, and asthmatic patients will be described. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC3591
Research Topics in Health and Exercise Science
School of Medical Sciences
UOC6 HPW6
Prerequisite: HESC2501

Initially, in this course a research review will be carried out. Then the student will learn a range of research skills and techniques in their chosen area. The student will both observe and practice data collection in the laboratory of their choice. A report is to be written in the form of a research review and a summary of the skills and techniques acquired.

HESC3611
Clinical Movement Studies
School of Medical Sciences
UOC6 HPW6
Prerequisites: ANAT3131, ANAT3141, SESC2451

This course focuses on the quantitative assessment of human movement. Techniques, skills, and knowledge to assess both normal and pathological human motion will be covered. The clinical applications of human motion assessment will also be examined. The course will extend studentâ ™s knowledge of biomechanics and musculoskeletal functional anatomy acquired in SESC2451.

HESC4501
Research Methods in Physical Activity
School of Medical Sciences
UOC6 HPW6
Prerequisite: HESC3521

This course builds on the information that was covered in HESC1501 Introductory Exercise Science. The student receives more advanced training in statistical software such as SPSS and learns to administer statistical tests such as regression, between and repeated analysis of variance, and multivariate analysis of variance. The student will also develop a research proposal during the course.

HESC4511
Practicum A
School of Medical Sciences
UOC6 HPW6
Prerequisite: HESC3521

Students are required to complete 80 hours of work experience with an approved organisation under the supervision of the practicum coordinator. Course availability: it is intended that students will complete this placement over semester 1. The student chooses, after consultation and academic advice, to undertake a structured internship in a relevant professional area. This is done under the supervision of an accredited exercise physiologist with industry experience. The supervisor will ensure adequate records of activities and skills developed by the student. The course requires the submission of a substantial internship report, a completed lab book, and a seminar presentation.

HESC4521
Practicum B
School of Medical Sciences
UOC6 HPW6
Prerequisite: HESC4511

See description for Practicum A. The student may take the internship in a different or related professional area to that of Practicum A. The same requirements apply in terms of a completed log book, a substantial report, and seminar presentation.

HESC4531
Movement Rehabilitation A
School of Medical Sciences
UOC6 HPW6
Prerequisites: ANAT3131, ANAT3141, SESC2451, HESC3571

This course describes the use of exercise as a clinical rehabilitative tool for humans with neurological and muscular pathologies. The course delivers information about evaluation of injury sites and the design and implementation of exercise-based rehabilitative techniques to improve functional capability. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC4541
Clinical Exercise Physiology A
School of Medical Sciences
UOC6 HPW6
Prerequisites: HESC3521, HESC3531

This course describes the use of exercise as a clinical tool in the rehabilitation of humans with cardiovascular and pulmonary pathologies. The course delivers information about the design and implementation of exercise-based rehabilitative methods to improve functional capability. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC4551
Research Project
School of Medical Sciences
UOC6 HPW6
Prerequisite: HESC3521

This course incorporates an initial research literature review followed by the acquisition of a range of research skills and techniques in the student's chosen area. The student will both observe and practice data collection in the laboratory of their choice. A final report is to be written with a summary of the skills and techniques acquired.

HESC4560
Professional Practice
School of Medical Sciences
UOC6 HPW6
Prerequisite: HESC3521

The principles and practice of planning, staffing, financial management and information systems management with reference to exercise rehabilitation will be the focus of this course. Issues such as ethics, indemnity, and insurance will also be discussed.

HESC4571
Research Project
School of Medical Sciences
UOC6 HPW6
Prerequisite: HESC4501

A research proposal will have been developed in the course Research Methods in Physical Activity (HESC4501). In this course the student will implement the approved project in terms of reviewing the literature, applying the appropriate methods, accumulating results and analysing results through the appropriate statistics, discussing the results, and drawing conclusions. A report is to be written in the form of a scientific paper.

HESC4581
Clinical Exercise Physiology B
School of Medical Sciences
UOC6 HPW6
Prerequisite: HESC4541

This course builds on material presented in HESC4541 Clinical Exercise Physiology A. The course elaborates the use of exercise as a clinical rehabilitative tool for humans with a spectrum of diseases and disabilities not examined in HESC4541. The course delivers more advanced information about design and implementation of exercise-based rehabilitative methods used to improve functional capability. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC4591
Neuromuscular Rehabilitation
School of Medical Sciences
UOC6 HPW6
Prerequisites: HESC3571, HESC4531

This course provides the opportunity for students to understand the potential and limitations of exercise as a tool for clinical rehabilitation in humans with neurological pathologies. Specific information about a range of neuromuscular disorders is provided, and students are encouraged to apply their knowledge to case studies and realistic scenarios in order to develop the scientific and clinical attributes necessary to contribute effectively to a neuromuscular rehabilitation team. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC4621
Movement Rehabilitation B
School of Medical Sciences
UOC6 HPW6
Prerequisites: HESC4531

This course builds on material presented in HESC4531 Movement Rehabilitation A. The course describes specific rehabilitation techniques

that are used for treating a variety of injuries involving the shoulder, elbow, hand, wrist, groin, hip, thigh, knee, lower leg, ankle, foot, and the spine. This course offers a mixture of traditional and interactive/case study approaches to learning.

HESC4631
Nutrients, Metabolism, and Exercise
School of Medical Sciences
UOC6 HPW6
Prerequisite: FOOD3330

This course will consider the relationship between nutrients, metabolism, and different types of exercise. The current literature on the influence of nutrition on pre-, during-, and post-exercise metabolism with a view to enhancing performance will be reviewed. Discussion will focus on the adjustment of nutrient requirements for age, gender, special needs, and environment (heat and altitude).

HIST1003
The Fatal Shore: Aborigines, Immigrants and Convict Society
School of History
UOC6 HPW3

Sex and violence pervaded early colonial society. Looks at the way violence was used to dispossess Aboriginal people from their land and to establish and maintain convict society. Examines the complex relationships arising from sexuality: sex as a form of currency, domination, negotiation and identity for both Aboriginal people and Europeans. What is the legacy of these brutal beginnings for modern Australia? Are we still marked by the convict stain? And how did the criminal system develop in Australia? Did early colonial Australia recreate the class, gender and ethnic inequalities of 18th and 19th century Britain? Also includes an excursion to a historic site in the Sydney region.

HIST1004
Making Australia 1850 - 1901: Land, People and Culture
School of History
UOC6 HPW3

The historical context for the making of modern Australia, 1850-1901. What was the 19th century experience of Aboriginal people? Where does the Republican Movement find its Australian origins? What do recent stereotypes of masculinity and femininity owe to our colonial past? How has history shaped definitions and expressions of sexuality? What are the origins of our current political system? Charts Australia's development from an isolated colony to an independent nation.

HIST1010
Introducing Southeast Asia
School of History
UOC6 HPW3
Excluded: ASIA1002

Introduces students to the history of the Southeast Asian region through a survey of the major eras from the classical civilisation of Angkor, Pagan and Borobodur up until the early twentieth century. Beginning with the religious and cultural traditions of Southeast Asia, kingship and power, pre-colonial society, colonial society and nationalist visions are explored. Analyses the ideas of nationalist figures like Jose Rizal and Sukarno, as well as peasant rebellions against colonialism and capitalism. The Philippines, Indonesia, Cambodia, Burma and Thailand receive particular attention.

HIST1011
The Emergence of Modern Europe (A)
School of History
UOC6 HPW3

The principal themes in the history of early modern Europe, concentrating on the 16th and 17th centuries. Topics may include modern trends such as the Renaissance, the Protestant Reformation, the Scientific Revolution, the emergence of towns and the centralised absolute state. Discussion may also include the history of climate, disease and population change and their relationship with the environment; social and religious conflicts; and the lives and beliefs of 'ordinary people' in the period, such as witchcraft. For details of topics covered in current year contact the School of History.

HIST1012
The Emergence of Modern Europe (B)
School of History
UOC6 HPW3

Investigates major themes in the history of early modern Europe during the 17th and 18th centuries. Topics may include the consolidation of 'absolute' monarchies, the intellectual challenges of the Scientific Revolution and the Enlightenment, the emergence of a more literate and secular society, the lives and beliefs of 'ordinary people', and the prospects for reform of the 'Old Regime' in the late 18th century.

HIST1014
Enter the Dragons: Continuity & Change in East Asia
School of History
UOC6 HPW3

An introduction to the societies and cultures of East Asia. Special consideration will be given to early contacts with Europe, responses to intervention and modernisation and the links between traditional cultures and patterns of historical change into the twentieth century. The course is intended to provide a survey of major themes in East Asian history, preparatory to more specific study at upper level in the School of History.

HIST1015
The 60s: Australia and the United States
School of History
UOC6 HPW3

Examines the significance of the 1960s in Australian and American national life and explores the construction of the Sixties as an epoch in western history. After exploring the construction of the Sixties the course will examine a number of significant social and political themes which have characterised the period and compare and contrast the Australian and American experience. Themes include issues such as race and minorities, popular culture, civil protest, architecture, the war in Vietnam, student activism, the sexual revolution and the counter-culture. Concludes by examining the legacy of the Sixties for Australia and the United States.

HIST1016
World History: The Big Picture
School of History
UOC6 HPW3
Excluded: ASIA1000, HIST1017, INST1000, INST1100

Focuses on the basic features and forces which have shaped human history from the origins of civilisation to modern times. The first part of the course covers selected major civilisations (eg, Roman Empire, Han China) while the second covers transnational issues such as nomadism, trade between civilisations, disease and climate. The final part covers the origins and nature of modernity, to the 19th century.

HIST1020
Women, Gender & World History
School of History
UOC6 HPW3
Excluded: GLST1200, WOMS1003

Looks at world change from ancient times, with reference to premodern women, male-female relations, sexuality and social constructions of gender. Emphasis will be placed upon patterns of change from prehistory through to modernity but with the recognition that even 'revolutionary' change has not necessarily involved progress for women. Topics include: androcentric periodizations of history; debates about early 'matriarchies'; patriarchal controls placed upon women, their sexuality and fertility; different social constructs of feminine and masculine roles and identity; and the importance of culture and class in determining social roles, male-female relations and differences between women.

HIST1021
World History: The Twentieth Century
School of History
UOC6 HPW3
Excluded: HIST1019, HIST2000, INST1004, INST1200, INST2000, SPAN2432

Focuses on the major forces and features of twentieth century world history. Includes empires, modernity, nationalism, fascism, decolonisation, communist revolutions, total war, genocide, the growth of the media, social movements, environment, 'Americanisation', and terror.

HIST1030
The Modern Jewish Experience: Emancipation to the Holocaust
School of History
UOC6 HPW3
Excluded: JWST1000

The progress towards emancipation of the Jews in the 18th and 19th centuries was driven not only by Enlightenment ideas of equality and tolerance, but also by highly pragmatic considerations. While initially, for the most part, enthusiastic objects of this process, European Jews grew increasingly aware of the conditions attached to it and of its real and potential dangers. Traces the history of emancipation, its achievements and failures, and the light it sheds on the development of European societies.

HIST1031
The Modern Jewish Experience: Nationalism and Statehood
School of History
UOC6 HPW3
Excluded: JWST1001

Explores the origins of modern Jewish nationalism, Zionism, in the mid-nineteenth century and charts its development through to the creation of the State of Israel in 1948. Discusses the influence of emancipation, nationalism, socialism and anti-semitism. Concludes by considering the debate on 'post-Zionism' and the challenges it may present for Israel and the Jewish Diaspora.

HIST2015
Women in the Modern World
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

History of women in the Western world since the French and American Revolutions. Stress on relating the role and position of women to questions of social change over long periods. Topics include: changing family structures, sexual attitudes and practices, women's work, the role of women in feminist politics and reform movements, the position of women in contemporary Western society. Covers the United States, Europe and Australia.

HIST2016
Film in History
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

Assesses the significance, for the discipline of History, of film as a major communications medium. Issues include: the industrial archaeology of the film; the political-economic history of the film; national and transnational film industries, the impact of film upon perceptions of the past, and its uses in teaching history; film as a primary historical source material (ie documentaries, pedagogic films, advertising commercials and propaganda films, and home movies); reading film texts from the standpoint of the historian.

HIST2019
Identity, Culture, Politics: Ireland and Australia in the 20th Century
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: IRSH2002

Examines the political, economic and social changes that took place in Ireland and Australia during the course of the 20th century as they became increasingly independent of Great Britain. Compares and contrasts developments in both countries in terms of national identity, constitutional arrangements with Great Britain, the impact of war, politics, economics and social issues.

HIST2025
Slavery and Freedom: American History 1750-1890
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

A social history of the expansion and consolidation of the new Republic, with special attention to slavery, native Americans, the western frontier, Jacksonian democracy, reform, the Civil War and its aftermath. The central concern is how a social system based on physical coercion and paternalistic social relations came to be replaced by a free labour system based on principles of individual morality and self-restraint.

HIST2027
Inventing Australia: Race, Nation, Identity, 1901-1949
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: AUST2019

Examines the changing myths, ideas, visions, prejudices and debates through which Australians experienced themselves, others and the world during the first half of the twentieth century. Themes include the making of a White Australia, ideas of nationhood, invasion fears, the experience of Indigenous Australians, sex, disease, housewives, new forms of cinema, slums, cities and work.

HIST2028
Australia since World War 2
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: AUST2020

Major developments in Australian Society since World War II. Topics include: immigration, religion, culture, government, education, comparative welfare history, external relations, women's experiences, media studies, Aboriginal culture and politics, the impact of the Vietnam war, tough times and the 1980s, Australia and America, sporting culture and Olympism, television and the media, Australia and Asia, and the emergence of the new commercial and communication systems of 'the Information Age'.

HIST2041
Australian Sport: History and Culture
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: AUST2018

Urbanisation transformed the shape of sport and popular culture and created an industry of mass entertainment. Explores how and why this transition took place in 19th-century Australia and England and what it all meant in personal, familial, regional and national terms. Topics include: historiography of sport and mass culture; the leisure revolution in 18th-century Britain; the rise of organised sport and mass culture in Australia; and the social and political implications of new leisure institutions.

HIST2045
Modern America
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

Analyses US history from the end of the Civil War to the reverberations of 9/11 from the perspective of politics, economics, culture, minorities, and foreign policy. Asks what America is and who the Americans are, and explains how this former colony acquired the status of hyperpower.

HIST2049
Working Lives: Historical Perspectives
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

Explores the historically changing nature of work in relation to the individual and society. Uses theoretical literature to explore themes such as the development of the labour process, the relationship between work and ethnicity, the cultural and ideological dimensions of work, and the connections between changes in the workplace and broader labour movements. Unemployment, technological change and workers' responses are examined. The gendered nature of work is considered: the role of the household economy, the development of sexual divisions of labour and the forms of work specific to women's experience as well as the role of work in shaping men's identities. Students will visit museums and industrial sites. Draws on case studies from a broad range of countries, including Australia.

HIST2054
Modern Japan: Political Culture, Popular Culture
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2012

Concentrates on Japan from Meiji (1868 -1912) to the Fifteen-year War (1931-45), but includes the Allied Occupation, post-war popular culture, and the apparent 'successes' of Japan's modernisation; looks at imperial Japan not just through the eyes of its 'successful' leaders, but also through the eyes of Japanese who were marginalised in society or who actively resisted state authoritarianism. Weekly topics vary, ranging from the hegemonic imperialist ideology of emperor-centred paternalism, to social movements of opposition, to changing cultural (eg literary) forms.

HIST2055
Modern India
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2008

Examines the history of Modern India, and the controversies surrounding history in the subcontinent. Topics include the Mughal empire, the British Raj, the Indian Nationalist Movement, Mahatma Gandhi, Independence and the partition of India into the new nations of India and Pakistan, independent India and the effects of globalisation in South Asia. Themes include colonialism and its aftermath, resistance, gender and religious nationalism. Also engages with, and critiques, popular conceptions of India as it is represented in the West, and incorporates Indian popular culture, literature, film, sport and music to this end.

HIST2059
The Modern Olympics
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

Examines the successful elevation of a small-scale European athletic event into a major world festival. Topics include: the invention of the modern Olympics; myth and ideology; politics, including the role and structure of the IOC; commercialisation; the impact of media, especially film and television; the bidding process; gender issues; and the impact of the Olympics on the environment, town planning, tourism and the economies of host cities.

HIST2060
(Un)Making the Third World: History & Global Development B
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: COMD2010, GLST2101, HIST2040, SPAN2424, SPAN2428

Explores the history of dictatorship and democracy in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. In geographical terms, the focus is on Latin America with a particular focus on Argentina, Brazil, Chile, Peru, Mexico, Cuba, Guatemala and Colombia. The historical trajectories, current circumstances and future prospects of these nation-states will be examined in relation to themes such as authoritarianism, violence, terror, fear, democracy, liberty, freedom, nationalism, revolution, US hegemony, neo-liberalism and globalisation.

HIST2061
(Un)Making the Third World: History & Global Development A
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: COMD2020, GLST2102, INST2000, SPAN2429

Explores the history of underdevelopment and development in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. Themes include: colonialism, nationalism, decolonisation and post-colonial states; the history and politics of development in the Cold War and post-Cold War era; the state and economic development; the role of international organisations such as the World Bank and the IMF; and the question of globalisation. In geographical terms, the focus is on sub-Saharan Africa, especially the Democratic Republic of the Congo; the Middle East, especially Egypt; South Asia, especially India; Southeast Asia, especially Indonesia; and Northeast Asia, especially South Korea.

HIST2074
Holocaust and Genocide in Historical Perspective
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: JWST2101

Introduces students to the field of genocide and Holocaust studies, beginning with competing definitions of genocide and moving to a detailed treatment of various cases of mass death in world history. The Holocaust as a paradigm case of genocide and the legal prosecution of genocide will be considered.

HIST2078
In the Firing Line: Australians go to War
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: AUST2008

Examines the importance of war in shaping Australia, from the colonial period to the engagement at Gallipoli and up until the outbreak of World War II. Considers war's contribution to definitions of nationality, ethnicity, citizenship, masculinity and femininity and the way war shaped Australia's place in Empire. Focuses on the battle zone and looks at the way that participants understood and represented the experience of war, drawing on literature and film, personal letters and diaries, reminiscences and oral interviews as well as official records.

Note/s: Includes a field trip to the Australian War Memorial in Canberra.

HIST2090
The Transformations of Warfare
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GENT0309

Ranging from ancient Roman warriors to Vietnamese guerillas and Islamic suicide bombers, examines the evolution of warfare in terms of the nature of troops, tactics, and technology. Considers wars not only as the greatest cataclysms in history, but also as fundamental catalysts of change. Emphasises how society has impacted warfare and the other way around, exploring themes as varied as law, ethics, women, identity, interracial relations, and warfare's collateral damage and its consequences for civilians and the environment.

HIST2201
The Medieval World
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

The Middle Ages is among the most dynamic and formative phases in world history. Deals mainly with Europe and the Mediterranean world from Late Antiquity through to the Renaissance, and covers topics such as the 'fall' of Rome, the 'Barbarian West', Byzantium, Persia and Islam, the making of Latin Christendom, the Vikings, the Crusades, and Europe's cultural and intellectual revival from 1000 AD. Important themes include sex, gender, Christianity, Islam, heresy, state formation, feudalism, imperialism and warfare.

HIST2202
Born to the Purple: The Byzantine World (330-1453)
School of History
UOC6 HPW3
Prerequisite: 36 units of credit, Excluded: GREK3505

Examines the Byzantine world, from its origins in the late antique world, through the Middle Ages, to its political and cultural legacy in the early modern world. Focuses on political, social and religious developments in the Byzantine state and church, the manner in which Byzantine culture received and redeployed its Classical heritage, and its place between the European, African and Asian worlds.

HIST2203
The Modern Greek World (1453 to Present Day)
Modern Greek Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GREK3506

Examines the contemporary culture of Greece and Cyprus within its historical context. Considers the meaning of events such as the fall of the Byzantine Empire in 1453, the effects of western rule and Ottoman domination, the influence of the European Renaissance and Enlightenment, the movement for independence, the Asia Minor catastrophe, the Nazi and Fascist occupation and the military dictatorship of 1967-74.

Note: This course is compulsory for students who wish to major in Modern Greek. Taught in Greek.

HIST2351
Chinese Civilisation, 1600 BC to 1600 AD
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

Surveys Chinese civilisation from ancient times through to the Ming Dynasty. Topics include technology, ritual, and war-making in Shang (1600-1050 BC) and Zhou (1050-256 BC) periods; Chinese political thought; the establishment of a unified government under Confucian principles; influence of Buddhism on Chinese society; technological innovations in the Song period (960-1276); relations with northern barbarians and the Mongol conquest of China: commerce and culture under the Ming, and building the Great Wall.

HIST2352
Modern China, 1600-present
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2043, HIST2044

Covers the history of China from the foundation of the Manchu Qing Dynasty (1644-1912) through the Republican Era (1912-1949) and the era of Communist Party rule (1949-present). Topics include consolidation and empire-building under Manchu rule; internal rebellions and the growing menace of nineteenth century Western imperialism; the formation of a modern Republic and a Nationalist system of government (1912-49); the brutal and devastating war with Japan (1931-1945); and the foundation of a socialist government backed by the tide of rural revolution. Examines China's transformations under the leadership of Mao Zedong, DEngineering Xiaoping, and Jiang Zemin.

HIST2400
Concepts of Europe
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: EURO2000

Europe conquered, colonised and revolutionised the world despite being politically and culturally fragmented. Now, faced with the threat of decline, it seeks to overcome the fragmentation through the consolidation and expansion of the European Union, but different ideas about what a united Europe should be like continue to divide the participants in the European project. These differences have deep historical roots, as indeed does the European idea itself. They reflect the ambiguities of defining "Europe" between geographical boundaries, cultural identities, religious beliefs, political power, military security and economic interests, between local, regional, national and imperial loyalties. Traces the historical origins of the European idea, examines the various concepts of Europe used through the centuries and discusses their relevance to the contemporary difficulties of the European Union.

HIST2410
Nineteenth Century Europe 1848-1918: Nation, Empire, Revolution
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: EURO2410, IRSH2410

Examines the rise of the explosive social and national tensions in late nineteenth-century Europe which culminated in world war and revolution (Russia, Germany, Hungary, Ireland). Key themes are industrialisation and the rise of the labour movement; urbanisation and its impact on gender roles; the flowering of bourgeois culture and its fin de sihcle crisis; the transformation of revolutionary into "integral" nationalism and imperialist jingoism; great power rivalry and the origins of the First World War. Aims to understand how the period laid the foundations for the dramatic events of the "short twentieth century".

HIST2482
Europe, 1914-1945: Dark Continent?
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: EURO2482, HIST2066, HIST2067

Explores examples of catastrophic wars and revolutionary upheavals, examines cases of ethnic-cleansing and genocide, and analyses the impact of ideologies on concepts of nation, race and gender. Themes include: Total War, Socialism, Fascism, Communism, Anarchism and the "New Woman". Case studies will include Hitler's Germany, Stalin's Russia, the Spanish Civil War, WWI & WWII, the Armenian genocide and the Holocaust.

HIST2483
Decadence, Dada & All That Jazz: European Cultural History, 1880-1945
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: EURO2483

Focuses on the major cultural expressions of European modernity and the way in which they reflected social and political transformation. Themes include: modernism's challenges to positivism, fin-de-siecle decadence, Freud and the rise of psychoanalysis, the roaring 20s, feminism, Surrealism, Cubism, Cabaret, Americanisation, Jazz, and cultural representations of WWI & WWII.

HIST2484
Europe in the Age of Revolutions
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

Examines and assesses the most significant upheavals of the turbulent decades between the late-18th century and the mid-19th century. Topics may include: the French Revolution, Napoleonic Europe, innovations in agriculture, industry and communications, social transformations (population growth, urbanisation, ideas about 'classes'), cultural production (Romanticism, the periodical press), the expansion of state power, and conflicts over political representation (conservatism, nationalism, socialism, feminism).

HIST2485
The German-Jewish Experience
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: EURO2300, JWST2103, SOCA3310

The contribution of Jewish Germans to the social, political and cultural life of Germany and Austria from 1900 to 1933. The impact of attempted integration as reflected in the work of Herzl, Schnitzler, Kafka, Buber, Feuchtwanger, Scholem and others; the failure of the German-Jewish symbiosis as a basis for discussion of the concepts of assimilation, acculturation, ethnicity, identity and nationality.

HIST2489
The Attractions of Communism
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: EURO2311, SOCA3313

After the demise of the Soviet Empire, the 'totalitarianism thesis', which equates Fascism and Communism, has gained a new lease of life. Though there are many similarities in the political practices of these two movements which dominated the twentieth century, their aims and the groups they appealed to seem radically opposed. Seeks to explain the attractions of Communism through the study of documents, literary texts and film, and to shed light on the reasons for the loyalty of many European workers and intellectuals to 'the cause' despite their increasing awareness of its deformations in the Soviet Union and elsewhere.

HIST2491
Text Workshop A
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: EURO2201

A close analysis of short key texts in modern European history and culture, designed to develop students' close reading skills and to introduce them to important social, philosophical and theoretical questions through first hand encounters with the texts themselves.

HIST2510
The United States and Changing Global Orders
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GLST2103, SPAN2431

Examines the role of the USA in the world in the context of the history of changing global orders. Drawing on diplomatic history, international history, international relations, international political economy, and social and cultural history, the main themes include: westward expansion, 'Manifest Destiny', theories of imperialism, US-Soviet rivalry, and debates about globalisation and the character and future of the contemporary global order centred on the USA.

HIST2511
The United States and Conflict in the Middle East
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

Explores shifting American interests and policies in the Middle East - conceived as a broad and diverse region from Algeria to Afghanistan - from the early republic's conflict with 'Barbary' states to the clash with 'Rogue' states after 9/11. The emphasis is on the post-World War II era and major crises such as, among many others, the Arab-Israeli conflict.

HIST2662
Rome: From Kingdom to Republic
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

Traces the rise of Rome from a small, unimportant city-state to the largest power in the Mediterranean world. Explores the political, social, and cultural development of Roman civilisation from the eighth century to the end of the Middle Republican period of 133 BCE. Examines how Rome as a state and as a people dealt with both internal conflict and external adversities. Asks how Rome overcame many of these problems and yet its pluralistic system of governance and of social organisation eventually started to fracture.

HIST2665
Early Greece: Bronze Age to Archaic Greece
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

Explores the origins of Greek civilisation. Begins with a survey of the earliest eras before examining the island and mainland civilisations of the Aegean Bronze Age, the Greek 'Dark Age' following their collapse, and the 'Greek Renaissance' of the Archaic Era. Themes may include: historiography and archaeology; the political evolution of Greek states; trade, colonisation, and intercultural relationships; Panhellenism and the evolution of Greek identity; the evolution of social structures (such as the practice of slavery, the status of women, the composition and role of the aristocracy); culture, art, philosophy and the uniqueness of the 'Greek experiment'.

HIST2666
The Expansion of Greece: Classical to Roman Greece
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

Examines the dynamic, diverse, and troubled society of Classical Greece's polis civilisation, the failure of the polis and the rise of the kingdom of Macedon. Studies Greek interaction with non-Greeks in the Hellenistic kingdoms following the aftermath of Alexander's conquests. Investigates the decline of these kingdoms, and traces how Greece became a prosperous backwater of the Roman Empire. Themes include the origins and evolution of Greek institutions, long-term changes in economic and social structures, and Greek interaction with the outside world.

HIST2751
Nightlife and the Metropolis: Moulin Rouge to Rave
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

Traces the unfolding of a global culture of nightlife in the twentieth century, thus providing a window into modern urban cultural history. Examines how nightlife spaces created new forms of sociability, fashionability, sexuality, and identity for modern urbanites. Other influences on the growth and spread of nightlife include imperialism, colonialism, and war; advances in media technologies such as radio, film, television, and recording; and the role of criminal organisations and narcotics in building modern nightlife industries. Emphasises East Asian cities such as Tokyo and Shanghai.

HIST2752
Religion in World History
School of History
UOC6 HPW3
Prerequisite: 36 units of credit

Uses pilgrimage and travel as a device to examine the role of religion in world history, focusing on the politicized nature of religions, the role of religion in people's lives, and recent manifestations of religious experience. Topics include: Jerusalem; medieval and modern Marian devotion (the Coogee Madonna); Haj; the adoption of pilgrimage as resistance against colonial or totalizing regimes in India and Tibet; religion as protest (Malcolm X); New Religious Movements; 'civic religion' (travel to Ground Zero), pilgrimage to Gallipoli; travel to places associated with iconic people (Diana, Elvis); backpacking and New Age travel and virtual pilgrimage.

HIST2760
A History of Sexualities
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: WOMS2003

Begins with Classical Greece and establishes some important themes concerning gender, sex and culture which will be traced through the intervention of colonisation, Christianity, and the development of social sciences from the 18th century; traces the relationship between sexuality and socio-political control in the 19th and 20th centuries; investigates the shaping of sexualities through art, literature, cinema and media as well as pornography; and looks beyond the infamy of Lesbos, Mary Magdalen, the Marquis de Sade, Oscar Wilde, Margaret Mead, and Monica Lewinsky, amongst others, to uncover a rich history of the west.

HIST3101
Understanding Nazi Germany: Origins, Structures, Explanations
School of History
UOC6 HPW3
Prerequisite: 36 units of credit and 12 units of credit at the HIST2000 level; Excluded: HIST2422, EURO2331

Explores debates over the origins and role of Nazi Germany. Issues will include its roots in German history; the driving force of the regime; Hitler's role and Nazi Germany's war aims. Sixty years after its defeat in World War II, Nazi Germany continues to fascinate and to leave questions hotly debated by historians. Discusses whether the Nazis were modernisers or backward-looking romantics, and why there was so little opposition. Considers Nazi Germany's war aims and if the Holocaust was the inevitable outcome of Nazi ideology or a bureaucratic response to impending defeat. These issues will be explored in lectures and student-led seminar discussions of primary and secondary texts.

HIST3102
Premodern Japan: Status, Sex and Power
School of History
UOC6 HPW3
Prerequisite: 12 units of credit at the HIST2000 level; Excluded: HIST2076

A thematic treatment of Japanese history from ancient state formation to the Meiji Restoration of 1868, this course covers a variety of cultural and political topics. Features a particular emphasis upon cultural heterogeneity differences and tensions between the different status groups: aristocrats, samurai, clerics, peasants, merchants - and also upon gender constructs and sexuality/s. Students are encouraged to reflect upon issues of historiography such as: the pitfalls of linear narrative histories; how the Japanese past has been constructed by scholars and to what ends; and the extent to which interpretations of the past are the products of our present.

HIST3103
Urban Legends: The History of Sydney
School of History
UOC6 HPW3
Prerequisite: 36 units of credit and 12 units of credit at the HIST2000 level; Excluded: HIST2100, AUST2022, AUST3103

Explores Sydney's dramatic transformation from a tiny preindustrial penal settlement to a sprawling city of over four million people by examining the interplay of natural, cultural and spatial histories in the broader context of urban history and historiography. Themes include Sydney's environmental, Aboriginal, immigrant and gendered histories, 'slums' and suburbs, communities and sub-cultures, heritage and modernity, sex and food, the creation and impact of urban images.

Note: Includes excursions to key historic Sydney areas.

HIST3106
Environmental History
School of History
UOC6 HPW3
Prerequisite: 12 units of credit at the HIST2000 level; Excluded: HIST2039

A global perspective on our modern environmental condition and its development, primarily in Europe, the US and Australia, since pre-industrial times. Topics include: human impacts and natural changes in climate, the forests and the oceans; changing concepts of the natural world; economics and environmental damage; the impact of population growth and the industrial revolution; imperialism and its ecological effects on indigenous peoples; modern conservation and environmental movements.

HIST3108
The Mediterranean in History: From Odysseus to Club Med
School of History
UOC6 HPW3
Prerequisite: 12 units of credit at the HIST2000 level

Navigates the Mediterranean world from the time of Homer through to the advent of package tours, and examines whether there is such a thing as Mediterranean history. Topics include: The Odyssey, Greeks and Phoenicians, Roman cults, saint worship, the Jewish diaspora, and the broad impact of Venice, the Crusades, Islam and the Corsairs. Pays particular attention to the modern period, with special reference to multi-ethnic port cities (eg. Salonica, Alexandria and Haifa), banditry, rural poverty and revolt, Mediterranean fascism, popular religion and mass tourism.

HIST3109
Barbarians, Peasants & Vampires: Eastern Europe in History & Imagination
School of History
UOC6 HPW3
Prerequisite: 12 units of credit at the HIST2000 level; Excluded: EURO3001

Examines imaginative representations of East European peoples through history, drawing on evidence from visual images, travel writing, and chronicles. Clarifies the connections between history, mythology, demonisation and romanticism in West European depictions of 'the East', and Eastern self-representation.

HIST3111
The Ages of Homer
School of History
UOC6 HPW3
Prerequisite: 12 units of credit at the HIST2000 level

Explores the societies reflected in the Homeric poems, drawing upon documentary and material evidence from the Late Bronze Age to the early Archaic Period. In addition to the history and archaeology of Greece and Anatolia from ca. 1300-700 BC, topics include the collapse of complex civilisations in the Late Bronze Age Mediterranean and the onset of a 'dark age', the nature of oral tradition, the historicity of political, social, and cultural arrangements described in the poem, the emergence of state-level societies, colonisation, and long-distance trade in the Aegean, and the origins of Panhellenism.

HIST3900
Historiography of Southeast Asia
School of History
UOC6 HPW3
Prerequisite: 12 units of credit at the HIST2000 level at credit level or better; Excluded: HIST3008

Gives students practice in the discipline of history. Students will: conduct literature searches, comparing use of reference guides and computer searches; write review articles of scholarly literature on a prescribed topic; study the art of the book review; analyse general histories to establish changes in topic, focus, perspective; and review fiction as a source for historians. Students should gain an understanding of the production of knowledge and practice writing and oral communication. No prior knowledge of Southeast Asia necessary.

HIST3902
Australian History and its Constructions
School of History
UOC6 HPW3
Prerequisite: 12 units of credit at the HIST2000 level at credit level or better

Deals with various questions, themes and debates which have shaped current perceptions of the past and the evolution of historical literature in the Australian national context. Special attention is paid to the problems of attempting history in a national perspective and representative examples of colonial, as well as early and more recent Australian historiography. Also deals with individualism and the recent new historiography including feminist perspectives and the globalisation of ideas and topics which include the role of libraries and similar institutions and the Internet, film and memory, postmodernism and the killing of history.

HIST3904
Going Public: Public History and the Historian
School of History
UOC6 HPW3
Prerequisite: 12 units of credit at the HIST2000 level at credit level or better

Public history - the practice of history outside academia - is a conduit between academic history and the wider community. Explores the many ways public history is understood, practised and applied and its dynamic (often subversive) potential to question standard historical narratives. Offers practical information on working as a historian and gives students experience in primary research and writing for diverse audiences. Topics include: heritage and environmental campaigns, conservation and redevelopment projects, museums, and popular history.

HIST3905
Evidence and Interpretation: Controversies in European History
School of History
UOC6 HPW3
Prerequisite: 12 units of credit at the HIST2000 level at credit level or better

From the famous controversy between E H Carr and Geoffrey Elton, sparked by Carr's 'What is History?' half a century ago, to the more recent 'postmodernism' debate, historians have been sharply divided over such key issues in historiography as the relative importance of empirical evidence, theories, moral values, and narrative subjectivity. Explores these issues through both the major writings of the key protagonists in these debates, and case studies of three of the most celebrated 'wars of interpretation' in European history: the English Civil War, the French Revolution, and the rise of Nazism in Germany.

HIST3907
Clio's Craft: Writing Feminist Histories
School of History
UOC6 HPW3
Prerequisite: 12 units of credit at the HIST2000 level at credit level or better

Examines the theory and practice of feminist history, comprising histories of women, gender and sexualities. Emphasises changing approaches to feminist history inspired by different sorts of feminist theory - recently, for example, by sexual difference ('French') feminism and postcolonial feminism.

HIST3912
Researching and Writing History
School of History
UOC6 HPW3
Prerequisite: 12 units of credit at the HIST2000 level at credit level or better

A seminar and workshop series in which students are introduced to a variety of research methods, sources and styles of writing, e.g. biography, oral history, family history, use of land titles, newspapers, parliamentary papers, official and private archives. Students will receive hands-on experience in dealing with primary sources and visit major archives in Sydney and Canberra.

HIST4000
History Honours (Research) Full-Time
School of History
UOC24 HPW5
Prerequisite: 54 units of credit in HIST at 70% including 6 units of credit from HIST39** Pre Honours courses and permission of Head of School

Honours (Research) students are required to prepare a thesis of between 15,000 - 20,000 words which must be submitted by a date specified by the School and to complete two fourth year seminar courses. At least one of these must be taken in the first session of enrolment. For details consult the School.

HIST4050
History Honours (Research) Part-Time
School of History
UOC12 HPW3
Prerequisite: 54 units of credit in HIST at 70% including 6 units of credit from HIST39** Pre Honours courses and permission of Head of School

Honours (Research) students are required to prepare a thesis of between 15,000 - 20,000 words which must be submitted by a date specified by the School and to complete two fourth year seminar courses. For details consult the School.

HIST4500
Combined History Honours (Research) Full-Time
School of History
UOC12 HPW2

Prerequisite: 48 units of credit in HIST at 70% including 6 units of credit from HIST39** Pre Honours courses and permission of Head of School

This program is undertaken in two schools, eg History and Politics and International Relations, History and German Studies. Students are required to complete a research and seminar program acceptable to both schools.

HIST4550
Combined History Honours (Research) Part-Time
School of History
UOC6 HPW2
Prerequisite: 48 units of credit in HIST at 70% including 6 units of credit from HIST39** Pre Honours courses and permission of Head of School

This program is undertaken in two schools, eg History and Politics and International Relations, History and German Studies. Students are required to complete a research and seminar program acceptable to both schools.

HPSC1100
Cosmos and Culture
School of History and Philosophy of Science
UOC6 HPW3
Excluded: HPST1107, HPST1109

Examines the history and philosophy of science (including medicine) from antiquity to the twentieth century. Places special emphasis on contextual factors (social, political and cultural) and the role of technologies in the development of science. Topics include: Greek and Hellenistic natural philosophy; science in Late Antiquity; Medieval science; the Copernican Revolution; mechanical philosophy; the telescope and microscope; Newtonianism and the Enlightenment; natural history; Romanticism and the Counter-Enlightenment; the Darwinian Revolution; laboratory medicine; chemistry and industrial research; the twentieth-century physics revolutions and their impact on philosophy of science; the atomic bomb and Big Science.

HPSC1200
Science Good, Bad and Bogus
School of History and Philosophy of Science
UOC6 HPW3
Excluded: HPST1003, HPST1108

What is science? What are its distinctive characteristics as a form of inquiry? Why are astrology, 'creationism' or parapsychology widely considered to be pseudosciences? A critical consideration of such inquiries raises central questions concerning the nature of science, involving issues such as the nature of observation and evidence, theories and laws, explanation and prediction, etc. Issues to be considered include the 'Galileo Affair', 'science vs. religion' and relativism. These are placed in an historical context from the Ancient Greeks to twentieth-century philosophers. Also considered are the nature of scientific revolutions and 'postmodern' approaches to science.

HPSC1400
Science, Technology, Society and Environment
School of History and Philosophy of Science
UOC6 HPW3
Excluded: SCTS1001, SCTS1106, SCOM1011

Examines the relations of science and technology with societies in the modern world. The status and authority of science. Can science tell us what we ought to do? Critiques of science. Is technology applied science? What is the relation between technology and social change? The political uses of expertise. Experts and the rest of us. Issues of participation. These topics will be explored theoretically and by reference to case studies including: modern genetics and its use in agriculture and medicine; information technology, computers and cyberspace; energy technologies, nuclear and solar; technologies of everyday life.

HPSC1500
Understanding Environmental Controversy
School of History and Philosophy of Science
UOC6 HPW3
Excluded: SCTS1002, SCTS1107

Examines the nature of global and local environmental problems with particular emphasis on understanding controversies about environmental risk. Patterns of population and consumption, production and waste; what constitutes an environmental problem?; risk and risk perception; environmentalism; the uses of knowledge, science and environmental controversy; international attacks on global problems; stakeholders and stances; environmental problems in your backyard; local and global action. In the last seven weeks students will participate in group projects examining particular environmental risk controversies.

HPSC2150
Darwin & the Order of Nature
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HPST2107

Examines ideas about the natural order (that is, about the ecology and classification of living things), from the 18th century to the present era, in cultural and political context. Retraces the West's quest for an explanation of living creation in terms of life forces and their interaction with a changing Earth, a quest which ultimately arrived at Darwin's theory of evolution. Also examines the major historical developments that set the stage for these scientific developments in an age of dramatic political and economic revolution, and at the ongoing impacts of the Darwinian world-view.

HPSC2200
Philosophy of Science
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HPST2011, HPST2116

An examination of central issues in the philosophy of science. Introduces students to the nature and scope of the discipline, and through the examination of central issues prepares students to undertake work not only on the issues examined, but also across the discipline more broadly. Issues include: scientific method; inductivism and deductivism; scientific progress; explanation; causality; confirmation and evidence; values; scientific realism.

HPSC2300
Sociology of Science and Technology: How Science Works
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SCTS2002, SCTS2107

Examines contrasting accounts of how science works as a system of knowledge production, as a social system, and as a basis for manipulating the world through technology. Is science insulated from social and technological processes or integrated with them? Approaches include: Mertonian normative sociology; sociology of scientific knowledge; Latourian actor-network theory; symbolic interactionism and pragmatist sociology of science. Provides understanding of: the objectivity of scientific knowledge; the relationship between science and technology; the role of science in handling environmental problems; the communication of scientific knowledge to wider business, governmental and community constituencies and their understanding of it.

HPSC2500
Environment, Technology and Politics
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SCTS2118

Provides historical, social and political background for understanding the 'social crisis of the environment' - often blamed on the technological systems of 'Western Industrialised Society'. Also examines alternative visions such as 'Deep Ecology', 'Ecofeminism', and 'Ecological Democracy'. Key developments of thought and action in Western society are related to present day environmental politics. Topics include: pre-industrial developments in Europe; the ideas of the Enlightenment; changing images of nature; ecological impacts of industrialisation; globalisation; and public participation. Examples are drawn from the politics of energy systems, the relationship between agriculture and civilisation, and the politics of waste.

HPSC2550
Sustainable Development, Globalisation and the Third World
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: COMD2050, INST2401, SCTS3106

This course is about sustainable development along with the technological and social changes that are involved in achieving it, both at a national

and global level. It is divided into three parts: (1) the historical causes of the present global environmental and economic crisis; (2) possible solutions to problems of food production, environmental degradation, industrialisation, energy use, and population growth; (3) ideas for a New World Economic Order and the economic and technological changes required to bridge the ever increasing gap between rich and poor nations.

HPSC2600
Galileo, Science and Religion
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HPST2139

Examines Galileo's scientific discoveries and his defence of Copernicanism against Aristotle and the Church. Also examines "the greatest scandal in Christendom" - the trial and condemnation of Galileo by the Catholic Church in 1633. Issues raised include the perennial conflict between science and religion as well as central issues in the history and philosophy of science. Students will view Jupiter's moons and the phases of Venus, first seen by Galileo, and they will participate in a "re-trial" of Galileo re-enacting the Roman Inquisition hearing.

HPSC2610
Computers, Brains and Minds
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GENS5525, HPST2004

Introduction to contemporary discussions of the mind, thought, intelligence and consciousness. Focuses on the issues which arise in connection with the so-called 'cognitive sciences' - the disciplines which include such fields as neuro-science, psychology, linguistics, the philosophy of mind, and 'artificial intelligence'. Can computers think? Is the brain a machine?

HPSC2630
God, Life, the Universe and Everything: Science and Meaning
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HPST2126

'Ultimate' questions about God, the meaning of life and the point of it all, have traditionally been the business of religion. Can science provide an answer to these questions, or is there always a realm of understanding which is beyond scientific knowledge? Examines philosophical issues in epistemology, metaphysics and philosophy of science. Topics include arguments for the existence of God and the underlying questions of evidence and explanation in science.

HPSC2650
Worrying Ourselves to Death? Health, Risk & Modern Medicine
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HPST2138

Statistics suggest that populations of First World countries are healthier and longer-living than at any previous time. Ironically, the perception exists that we are 'doing better but feeling worse'. How did we become the 'worried well'? Departing from traditional positivist and progressivist approaches in medical history, this course provides a framework for examining some of the practices and paradoxes of modern medicine. We ask why the forces that created modern medical 'miracles' have also created the current climate of anxiety and ambivalence. Why has the maintenance of health become a perpetual exercise in risk assessment?

HPSC2660
Cheating Death: A History of Medicine
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GENS5522, GENT0902, HPST2003, HPST2128

What was the Medieval attitude to the bubonic plague? How has the doctor/patient relationship changed through time? In what ways has society reacted to new diseases such as AIDS? The answers to these questions, and many more, will be discussed in this course, which looks at the changes in Western medical theory and practice from the earliest recorded times to the present day. No previous biological knowledge is required for this examination of issues of health and disease in their historical and social contexts.

HPSC2665
On Drugs: Pharmaceuticals, Medicine, and Culture
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit

Drugs are powerful forces of change, rapidly reshaping medical care, lifestyles and even nations. Examines the 'life cycles' of successful medicines developed in the past century, from sex hormones to amphetamines to the latest genetically engineered protein drugs. Considers how the pharmaceutical industry creates new drugs, how marketing interacts with doctor and patient behavior, and how medicine, culture and politics are affected in the process. Applies general concepts regarding the way scientific and social change are connected to help understand drugs and their impact.

HPSC2881
Cultural Heritage Management
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ATSI3003, SCTS3120

Over 40,000 years of human habitation has helped to shape Australia's environment. Examines the policies and processes of managing both Aboriginal and non-Aboriginal (historical/European) 'cultural heritage'. It will define the notion of 'cultural heritage' and examine to what extent the Australian environment may be defined as 'natural'. Identifies and examines the values attributed to cultural heritage items, sites and places by a variety of interest groups, and critically examines the legal, ethical and policy requirements which dictate management processes.

Note: Taught by Nura Gili (Indigenous Programs)

HPSC3100
Advanced History of Science
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit

Introduces students to key issues, methods and debates in the history of science by means of close examination of case studies of significant turning points in the development of Western science. Critical examination of primary sources will be stressed, along with the central historiographical debates concerning each case. Issues include: the Scientific Revolution of the 17th century; science and technology in the Enlightenment; life science and the sciences of the environment in the 19th and 20th Centuries.

HPSC3200
Topics in the Philosophy of Science
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit

Explores central issues in the philosophy of science at advanced level. Topics will be drawn from: scientific change; demarcation; rationality and objectivity; theory and observation; discovery; instrumentalism and realism; cognitive approaches to science; laws of nature; explanation, reduction and causality; underdetermination; justification and evaluation. Emphasis is placed on developing disciplinary skills required for higher level research in the field.

HPSC3300
Technology and Culture
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SCTS3900

Explores issues in the history, philosophy and sociology of technology at advanced level. Issues will be drawn from: technology and everyday life; technological determinism and change; ways of being with technology; the development of technological systems; the social construction of technology; actor-network theory; risk and trust; technology and gender; citizen participation and strategies for technological reform. Emphasis is placed on developing disciplinary skills and literacy required for higher level research in the field.

HPSC3500
Society & Environmental Process: Botany Bay
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: HPSC2500 or HPSC2550 or SCTS2118 or SCTS3106; Excluded: AUST2010, SCTS3013, SCTS3020, SCTS3126

Interprets the concept of the social construction of the environment in the specific context of Botany Bay and its region. Environmental issues are identified and examined in the light of historical, sociological, economic and political developments at the regional, national and global levels. Prospects and processes for intervention. In addition to other work, each student completes a substantial research report.

Note: In addition to the prerequisite listed, it is desirable that students have completed two other Upper Level courses listed in the Environmental Studies program.

HPSC3920
Reading Option
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: 36 units of credit

Students wishing to work in an area not covered by an existing course may apply to the School to take a reading option. Not more than one such course may be counted towards a degree. Approval of a program for a reading option will depend on its suitability, and the availability of a staff member to undertake supervision.

Note: Permission for enrolment in the reading option must be obtained from the Head of School.

HPSC4000
History and Philosophy of Science Honours (Research) Full-Time
School of History and Philosophy of Science
UOC24 HPW5
Prerequisite: 54 units of credit in HPSC at 65%

Candidates are required to present a thesis and complete coursework as approved by the Head of School.

Note: With the approval of the Head of School, courses outside the School carrying up to 12 units of credit may be substituted.

HPSC4050
History and Philosophy of Science Honours (Research) Part-Time
School of History and Philosophy of Science
UOC12 HPW3
Prerequisite: 54 units of credit in HPSC at 65%

Candidates are required to present a thesis and complete coursework as approved by the Head of School.

Note: With the approval of the Head of School, courses outside the School carrying up to 12 units of credit may be substituted.

HPSC4200
History and Philosophy of Science Combined Honours (Research) Full-Time
School of History and Philosophy of Science
UOC12 HPW2
Prerequisite: 48 units of credit in HPSC at 65%

For Combined Honours, candidates are required to present a thesis and complete coursework as approved by the Heads of the two participating Schools.

Note: With the approval of the Head of School, courses outside the School carrying up to 12 units of credit may be substituted.

HPSC4250
History and Philosophy of Science Combined Honours (Research) Part-Time
School of History and Philosophy of Science
UOC6 HPW2
Prerequisite: 48 units of credit in HPSC at 65%

For Combined Honours, candidates are required to present a thesis and complete coursework as approved by the Heads of the two participating Schools.

Note: With the approval of the Head of School, courses outside the School carrying up to 12 units of credit may be substituted.

HPSC4500
Combined Honours (Research) in Environmental Studies Full-Time
School of History and Philosophy of Science
UOC12 HPW2

The course has three components: thesis (50%); seminar (25%); and either a second seminar, an internship or a project (25%). The project is intended to provide the opportunity for learning experience based on field research involving industry, government, or community activity, in a topic area different from that of the thesis. It could take the form of a radio program, a short film, an environmental action plan or design, a community event, a developed policy proposal, a detailed funding program etc., or elements of several of the foregoing.

Note: Students must meet the following requirements: 1. Combined honours prerequisites in a discipline. 2. At least 48 units of credit from the interdisciplinary major in Environmental Studies, including HPSC2500/SCTS2118 and HPSC3500/SCTS3126, with an average of Credit or better. 3. Permission of the Honours Committee of the Environmental Studies Committee.

HPSC4510
Environmental Studies Honours (Research) Full-Time
School of History and Philosophy of Science
UOC24 HPW5

Normal requirements are a thesis (50%), seminar (25%) and an additional component (25%) which could be a second seminar, an internship or a project.

Note: Students must meet the following requirements: At least 54 units of credit from the interdisciplinary major in Environmental Studies, with an average of Credit or better. This must include the core course HPSC3500, at least one other '3000' course, and at least one Fundamental Knowledge course, and may include only two of the Level 1 courses recommended above.

HPSC4520
Environmental Studies Honours (Research) Part-Time
School of History and Philosophy of Science
UOC12 HPW3

Normal requirements are a thesis (50%), seminar (25%) and an additional component (25%) which could be a second seminar, an internship or a project.

Note: Students must meet the following requirements: At least 54 units of credit from the interdisciplinary major in Environmental Studies, with an average of Credit or better. This must include the core course HPSC3500, at least one other '3000' course, and at least one Fundamental Knowledge course, and may include only two of the Level 1 courses recommended above.

HPSC4550
Combined Honours (Research) in Environmental Studies Part-Time
School of History and Philosophy of Science
UOC6 HPW2

The course has three components: thesis (50%); seminar (25%); and either a second seminar, an internship or a project (25%). The project is intended to provide the opportunity for learning experience based on field research involving industry, government, or community activity, in a topic area different from that of the thesis. It could take the form of a radio program, a short film, an environmental action plan or design, a community event, a developed policy proposal, a detailed funding program etc., or elements of several of the foregoing.

Note: Students must meet the following requirements: 1. Combined honours prerequisites in a discipline. 2. At least 48 units of credit from the interdisciplinary major in Environmental Studies, including HPSC2500/SCTS2118 and HPSC3500/SCTS3126, with an average of Credit or better. 3. Permission of the Honours Committee of the Environmental Studies Committee.

IDES1012
Safe Workshop Practices
Industrial Design Program
UOC3 HPW2

This is a laboratory course for inducting students into the safe operation of hand tools, power tools, stationary machinery, and other equipment for the fabrication and finishing of industrial design models and prototypes. Instructional demonstrations of workshop techniques are followed by "hands- on" student exercises, using a wide variety of modelling materials, including timber, plastics, and metals. Successful completion of this course is required before students will be allowed to use the Industrial Design Laboratory for their design studio projects.

IDES1031
Industrial Design Studio 1
Industrial Design Program
UOC6 HPW4
Prerequisite: IDES1101

This course aims to introduce students to the basic aspects of Industrial Design in order to develop an ability to solve problems of very low complexity, involving theoretical and project work to introduce design methodologies and their application to three dimensional design problems. At the same time, the course assists in the final decision at the end of year 1 that industrial design is the appropriate professional career choice for each individual student.

IDES1071
Materials and Technology Workshop A
Industrial Design Program
UOC6 HPW4

This course is designed to provide a platform of understanding of physics, mechanics and materials. Basic concepts of Energy transfer, Electrostatics and electromagnetism, Sound, Mechanics and Materials will be considered in the context of their applications to Industrial Design activity using a project-based approach.

IDES1101
Industrial Design Fundamentals
Industrial Design Program
UOC6 HPW4

This is a studio-based course that provides an introduction to design as fundamental to coherent thought and action in the industrial design discipline. Studies include: Basic elements of two and three-dimensional design, and the development of the analytical and communication skills necessary for their understanding. Development of the creative processes concerned with the exploration and manipulation of the elements of design. The course also takes account of exploration of the influences on design thinking and practice, including the philosophical, historical, social and environmental issues. Studio projects and assignments provide an introduction to a range of representation techniques used by designers to develop and communicate design ideas comprising: colour, freehand drawing, sketching, painting, mixed media and 3D model making.

IDES1121
History of Industrial Design
Industrial Design Program
UOC3 HPW2

This course is a chronological and focused study of the emergence and development of industrial design from 1800 to the present day. It includes products as an aspect of our culture/society/commerce/industry from 1750 to the present day and examines consumer products within the context of the changes taking place in industry and society.

IDES1161
Industrial Design Communication A
Industrial Design Program
UOC6 HPW4

This is a studio-based course providing an introduction to a range of methods used to accurately communicate 3-dimensional design ideas. Studies will focus on orthographic drawing with particular reference to the Australian Engineering Drawing Standard. This course includes practical assignment work using a range geometrical and mechanical drawing techniques. It will also include some experience in model making for industrial design

IDES1162
Industrial Design Communication B
Industrial Design Program
UOC6 HPW4
Prerequisite: IDES1161

This course enables students to develop practical skill with the representation of 3-dimensional form using a variety of techniques including free hand drawing and formal pictorial drawing and an introduction to computer-aided techniques with particular reference to industrial design practice.The course will also include some 3-Dimensional model making.

IDES2072
Materials and Technology Workshop B
Industrial Design Program
UOC6 HPW3
Prerequisite: IDES1101

This course involves the investigation of the properties of engineering materials in the context of manufacturing technology and processes. The relationship between design practice and manufacturing processes is explored with particular reference to: strength and properties of materials, basic metrology and tolerancing, forming and machining processes and joining systems. Metals and alloy materials and manufacturing processes: review of major processes, principles of process selection, design constraints and quality assurance, and advanced manufacturing technologies.

IDES2092
Industrial Design Theory and Process
Industrial Design Program
UOC6 HPW3

This course considers design thinking and clarifies the design process linking the stages with established design methodologies. In addition the nature of form is studied and reviewed against past and current theories. Included also is a consideration of the values associated with the visual language and the signals/tools that reinforce visual appreciation.

IDES2161
Industrial Design Studio 2A
Industrial Design Program
UOC6 HPW4
Prerequisite: IDES1031

This course introduces students to design problems which require the application of the design process in order to arrive at creative and feasible solutions. The course is based around design projects as well as some critical review of design literature. The projects provide experience working with a restricted range of materials and manufacturing processes in the design and development of fully resolved product proposals. Students will be required to develop a good understanding of their own use of the design process. Skill development will emphasise the area of rapid exploration and communication of design ideas using a range of media.

IDES2162
Industrial Design Studio 2B
Industrial Design Program
UOC6 HPW4
Prerequisite: IDES2161.

This course builds on the knowledge and skills introduced in Industrial Design Studio 2A in order to further students' understanding and command of the design process. The course is based around design projects as well as some critical review of design publications. Project work provides experience in investigating the requirements of particular groups of end-users and exploring the development of product form to meet these requirements. Students will develop skills in communicating highly resolved design concepts.

IDES2163
Industrial Design Communication C
Industrial Design Program
UOC6 HPW4

This is a studio-based course which reviews approaches to perspective drawing and development of rendering techniques with reference to their applications in product design. This course offers a particular focus on techniques for rapidly generating and communicating design ideas. Students will be exposed to a professional standard of design communications of this type and will work on project tasks using a range of media.

IDES2171
Computer Applications in Industrial Design
Industrial Design Program
UOC6 HPW3

This course is structured around practical computer lab classes which cover various aspects of computer modelling and documentation used in industrial design. The first phase of the course of aims to consolidate students' knowledge of 2-dimensional Computer aided drafting with reference to Engineering Drawing Standards. In the second phase students will gain experience using 3-dimensional surface modelling software to produce computer models of complex, curvilinear forms. Photo-realistic images of these forms will be generated using associated rendering/ray-tracing software. The application of these tools in the industrial design process will be considered.

IDES2201
Ergonomics
Industrial Design Program
UOC6 HPW3

This course introduces the physiological and psychological aspects of ergonomics/ human factors and their application to product use, work, environment effects and human/machine interface. The course aims to equip students to investigate human-use implications of their design activities with regard to issues such as usability, comfort, efficiency and safety. Project work and workshops will focus on human factors/ ergonomics principles and research methods and their application in Industrial Design and product development.

IDES3073
Materials and Technology Workshop C
Industrial Design Program
UOC6 HPW3
Prerequisite: IDES1071

In this course, plastic materials and manufacturing processes are discussed together with the economics of production processes, design constraints, alternate design and manufacturing strategies and material properties and test procedures.

IDES3221
Industrial Design Studio 3A
UOC6 HPW4
Prerequisite: IDES2162, IDES2163

Learning activities build up on work carried out in previous stages of the Industrial Design program, and are intended to increase students-understanding of the complexities of design practice. Projects allow students to gain further experience in applying research and design methodologies to solve problems of moderate complexity. Each undertaking has a strong emphasis on innovation, technical resolution and documentation to a professional standard. A rigorous and responsible approach to product design is fostered by working on projects with "real-world" social, environmental, commercial, technological or industrial constraints.

IDES3222
Industrial Design Studio 3B
Industrial Design Program
UOC6 HPW4
Prerequisite: IDES3221

This course develops the students understanding of the design process in its application to complex product development problems. The course is based around design projects and will include the compilation, by each student, of a portfolio of design work completed in the Bachelor of Industrial Design program. Project work completed for this course will include the resolution of full design detail and will successfully address manufacturing and materials performance requirements tailored to particular markets and end-user needs. Design and communication skills will be at a level that would be acceptable in professional design practice.

IDES3231
Advanced Computer Aided Product Design
Industrial Design Program
UOC6 HPW4
Prerequisite: IDES2171

This course focuses on 3-dimensional modelling applications used in Computer Aided Design and Manufacture. The course is structured around practical computer lab classes in which students gain experience using parametric 3D modelling and visualisation tools. Project work involves modelling of complex, multi-component 3D forms and production of photo-realistic visuals. 3D computer modelling issues related to Materials and Manufacturing are also considered.

IDES4291
Industrial Design Studio 4
Industrial Design Program
UOC6 HPW4
Prerequisite: IDES3222.

Studies during this unit will be directed to prepare students to work as Industrial Design professionals. Each student is encouraged to direct his/her project program towards minimising any weaknesses that are evident in his/her knowledge and skills, or covering an area of design that they may not have worked in previously. Projects may be orientated towards specific interests that each student has developed in Industrial Design. Each student will finalise their folio during the year, therefore, this requirement should be kept in mind throughout the year when selecting and undertaking projects. The folio should aim at being of professional quality and range.

IDES4301
Project Research
Industrial Design Program
UOC6 HPW4
Prerequisite: IDES2092, IDES3222, MARK1012

This course covers the research techniques applicable to products and product systems, covering problem identification, data gathering and analysis, and synthesis of information into a brief for future product design endeavours. The outcomes of IDES4301 form the basis for the IDES4351 Project in the subsequent semester. Project proposals for project research are often aligned with the research interests and activities of the program staff, which include studying the environmental, social, cultural, marketing, engineering, emotional, ergonomic and aesthetic aspects of industrial design. Surveys, focus group discussions, expert interviews, market research, and a comprehensive literature search constitute major activities in the course, with a strong emphasis on ethical research practices being fostered throughout.

IDES4311
Visual Communication Design and Corporate Identity
Industrial Design Program
UOC3 HPW3
Prerequisite: IDES1031

This course covers the major graphic production processes, and their application in graphic design, including type and typesetting systems and involving graphic design projects.

IDES4321
Exhibition Design
Industrial Design Program
UOC3 HPW2
Prerequisite: IDES2162.

This course focuses on understanding the nature of environmental space and spatial ambience, and the relationship of objects and products to the surrounding space. It involves exhibition design projects.

IDES4352
Industrial Design Project
Industrial Design Program
UOC12 HPW4
Prerequisite: IDES4291, IDES4301

This is the student's final-year project, demonstrating the student's encompassing understanding of the product development process. This major design exercise is normally an application of the research findings in IDES4301. In this course, students attempt to explore the optimum solution to problems identified in the research, using various iterative techniques for concept generation, testing and development until the design is finally resolved. Outcomes of the project are displayed in a public exhibition.

IDES4372
Industrial Design Management and Practice
Industrial Design Program
UOC6 HPW3

This course considers the problem of integrating innovative product design and development within the overall managerial, production and financial structure of industry. Australian and overseas case studies are given. Particular emphasis is placed on the development of appropriate design management structures and methods for the Australian situation that incorporates social ethics, consideration of sustainability and professional practice.

INDC2040
Physical Process Chemistry
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6
Prerequisite: CHEM1021 or CHEM1041

Definitions of Classical thermodynamics. Pressure-Volume-temperature properties of industrially important fluids. Applications of thermochemistry in industry. Conversion of heat into work. Concept of lost work. Heat engines and refrigeration cycles. General properties of solutions. Maximum conversion of reactants in batch and flow reactors. Reactor design and chemical kinetics. Reaction rates in industrial batch and flow reactors. Electrochemical principles in the context of important industrial electrochemical processes. Properties and applications of electrolytes. Industrial electrochemical processes, electrodes and cells. Surface phenomena. An integrated laboratory incorporating experiments designed to demonstrate the basic principles covered in the lecture course.

INDC3051
Process Chemistry and Operation
School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4
Prerequisite: CEIC2110, INDC2040

Chemical aspects of high temperature materials; thermodynamics and kinetics of reactions in the solid state; phase equilibria in condensed systems; gas-solid and liquid-solid reactions. Selection of materials for chemical plant. Strength and corrosion resistance of less common materials of fabrication. Chemical and electrical aspects of corrosion and their application to corrosion problems encountered in the chemical process industries. Electrochemical kinetics. Design factors for corrosion prevention. Methods of corrosion prevention.

INDC3070
Instrumentation and Process Control 1
School of Chemical Engineering and Industrial Chemistry
UOC3
Prerequisite: MATH2021, CEIC2010, CEIC2020

Analog Computation: theory and application of basic analog computing elements; magnitude and time scaling; solution of linear differential equations. Instrumentation: theory and application of transducers and transmitters for measurement of process variables. Process Dynamics: behaviour of linear, lumped parameter dynamics systems; first, second and higher order and integrating systems. Process Control closed loop, block diagrams, controllers and controller tuning.

INDC3071
Process Control
School of Chemical Engineering and Industrial Chemistry
UOC4
ENROLMENT REQUIRES SCHOOL APPROVAL

INDC3110
Industrial & Environmental Chemistry
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6
Prerequisite: CHEM2839, INDC2040

The qualitative aspects of major unit operations in the chemical process industries. Topics covered include gas absorption, liquid-liquid extraction, distillation, filtration, evaporation, centrifugation, drying and leaching operations, particle size reduction and enlargement. Students are required to attend factory inspections at local and country centres as required and to make a short oral presentation based on information gained during the factory visit.

Soil chemistry. Occupational diseases. Smogs and acid rain. Toxic elements and compounds. Toxic waste disposal. Industrial accidents. Atmospheric structure and chemistry. Greenhouse warming. The Ozone hole. Nuclear energy. Alternative energy sources. Water analysis. Air analysis. Occupational health.

INDC3120
Industrial Chemistry Practice
School of Chemical Engineering and Industrial Chemistry
UOC6 HPW6
Prerequisite: CHEM2839, INDC2040

The production of inorganic industrial chemicals from the standpoint of the application of the basic principles of inorganic and physical chemistry (acid industries, alkali industries, industrial gases electric furnace products, superphosphates, aluminum and glass); a study of some sections of the organic industrial chemical industry cellulose, industrial alcohols, formaldehyde, phenol, urea, phenolic and urea resins, acetic acid, polymers based on ethylene and acetylene, elastomers.

A small research project designed to illustrate practical applications of the principles of Industrial Chemistry. Regression analysis. Statistical design of experiments. Two level factorial designs. Screening experiments. Optimisation of process variables. Spread sheet and database utilisation. Basic programming. Industrial applications.

INDC4061
Process Design A
School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4
Prerequisite: 132 units of credit

This course will encompass the complete process design of a given (small) chemical plant. In Part A, students will be required to produce a design report which will include plant sizing, process flow sheet, equipment selection and costing.

INDC4062
Process Design B
School of Chemical Engineering and Industrial Chemistry
UOC4 HPW4
Prerequisite: 132 units of credit

In Process Design B students will be required to produce an environmental impact statement, and a financial evaluation of the whole process. The report will also discuss the relevant thermodynamic and kinetic aspects of the process.

INDC4091
Research Project Theory
School of Chemical Engineering and Industrial Chemistry
UOC12 HPW11
Prerequisite: 132 units of credit

The course requires that the student elects a topic in Industrial Chemistry, undertake a literature survey on that topic and produce a report.

INDC4092
Research Project - Practice
School of Chemical Engineering and Industrial Chemistry
UOC12
Prerequisite: INDC4091

The experimental investigation of some aspect of an elected topic area in Industrial Chemistry.

INDC4093
Small Research Project Theory
School of Chemical Engineering and Industrial Chemistry
UOC8
Prerequisite: 132 units of credit

The course requires that the student elects a topic in Industrial Chemistry, undertake a literature survey on that topic and produce a report.

INDC4094
Small Research Project Practice
School of Chemical Engineering and Industrial Chemistry
UOC8
Prerequisite: INDC4093

The course requires that the student elects a topic in Industrial Chemistry, undertake a literature survey on that topic and produce a report.

INDC4120
Chemistry of the Industrial Environment
School of Chemical Engineering and Industrial Chemistry
UOC3
Prerequisite: CHEM1011 or CHEM1031, CHEM1201 or CVEN1531

Soil chemistry. Occupational diseases. Smogs and acid rain. Toxic elements and compounds. Toxic waste disposal. Industrial accidents. Atmospheric structure and chemistry. Greenhouse warming. The Ozone hole. Nuclear energy. Alternative energy sources. Water analysis. Air analysis. Occupational health.

INDO1001
Introductory Indonesian 1
Department of Chinese & Indonesian Studies
UOC6 HPW6
Excluded: GENT0428

An integrated program for beginners, which combines listening, speaking, reading and writing. Speaking and listening skills are emphasised through communicative activities in class. Students will learn some 750 vocabulary items, and will be able to communicate in practical situations across a wide range of topics.

Note: Excluded 2 or 3 Unit HSC Indonesian or equivalent or native speakers of Indonesian and Malay.

INDO1002
Introductory Indonesian 2
Department of Chinese & Indonesian Studies
UOC6 HPW6
Prerequisite: INDO1001

Further consolidation and development of language skills acquired in INDO1001.

Note: Excluded 2 or 3 Unit HSC Indonesian or equivalent or native speakers of Indonesian or Malay.

INDO2001
Intermediate Indonesian 1
Department of Chinese & Indonesian Studies
UOC6 HPW5
Prerequisite: INDO1002

Extensive development of skills already acquired in listening, speaking, reading and writing. The course places special emphasis on communicative activities in class. Students will be expected to develop their preferred skills in areas of their own personal interest and future careers.

Note: Excluded HSC Indonesian LBS or equivalent.

INDO2002
Intermediate Indonesian 2
Department of Chinese & Indonesian Studies
UOC6 HPW5
Prerequisite: INDO2001

Further development and consolidation of communicative skills and broad knowledge of contemporary Indonesian society.

Note: Excluded HSC Indonesian LBS or equivalent.

INDO3001
Advanced Indonesian 1
Department of Chinese & Indonesian Studies
UOC6 HPW4
Prerequisite: INDO2002

Advanced learning in the Indonesian language, with special emphasis on professional communication skills, and the analytical discussion of aspects of Australian and Indonesian societies eg cultures of the main islands of the archipelago, technology, trade and Australian-Indonesian relations.

Note: Excluded HSC Indonesian LBS or equivalent.

INDO3002
Advanced Indonesian 2
Department of Chinese & Indonesian Studies
UOC6 HPW4
Prerequisite: INDO3001

Extends and consolidates advanced learning in the Indonesian language, with emphasis on professional skills and analytical discussion. High level speaking and listening skills are combined with advanced reading and writing.

Note: Excluded HSC Indonesian LBS or equivalent.

INDO3035
Indonesian Popular Culture
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: INDO1102 or INDO2002

This course builds on students' general proficiency in Indonesian language to examine various aspects of contemporary Indonesian culture. Topics include: popular drama and literature, youth culture, popular music, media, fashion, film and the impact of globalisation. Authentic Indonesian language video, audio and textual materials are used.

Note: Open to native speakers.

INDO3500
Contemporary Indonesian Society
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: INDO1102 or INDO2002

The course is taught in Indonesian, and is based on discussion of important issues in modern Indonesian society. Involves the examination of major 20th century Indonesian thinkers. Themes include: nationalism, Islam, East and West, Marxism, the role of students, women, the press.

Note: Open to native speakers.

INDO3502
Islam in Indonesia
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Investigates Islamisation in Indonesia and the role of Islam in Indonesian politics and society. Themes include Islam and art, Islam and politics, Islam and women. Students will gain a broader understanding of Islam in general, and the past and likely future of Islam in Indonesia in particular.

INDO3503
Indonesian Political Culture
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Examines the building blocks and processes of Indonesia's political culture, where geography, history, ideologies, interests, ethnic and national identities coincide and compete. Considers the role of poor peasants, labour and the military. Case studies are used for analysis.

INDO3900
Introduction to Indonesian Studies
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 36 units of credit overall, including 6 units of credit in INDO at credit level or better

Introduces a range of issues in Indonesian Studies, including insider and outsider views, shifts of emphasis in themes and explanations, linguistic issues, and major topics of history, politics, economy, regional cultures, law, literature and language. Includes critical readings of key Indonesian texts, as well as providing a broad overview of current work in the area.

INDO3901
Indonesian Studies Research Methods
Department of Chinese & Indonesian Studies
UOC6 HPW3
Prerequisite: 36 units of credit overall, including 12 units of credit in INDO at credit level or better

Critical readings of Indonesian and English texts raising key issues in analysing Indonesian society and language; questions, themes and debates which have shaped current perceptions of Indonesia; tools and methods for conducting research in Indonesian Studies.

INDO4000
Indonesian Honours Research Full-Time
Department of Chinese & Indonesian Studies
UOC24 HPW5
Prerequisite: 54 units of credit in INDO with an average of 70%

For Honours (Research) candidates are required to present a thesis of 15,000-20,000 words and complete two seminars as approved by the Head of the Department.

INDO4050
Indonesian Honours Research Part-Time
Department of Chinese & Indonesian Studies
UOC12 HPW3
Prerequisite: 54 units of credit in INDO with an average of 70%

For Honours (Research) candidates are required to present a thesis of 15,000-20,000 words and complete two seminars as approved by the Head of the Department.

INDO4500
Combined Indonesian Honours Full-Time
Department of Chinese & Indonesian Studies
UOC12 HPW2
Prerequisite: 48 units of credit in INDO with an average of 70%

Students are required to present a 15,000 - 20,000 word thesis and complete seminars as approved by the Heads of the participating Schools/Departments.

INDO4550
Combined Indonesian Honours Part-Time
Department of Chinese & Indonesian Studies
UOC6 HPW2
Prerequisite: 48 units of credit in INDO with an average of 70%

Students must present a 15,000 - 20,000 word thesis and attend seminars as approved by the Heads of both participating Schools/Departments.

INFS1602
Computer Information Systems
School of Information Systems, Technology & Management
UOC6 HPW3

This course provides students with a basic understanding of the content of information systems; the types of information systems; the current roles of information systems in organisations; and the opportunities for and limitations of information systems within organisations and society. The course also provides an overview of the tools, techniques and frameworks used to analyse information systems; the range of Information Technologies used to support information systems and to explain their use; the alternative approaches for the development and implementation of information systems; the current technologies for the development of personal information systems and for information searches from a range of sources; and the ethical responsibilities of both the Information System professional and the private user of information.

INFS1603
Business Data Management
School of Information Systems, Technology & Management
UOC6 HPW3

This course provides an introduction to the concepts, design techniques and technology for the storage and management of data. Students gain the required knowledge and practical skills to model data including the use of entity/relationship models and object models; design simple databases in an organisational environment; understand the role of data in business; and understand the quality assurance issues in collecting, storing and using data. Students acquire and exercise skills in a number of data modelling and design techniques as well as develop a simple system using Microsoft Access.

INFS1611
Requirements Engineering
School of Information Systems, Technology & Management
UOC3 HPW1.5

Currently enrolled in Program 3648 or 3651 or 3652 or 3653 or 3749; Excluded: INFS2611

This course trains students how to define system requirements using rapid prototyping techniques. Requirements elicitation, analysis and traceability methods are addressed, with emphasis on the roles of user interface design and object-oriented techniques. Students receive hands-on experience with an automated design tool.

INFS2603
Systems Analysis and Design
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite:INFS1602 or INFS1611, INFS1603

This course examines system analysis and design: requirements analysis and specification; logical and physical design of business systems. More specifically, the object-oriented (OO) methodology and structured methodology (SDLC) are covered. Hands-on experience with CASE tools used by information systems practitioners is provided (ie MetaEdit and RationalRose).

INFS2607
Business Data Networks
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite:INFS1602 or INFS1611

This course provides students with an understanding of data communication and distributed data processing in a business environment; and an understanding of the management issues associated with telecommunication systems. Main topics include data communication concepts; computer networks; reference to international standards and common industry communications software packages; local/metropolitan/wide area networks; network management; telecommunications services; and data security.

INFS2609
Software Implementation
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: INFS1602, INFS1603 or COMP1021 or COMP1721 or COMP2811

This course covers programming in the business context with a commercial object-oriented programming language; defining problems and designing structured programs to solve problems; use of data types, selection, iteration, functions, arrays and data structures in procedural programs; and the use of an interactive development environment.

INFS2611
Requirements Elicitation
School of Information Systems, Technology & Management
UOC3 HPW1.5
Prerequisite:INFS1602 Excluded:INFS1611

Students learn how to establish and verify user requirements for information systems; become familiar with the instruments for requirements definition and the criteria for requirements quality assessment; and refine analytical skills for the evaluation of customer needs.

INFS2691
Industrial Training 1
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: INFS1602, INFS1603

A practical treatment of the characteristics of commercial information systems. Topics include analysis of an existing information system; development of overview documentation of the system; evaluation of the interface design; consideration of the role of security and control mechanisms.

Note: Available only in Program 3971.

INFS2791
Industrial Training A
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: INFS1602, INFS1603

Students consider the practical treatment of commercial information systems in business. The topics include: analysis of an existing system in its organisational setting; evaluation of the interface design; consideration of organisational impact of the information system.

Note: Available only to BCom ISM Co-op students.

INFS3603
Business Intelligence Systems
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: INFS1602 or INFS1611, INFS1603

This course examines the process of decision making and work group activity by professional and managerial people; the tools and techniques available in information technology to support these processes and when they can be advantageously used; some of the reasons why so many executive support systems do not achieve their intended objectives; and the cultural and organisational issues involved in the use of Information Technology tools and techniques.

INFS3604
Information Technology Management
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: INFS2603

This course introduces the strategic and operational management issues involving information systems and software. Consideration is given to both quantitative and qualitative management techniques, including the practical application of tools and concepts for software project management, as well as material on software metrics and software quality. In addition, techniques are covered for strategic planning of information systems and ensuring business contribution.

INFS3605
Implementation Workshop
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: INFS2603, INFS2609

Students implement an information systems project using a commercial object-oriented programming language in a workshop environment. Topics include advanced program design; computer aided software engineering techniques; a comparison of a range of programming languages; test data specification; implementation procedures; interfacing an application with a commercial database such as Oracle; the production of system documentation; and the production of quality software.

INFS3608
Advanced Database Systems
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: INFS1602, INFS1603

This course provides students with an in-depth understanding of database application design and database management for large and small businesses; practical experience using formal database design methodologies in systems development; and an understanding of the technological issues of database systems in a modern IT infrastructure. The main topics include advanced modelling of business applications, database logical design, normalisation through decomposition and synthesis, physical design, concurrency, security, and transaction management issues, contemporary issues of object-oriented databases, advanced database applications, multimedia databases, data warehousing, data mining, OLAP, and client/server design on the Internet.

INFS3611
Design Workshop
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: INFS2603 and 96 units of credit

This course consists of a real-life systems development project, conducted in a workshop environment. It provides practical experience in the specification and design of commercial business systems. Requirements definitions, system specifications and logical designs are developed to a professional standard.

INFS3685
Electronic Commerce Management
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: INFS1602

This course has been designed to help students develop specific skills relating to the management and application of electronic commerce as well as an understanding of essential concepts and technologies. Topics include: types of electronic commerce; Internet and World Wide Web applications; security; payment systems; applications in the banking, retail and manufacturing industries; problems relating to implementations of electronic commerce; and essential concepts/technologies supporting electronic commerce.

INFS3692
Industrial Training 2
School of Information Systems, Technology & Management
UOC12 HPW6
Prerequisite: INFS3605

An in-depth practical exposure to information systems development. Topics include the structure and management of the implementation teams; the roles of users and information staff in implementation; scheduling and control during implementation.

Note: Available only in Program 3971.

INFS3774
Information Systems Security
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: INFS2603.

Information Systems Security is a rapidly evolving field with new technologies, models, methods and paradigms, emerging each year. Recent world events have also heightened public awareness of security issues. This means that people involved in information systems security are required to continually update their knowledge and awareness of developments.

This course aims to review concepts, theory, methodologies and techniques discussed in the IS security literature and current practice. You will undertake case study exercises using the University's computing facilities and laboratories to provide you with a better understanding of computerised security techniques used in practice.

A particular emphasis of this course is the development of your critical thinking/awareness skills in order to ensure they are able to contribute, in an informed and flexible way, to discussions during the course and later in your employment. You are encouraged to relate theory to practice, with particular emphasis on reflections on your own experiences.

INFS3792
Industrial Training B
School of Information Systems, Technology & Management
UOC12 HPW6
Prerequisite: INFS2603

Students are provided with in-depth practical work in information systems analysis and design. Topics include: the management of requirements analysis and design activities; the roles of information system clients; managing the software process; managing and using technology.

Note: Available only to BCom ISM Co-op Students.

INFS4693
Industrial Training 3
School of Information Systems, Technology & Management
UOC12 HPW6

In depth practical work in information systems analysis and design. Topics include the structure and management of analysis and design teams; the roles of users and Information Systems staff in analysis and design; scheduling and control during analysis and design.

Note: Available only in Program 3971.

INFS4793
Industrial Training C
School of Information Systems, Technology & Management
UOC12 HPW6
Prerequisite: INFS3604

Students study, in-depth, the business process and its relationship with information systems. Consideration is given to the impact of the system on the organisation and the suitability of the system to the organisation's needs; planning and re-engineering the business; and writing a business project.

Note: Available only to BCom ISM Co-op Students.

INFS4795
Thesis Part A
School of Information Systems, Technology & Management
UOC6
Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

Thesis A is undertaken in the lfirst session of the Honours year. Students undertake directed research work in an approved area under the guidance of a member of the lecturing staff. This course represents the research literature section of the thesis.

Note: Available only to Year 4 Honours students.

INFS4796
Thesis Part B
School of Information Systems, Technology & Management
UOC18
Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

Thesis B is undertaken in the lsecond session of the Honours year. Students undertake directed research work in an approved area under the guidance of a member of the lecturing staff. This course represents the research literature section of the thesis.

Note: Available only to Year 4 Honours students.

INFS4805
Information Systems Auditing
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

Management of information systems audit and the evaluation of IT management. Analysis and review of internal controls in contemporary computer installations and applications. Use of basic and advanced information systems audit techniques and methodologies, including audit software, integrated test facility, and concurrent auditing techniques. Technology audit reviews of the audit requirements for such technologies as LANs, EDI, and expert systems. Legal and professional requirements and computer abuse/fraud auditing. Review of future IS audit techniques, methodologies, research and social implications.

INFS4810
Advanced Data Management
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

The principle and practice of data administration in a large organisation. Design, redesign and tuning of database. Distributed databases and database management systems, including reliability, security and integrity of the database.

INFS4811
Knowledge Management Systems and Technology
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

The objective of this course is to provide the student with an understanding of the business of managing the generation, formulation, dissemination, retention, storage, measurement, application, distribution, archival and disposal of corporate knowledge. It considers various systems and technology supporting knowledge management. It also addresses knowledge discovery in databases and corporate data warehouses, by identifying understandable patterns in data.

INFS4848
Information Systems Project Management
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

An introduction to the central concepts and issues of project management and the practical benefits of project planning and management together with resource management. Practical sessions in project planning and the use of a computer based management tool. Additional topics include customer focus, lifecycle customisation, work packages, progress monitoring, risk evaluation, quality management, people skills, and negotiation skills. Case studies of and examples from software development projects will be used as illustrations.

INFS4853
Information Systems Management
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

This course aims to assist students to develop their knowledge and understanding of important issues involved in the management of information systems in organisations and their ability to critically analyse these issues. Management of information systems will be considered at strategic, tactical and operational levels. Particular emphasis will be given to the management of enterprise-wide and inter-organisational systems and planning for their strategic use. Students without knowledge of and experience in management or the use of IS in organisations, may wish to undertake Information Systems Project Management INFS4848/INFS5848 before enrolling in this course.

INFS4886
Research Topics in Information Systems 1
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

The development of science. Alternative social science research methodologies - case study, normative, laboratory, field studies and field tests. The research process. Judgement in research. Statistical analysis of research data and interpretation of results. Writing the research report.

INFS4887
Research Topics in Information Systems 2
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

The objective of this course is to enable the students of information systems research to carry out data analysis using statistical tools for empirical research. It examines both the theoretical aspects of scientific data and statistical analysis and introduces the student to a statistical data analysis package.

INFS4891
Decision Support Systems
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

This course covers issues in the design, development and implementation of systems designed to support decision-making tasks in organisations. The course reviews models of individual and organisational decision-making and provides an overview of a number of exisiting and emerging techniques that support decision-making, such as, management science, statistics, expert systems, artificial intelligence, group decision-support systems, data warehousing and data mining. Methodologies for the development and implementation of DSS applications are discussed. Case studies describing organisational experiences with DSS applications will be discussed.

INFS4893
Special Topic in Information Systems
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

A specially assigned project, program or set of readings relating to information systems research.

INFS4898
Project Seminar
School of Information Systems, Technology & Management
UOC6 HPW3
Prerequisite: Entry to Honours plan majoring in Information Systems in Commerce or Science programs 3971 and 3979.

INOV2100
The Innovation Process
Faculty of Science
UOC3
Currently enrolled in program 3451 Innovation Management

The course gives students a fundamental and practical introduction to the innovation and commercialisation processes of high technology industries.

Lecture material includes the psychology and strategies for creativity and idea generation, action, strategic and business planning, technical evaluations, benchmarking, market research, intellectual property, and R&D and business funding.

Workshops explore the innovation process in terms of the identification and evaluation of commercial opportunities. Case studies examine examples of successful and unsuccessful scientific innovation.

The course material is delivered by a team of university academics and expert industry professionals.

Note: This course is only available to students enrolled in the Diploma in Innovation Management program. Coursework comprises 35 hours during Winter Session.

INOV2110
Business Start Up Skills
Faculty of Science
UOC3 HPW2
Currently enrolled in program 3451 Innovation Management

The course enables students to acquire the knowledge, skills and attitudes required to organise and operate a business.

Student companies are guided through all the stages of a concentrated business cycle, including: establishing the company organisational structure, electing an executive management team, researching, designing and producing goods or services to fill a profitable market niche in the community. The companies plan, develop and implement quality systems in the key management areas of finance, manufacturing, human resources and marketing. Each company is required to prepare a business plan and an annual report.

Throughout the course, students tackle typical issues and challenges which confront commercial operations and develop skills for decision making, negotiation, creativity, communication, teamwork and networking, leadership, responsibility and accountability, and financial management and planning.

Note: This course is only available to students enrolled in the Diploma in Innovation Management program.

INOV3100
Strategic Communication
Faculty of Science
UOC3

The course material provides a theoretical and practical instruction in evaluating, communicating and marketing technical information, ideas and opportunities to a variety of audiences. Workshops focus on the development of the student's interpersonal skills including oral presentations, persuasion, negotiation, networking, business ethics and leadership. Other areas covered include analysis of personality and audience types, risk perception, locus of control, negotiation of expert status, effective listening, enquiry and feedback strategies, and meeting facilitation.

Note: This course is available to students either enrolled in the Diploma in Innovation Management program or having school approval. Coursework comprises 35 hours in a one-week block towards the end of Summer session.

INOV3110
Technical Publications
Faculty of Science
UOC3 HPW2
Prerequisite: INOV2100 or INOV2101

Student teams work with academic mentors to prepare a scientific or technical report suitable for publication. Academic mentors provide data from their research findings, which have been previously documented in the form of research reports, patents and student theses.

Students are allocated projects based on their nominated preferences for potential papers offered from a range of bioscience disciplines. The academic mentor clearly defines the background and scope of the work to be written up and supplies all the relevant raw data and reports. The student drafts the entire content of the paper including the Abstract, Introduction, Materials and Methods, Results, Discussion and Conclusions, Bibliography and associated Tables and Figures.

Each student receives instruction and constructive criticism throughout the project from their academic mentor. At the end of the assignment, the student will be expected to be completely familiar with the scientific foundation and objectives of the work covered in the paper. Students gain experience in the complete publication process from initial identification of target journals through to the preparation and submission of the final draft report.

Note: The course is only available to students enrolled in the Diploma in Innovation Management program.

INOV4001
The Bioentrepreneurial Process
Faculty of Science
UOC6

The course covers an introduction to accounting, economic and business principles with a focus on the special considerations and parameters particular to the entrepreneurial process involved in the establishment of science based businesses. Tutorials, workshops and assignments involve the interpretation and preparation of budgets, cost analyses, market projections, project evaluations and financial statements for models of both established and proposed businesses.

Note: This course is only available to students enrolled in the Diploma in Innovation Management program. Coursework comprises 35 hours in a one-week block at the beginning of Summer session and performance of assignments throughout the Summer session.

INOV4101
Innovation in Practice A (6 Units of Credit)
Faculty of Science
UOC6
Prerequisite: INOV2100 or INOV2101

The course requires the involvement of students in practical projects for 4 weeks via placement in innovative workplaces. Projects may be undertaken on either a part-time or full-time basis.

Generally projects will be with businesses in Australia or overseas, but some projects may be offered at the University or related institutions. Preparation and presentation of a report is required at the end of the placement period.

The placement may be completed during a vacation period or across a session depending on the placement/project undertaken. Students may incur travel costs, particularly if undertaking placements overseas.

The placements are supervised by appropriate academic advisors. Internet-based interactions with the supervisor and other students assist in the integration of experiences with previous theory and in the preparation of the project report.

Note: This course is only available to students enrolled in the Diploma in Innovation Management program.

INOV4201
Innovation in Practice B (12 Units of Credit)
Faculty of Science
UOC12
Prerequisite: INOV2100 or INOV2101

The course requires the involvement of students in practical projects for 8 weeks via placement in innovative workplaces. Projects may be undertaken on either a part-time or full-time basis.

Generally projects will be with businesses in Australia or overseas, but some projects may be offered at the University or related institutions. Preparation and presentation of a report is required at the end of the placement period.

The placement may be completed during a vacation period or across a session depending on the placement/project undertaken. Students may incur travel costs, particularly if undertaking placements overseas.

The placements are supervised by appropriate academic advisors. Internet-based interactions with the supervisor and other students will assist in the integration of experiences with previous theory and in the preparation of the project report.

Note: This course is only available to students enrolled in the Diploma in Innovation Management program.

INOV4301
Innovation in Practice C (18 Units of Credit)
Faculty of Science
UOC18
Prerequisite: INOV2100 or INOV2101

The course requires the involvement of students in practical projects for 12 weeks via placement in innovative workplaces. Projects may be undertaken on either a part-time or full-time basis.

Generally projects will be with businesses in Australia or overseas, but some projects may be offered at the University or related institutions. Preparation and presentation of a report is required at the end of the placement period.

The placement may be completed during a vacation period or across a session depending on the placement/project undertaken. Students may incur travel costs, particularly if undertaking placement overseas.

The placements are supervised by appropriate academic advisors. Internet-based interactions with the supervisor and other students will assist in the integration of experiences with previous theory and in the preparation of the project report.

Note: This course is only available to student enrolled in the Diploma in Innovation Management program.

INST1100
World History A
School of History
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law program; Excluded: ASIA1000, HIST1016, HIST1017, INST1000

Focuses on the basic features and forces which have shaped human history from the origins of civilisation to modern times. The first part of the course covers selected major civilisations (eg, Roman Empire, Han China) while the second covers transnational issues such as nomadism, trade between civilisations, disease and climate. The final part covers the origins and nature of modernity, to the 19th century.

INST1200
World History B
School of History
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law program; Excluded: HIST1019, HIST1021, HIST2000, INST1004, INST2001, SPAN2432

Focuses on the major forces and features of twentieth century world history. Includes empires, modernity, nationalism, fascism, decolonisation, communist revolutions, total war, genocide, the growth of the media, social movements, environment, 'Americanisation', and terror.

INST1300
International Relations in the 20th Century
School of Politics and International Relations
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law program; Excluded: INST1001, POLS1017

Traces the development of international relations and its major concepts and theories through key themes and events in international history over the past century. Examines ways in which international politics is viewed, and the events, forces, and trends that provide context and justification to these theories. Introduces the major theories of international relations, as well as developments such as the Cold War and the arms race, decolonisation and revolution, globalisation, and the rise of international organisations.

INST1400
International Relations: Continuity & Change
School of Politics and International Relations
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law program; Excluded: INST1002, POLS1020, POLS2005

An introduction to world politics and its study by scholars of International Relations. The course is in three sections which deal respectively with the key actors in, the dynamics of, and issues currently facing, the system of international politics.

INST2200
Globalisation and Fragmentation
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law programs, 36 units of credit; Excluded: SOCA2103

Examines the effects of globalisation on peoples' lives in different parts of the world. Explores the impact of transnational flows of culture, goods, technology and power and their impact on local worlds. Explores concepts such as: globalised culture, identity, frontiers, diaspora, de-territorialisation, virtual communities, the commodification of health and bodies, the formation of global multicultural cities, globalised religion, the experience of war and destablised states, risk and vulnerability, new forms of sociality, human rights as a global discourse and social futures.

INST2300
International Law: Power, Poltics and Ideology
School of Politics and International Relations
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law programs, 36 units of credit; Excluded: POLS2037

International law is integral to the system of international politics. It is the medium through which states and other actors negotiate their positions on a vast array of subjects and via which politics has, over recent decades, undergone a process of globalisation. Introduces students to the alternative approaches to analysing the political role of international law and examines the role of international law in particular case study scenarios.

Note: No prior knowledge of law is assumed.

INST2302
International Security
International Studies Unit
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law programs and 36 units of credit; Excluded: GLST2106, POLS2048, POLS3023

Examines the concept and practice of security in international relations. Examines theories of security, before addressing central actors to the security project such as states, institutions and civil society forces. Then considers key issues for security in international politics, including traditional conflict; humanitarian crises; environmental change; population movements and terrorism.

INST2400
The Theory and Practice of Development
School of Social Science and Policy
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law programs, 36 units of credit; Excluded: COMD2000, GLST2104, POLS2023, SLSP2701

The theories developed to explain the different rate and pattern of economic and social development within and between countries and regions and the policy consequences of these explanations are analysed and compared. The theories covered include explanations for different rates of development internal and external to nation states based on social, market, technological and other factors. Significant cases studies of policy experience from Latin America and Asia, where a variety of economic and social policy approaches have been adopted are examined. The current status of debates about the nature of underdevelopment and its solutions is reviewed.

INST2401
Sustainable Development, Globalisation and the Third World
School of History and Philosophy of Science
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law programs, 36 units of credit; Excluded: COMD2050, HPSC2550, SCTS3106

This course is about sustainable development along with the technological and social changes that are involved in achieving it, both at a national and global level. It is divided into three parts: (1) the historical causes of the present global environmental and economic crisis; (2) possible solutions to problems of food production, environmental degradation, industrialisation, energy use, and population growth; (3) ideas for a New World Economic Order and the economic and technological changes required to bridge the ever increasing gap between rich and poor nations.

INST3101
Individual Study Program A
International Studies Unit
UOC24

An individual sessional program of study normally at an overseas institution as approved after consultation with the relevant coordinator.

INST3102
Individual Study Program B
International Studies Unit
UOC24

An individual sessional program of study normally at an overseas institution as approved after consultation with the relevant coordinator.

INST3300
Theorising International Political Economy
School of Politics and International Relations
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law program and 36 units of credit; Excluded: POLS3054

Introduces key perspectives and central issues in the study of international political economy. Establishes links between theories about the relationship of politics and economics, and the analysis of key structures and processes in the world economy. Explores the theories and concepts designed to investigate the expansion and globalisation of a world economy. Key substantive issues include state-firm relations, production, international trade, and monetary relations.

INST3301
Economic Growth, Technology and Structural Change
International Studies Unit
UOC6 HPW3
Prerequisite: Enrolment in International Studies or International Studies/ Law programs, 36 units of credit; Excluded: ECON3109

The process of economic development is never smooth. It is associated with profound changes in the fundamental structure of economic society. The rate of growth and development varies substantially between different economies. The course seeks to explain the factors that determine how societies grow and develop, with special emphasis on the role of technology and finance. Various approaches will be examined, and attention will be paid to problems associated with growth, including those relating to equity and human rights issues.

INST3900
International Studies Advanced Seminar
International Studies Unit
UOC6 HPW3
Prerequisite: 96 units of credit and enrolment in International Studies or International Studies/Law program

Provides an opportunity for students to evaluate experiences and ideas gained abroad during the International Studies overseas study program in the light of recent scholarship in the field of International Studies. Particular attention will be given to debates over whether international change can be best understood through paradigms which emphasise the primacy of the state and interstate dynamics, or as evidence of newly

transforming processes often labelled as 'globalisation'. Explores these competing forces and the responses to them of governments, institutions and peoples.

INTA2101
Design Studio 1
Interior Architecture Program
UOC6 HPW5

Introduction to the principles of design and their application in studio-based learning exercises to two- and three-dimensional design. Explorations of many of the influences on design thinking and practice, including the philosophical, historical, social and environmental. Critical thinking and expression in different forms. Studio projects and assignments will attempt in particular to address issues raised in the Theory coursework and to apply skills learned in the Communications coursework. Core considerations: ideation - design as purposeful designation; the development and expression of design ideas in many modes; the role of the ideagram in ideation; the role of analysis in design.

INTA2102
Design Studio 2
Interior Architecture Program
UOC6 HPW5

An introduction to the design of space for human habitation. Design projects culminating in the design of a small-scale habitat. Core Considerations: ergonomics and anthropometrics; domestic scale construction systems; principles of structural stability; environmental and energy issues.

INTA2111
Theory 1
Interior Architecture Program
UOC3 HPW2

The study of the discipline of design, understood as designation for a purpose, demands an enquiry into the principles that govern its operation. A general theory of design process: aim, possibility, act and fulfilment. Each of these is investigated within the context of the human life that is to be served and the world order that forms the backdrop to the this life. The role of 'ideas' in design is discussed in relation to the process of analysis and synthesis that is fundamental to designing.

INTA2112
Theory 2
Interior Architecture Program
UOC3 HPW2

An introduction and exploration of the central theme of western European architectural design, modernism, as it emerges from practices such as philosophy, art and architecture, from the European Enlightenment until the late 20th century. Comparison is made between buildings that exhibit modern features and non-modern features to show that the discourse of modernism is more extensive and complex than architectural modernism.

INTA2121
History 1
Interior Architecture Program
UOC3 HPW1

An introduction to key aspects of Western architectural and design history, from Antiquity to the mid 19th century. Aspects of Chinese, Japanese and Southeast Asian architectural and design history will also be examined. Major themes, such as tradition and revival, will be explored within specific social, economic and political contexts. Their relevance to contemporary practice will also be considered.

INTA2122
History 2
Interior Architecture Program
UOC3 HPW1

An examination of the history of modern design from the mid 19th century to the mid 20th century. This will involve close study of the work of particular architects, interior designers and theorists. Issues to be considered include: design and technology, design and social morality, internationalism and universality and the 'total work of art'. Feminist and gender critiques of modern design will be discussed.

INTA2141
Communications 1
Interior Architecture Program
UOC6 HPW4

An introduction to the communication skills necessary in the study and practice of interior architecture. Students will develop capabilities in life drawing, freehand sketching, colour theory and the principles of perspective in a variety of techniques and media. These skills will be extended in a series of model making workshops using materials such as card, acrylics and timber. An introduction to the technology of computing and information technology as it pertains to the disciplines of the built environment. Topics include basic operation of a computer, information handling, networks and communications, computer graphics, CAD technology and computational processes.

INTA2142
Communications 2
Interior Architecture Program
UOC6 HPW4

An extension of fundamental presentation and communications skills established in Communications 1. Explorations of a variety of compositional modeling and media techniques will extend into discipline based specific drawing practices and presentation skills for the visual presentations of design based projects. A series of structured workshops will develop skills in freehand and technically constructed perspective, axonometric, isometric and rendering techniques. A component of computer based technical drawing skills is included. Workshops exploring skills for making oral presentations & practical research involving projects based around issues of universal design.

INTA2171
Technology 1
Interior Architecture Program
UOC6 HPW4

The course is divided into two distinct components - Ecological Sustainable Design and Structures. Ecological Sustainable Design : Introduction to the ecological and social issues facing society today with a particular focus on their relationship to the built environment. Particular focus on concepts of social responsibility, environmental accountability and ecological sustainability and their implications for the urban/built and natural environments. The Life Cycle Assessment (LCA) of materials, their use in the built environment as well as national and international case studies and their relationship to ESD will be examined. Structures: Understanding and examining how structures work without the need for mathematical formulas. The concept of forces, load transfer, strength, stability and stiffness will be examined. The course will outline key structural behaviour, concepts and focus upon basic structural elements and systems. The emphasis will be upon general principles and their graphical analysis using case studies throughout history to examine this further.

INTA2172
Technology 2
Interior Architecture Program
UOC6 HPW4

The course is an introduction to both the craft and the discipline of architectural drafting and to the principles of construction. There will be an introduction to constructional systems including small-scale timber structures, small-scale masonry construction with a brief analysis of constructional principles. A further study of structural elements, systems and materials with case studies will also be explored. The study will take place in parallel with a study of architectural drafting with emphasis upon the craft and discipline aspects of the practice. There will be an introduction to the Australian Standards dealing with the architectural drafting and to drawing conventions. Consideration will be given to sketching, measuring and documenting buildings. An exploration of the relationship between design and technology and the witness of actual building sites will also form part of this course.

INTA2201
Design Studio 3
Interior Architecture Program
UOC6 HPW5
Prerequisite: INTA2101, INTA2102.

Design projects centering on the design of small-scale interiors for relatively simple patterns of life. Core Considerations: exploration of the life-event as the origin of human aims in design; clarification of design aims; spatial ordering systems; inside/outside relationships; connections and transitions; the central idea - concept; formal presentation of the concept; ideas as ordering principles in design; translation of ideas into architectural space; natural and artificial lighting; construction detailing as a design activity.

INTA2202
Design Studio 4
Interior Architecture Program
UOC6 HPW5
Prerequisite: INTA2101, INTA2102.

Design projects related to residential patterns of life. Core Considerations: public/private realms; home as hearth; dwelling; sense of place; appropriate materials in the domestic context; sustainability as a general principle; passive energy systems; construction detailing as a design activity.

INTA2211
Theory 3
Interior Architecture Program
UOC3 HPW2
Prerequisite: INTA2111, INTA2112.

Theory of Form. The ontological and causal basis of the antinomical qualities of Form. An investigation of these qualities reflected in the natural world and in art and architecture through the ages. A critical appraisal of current thought and practice in design based on this investigation with a view to postulating improvements to design processes and outcomes that are judged to have shortcomings in relation to the theory of Form.

INTA2212
Theory 4
Interior Architecture Program
UOC3 HPW2
Prerequisite: INTA2111, INTA2112.

In modernism and the critique of modernism there emerge a number of themes. Three of these themes will be briefly investigated in this course. These themes are technology, representation and feminism. The reason for addressing these three themes is that they comprise a common ground between architecture and other current concerns in a more general cultural sense, especially in politics. Each theme is accompanied by readings that offer a range of arguments among which students will apply critical discourse in order to establish their own critical orientation.

INTA2221
History 3
Interior Architecture Program
UOC3 HPW1
Prerequisite: INTA2121, INTA2122.

An examination of the theory and practice of architecture and interior design in the late 20th century in relation to developments in visual culture generally. Issues to be explored include: design as polemic, design and youth, design and popular culture, design and fashion, design and the media. Postmodernist theory and production will provide primary contexts for discussion and debate.

INTA2222
History 4
Interior Architecture Program
UOC3 HPW1
Prerequisite: INTA2121, INTA2122.

A detailed exploration of recent issues in design practice. This will involve close study of the work of particular interior architects and designers. Discussion will be based around three primary themes: public and private spaces; cross-disciplinary and intermedia approaches; cross-cultural interaction and self-determination. There will be a strong Australian emphasis, with guest lecturers providing specialist input.

INTA2241
Communications 3
Interior Architecture Program
UOC3 HPW3
Prerequisite: INTA2141, INTA2142.

This course extends capabilities and techniques in visual presentation. Students will be encouraged to explore a variety of graphic, compositional and media techniques as an extension of design intent. Projects will provide opportunities to develop and refine individual skills in graphic presentation, layout, photography and Photoshop techniques.

INTA2271
Technology 3
Interior Architecture Program
UOC3 HPW2
Prerequisite: INTA2171, INTA2172.

Materials and Detailing. Materials: Materials used within the built environment may be understood with reference to their manufacture, characteristics, ecology and the craft associated with their utilisation. The course will look at both soft and hard materials as the media of interior design. Time shall be given to the finishing aspects of materials. Detailing: The formal study of materials in lectures shall be put into practice in the studio with exercises dealing with the application and documentation of such materials within architecture and interior design. Studies shall look at detailing a small-scale building/interior with emphasis given to construction documentation. Witness to construction sites, manufacturing and various current Sydney designer works will also form part of this course.

INTA2272
Technology 4
Interior Architecture Program
UOC3 HPW2
Prerequisite: INTA2171, INTA2172.

Materials and Detailing: An advanced study of the use of materials in structure, as finishes, the characteristics, ecology and craft associated with their utilization, including case studies of their application. A study of the joining, design and documentation of the detailing of materials for the interior will be thoroughly explored with examples and case studies. An advanced study of materials in lectures shall be put into practice in the studio with exercises dealing with the application and documentation of such materials within architecture and interior design. Studies shall look at detailing a small-scale building/interior with emphasis given to construction documentation, using either AutoCAD or hand drafted drawings. Witness to construction sites, manufacturing and various current Sydney designer works will also form part of this course.

INTA2301
Design Studio 5
Interior Architecture Program
UOC6 HPW5
Prerequisite: INTA2201, INTA2202.

Design projects dealing with small to medium scale commercial, retail or public facilities. Core Considerations: materials and meaning in architecture; furniture and fitments; connections, junctions, mediating elements and tolerances; acoustics; building services, regulations and codes; access and egress; air conditioning and ventilation systems.

INTA2302
Design Studio 6
Interior Architecture Program
UOC6 HPW5
Prerequisite: INTA2201, INTA2202.

Design projects dealing with medium to moderately-large scale commercial, retail or public facilities. Core Considerations: preparing finishes selections; incorporation of textiles into the design; preparing sample boards; space analysis and feasibility of facility and the user requirements; designing through the contract documents; budgeting.

INTA2371
Technology 5
Interior Architecture Program
UOC3 HPW2
Prerequisite: INTA2271, INTA2272.

Lighting: Environment. Natural and artificial lighting. Quantitative and qualitative aspects of lighting design. Electric light sources, light control and prediction methods. Skills for predicting natural lighting implications and the design of a small lighting design. Acoustics: Acoustics and noise control, design of a room's basic shape and volume, acceptable ambient sound levels. Acoustic performance: properties and behaviour of sound, sound transmission loss, external noises level, structure-borne and impact sound. Reverberation times, selection of building envelope elements, selection of interior building materials and elements and the design of small scale space in relation to acoustics.

INTA2372
Technology 6
Interior Architecture Program
UOC3 HPW2
Prerequisite: INTA2271, INTA2272.

Thermal Comfort and Advanced ESD: Integration of passive design strategies into buildings and understanding the concepts of human thermal comfort to integrate without mechanical heating and cooling. Skills for carrying

out a sun analysis. There will be an introduction to thermal evaluation and design tools, correlation and simulation models. Case studies of traditional and more technologically advanced built environments will be discussed. Building Services: Building services, regulations and standards: air-conditioning, plumbing, telecommunications, lighting, electrical and mechanical services. Implications for the design of interior space. Relationship to best practice principles of passive energy design and energy conservation. Fire protection systems and regulations. Working within the parameters of the Building Code of Australia, Standards Association of Australia standards and the requirements of other Statutory body pertaining to buildings in general and to interiors specifically.

INTA2382
Professional Practice 1
Interior Architecture Program
UOC3 HPW2
Prerequisite: INTA2301.

This is the first of two consecutive courses in the BIA Practice Stream that aim to introduce Interior Architecture students to the principles of management and best practice. The practice notes and contracts used by the various professional bodies will be examined through lectures, tutorials and assignments. A thorough investigation into project management procedures, building authorities, project costing, estimating and specification to project succesfull project delivery. Allowance has been made for students to undertake between 280 and 490 hours of non-compulsory practical professional experience in approved employment between the two consecutive Professional Practice courses commencing at the end of Session 2, Year 3 and finishing by the beginning of Session 2, Year 4. Those who gain such experience may submit a 'certified logbook' (contact lecturer for details) of their work for consideration in the assessment of INTA2482 Professional Practice 2 where, at the discretion of the Head of Program the mark gained may be substituted for one of the assessable components of the course to a maximum value of 40% of the total mark for the course. This does not obviate the necessity for all students to complete all assessable components of this course.

INTA2401
Design Studio 7
Interior Architecture Program
UOC6 HPW5
Prerequisite: INTA2301, INTA2302.

Design projects dealing with medium to large-scale commercial facilities. Core Considerations: the design concept as an expression of a developed personal theoretical position on design; needs analysis and preparation of client briefs; innovation with technical and pragmatic programs; professional verbal presentation skills; best professional practice and quality assurance measures; health and safety issues; space planning and facilities planning and management; skills for designing to a budget.

INTA2402
Graduation Project
Interior Architecture Program
UOC15 HPW4
Prerequisite: INTA2401, INTA2441, INTA2411

An approved self-selected large-scale project carefully chosen and executed to demonstrate proficiency in every aspect of the program. The project, though hypothetical, must be based on a real situation with site, client and brief and be carried out under the guidance of an academic supervisor. A mentor scheme running concurrently will seek to align each student with a professional mentor to provide further guidance. The Graduation Project will be examined in a personal presentation made to a jury of professional designers and academics. The theoretical basis for the Graduation Project is established in the Dissertation a pricis of which is to form part of the final submission in this course.

INTA2411
Dissertation
Interior Architecture Program
UOC6 HPW3
Prerequisite: INTA2302.

The dissertation is to be a written work of scholarship of between 8,000 and 10,000 words that deals with the theoretical basis of the student's proposed Graduation Project to be undertaken in the final session of the program. It will demonstrate the student's ability to thoroughly research an approved topic and present a well-reasoned argument in support of a clearly stated hypothesis. It is to be completed before the commencement of the Graduation Project. A pricis of the dissertation will be submitted as part of the final presentation of the Graduation Project.

INTA2441
Project Research
Interior Architecture Program
UOC6 HPW3
Prerequisite: INTA2302.

This course is devoted to laying the foundations for the Graduation Project. It incorporates the development of the design brief; a typological study of relevant buildings and contexts, a thorough analysis of the site of the proposed project and a report on the context of the project and the impact of all regulations and standards. The whole is to be submitted in the form of a report.

INTA2482
Professional Practice 2
Interior Architecture Program
UOC3 HPW2
Prerequisite: INTA2382.

The course will examine practical and legal aspects of design practice, examining legal contracts, company structures, issues of professional indemnity, professional liability.The course will provide in depth discussions on professional ethics and code of conduct; methods of fee structure, advanced issues in the conditions of engagement, contract variations and general project administration systems; preparing fee proposals and marketing a design practice.

IRSH2002
Identity, Culture, Politics: Ireland and Australia in the 20th Century
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2019

Examines the political, economic and social changes that took place in Ireland and Australia during the course of the 20th century as they became increasingly independent of Great Britain. Compares and contrasts developments in both countries in terms of national identity, constitutional arrangements with Great Britain, the impact of war, politics, economics and social issues.

IRSH2012
Contemporary Irish Literature
School of English
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ENGL2340, ENGL3471

Critically examines the poetry and prose written by Irish writers after WWII in terms of issues of identity, nationality, gender, landscape, language, tradition, and religion. Considers how Irish poets have coped with the legacy of Yeats, Irish novelists with the legacy of Joyce and what their writing tells us about present-day Ireland and the contemporary world.

IRSH2021
Contemporary Theatre
Media, Film and Theatre
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: THST2161

Studies recent developments in theatre and drama, in various countries, over the last 40 years.

IRSH2101
Ireland: States of Being, States of Mind
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit

Investigates key aspects of Ireland's social, political and cultural transformation from being subject to the British Empire, and thus a major source-country for the settlement of Australia, to becoming a wealthy, technologically advanced, highly educated and culturally sophisticated member of the European Community.

IRSH2104
Poetry, Virtue, Corruption: Milton to Burns
School of English
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ENGL2104

Studies how English, Irish, and Scottish poets from 1660-1800 define themselves in relation to a culture which they deem to be corrupt. Moves from Milton as the single just man in a society that has betrayed the godly revolution to the poet as libertine in Rochester and Behn, and the poet as political propagandist in Dryden. Sees how Finch, Swift, Pope, Wortley-

Montague, and Johnson detach themselves and poetry from political life. Later poets show that once you do this, what is left are passion, death, superstition, madness, and small animals.

IRSH2410
Nineteenth Century Europe 1848-1918: Nation, Empire, Revolution
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: EURO2410 and HIST2410

Examines the rise of the explosive social and national tensions in late nineteenth-century Europe which culminated in world war and revolution (Russia, Germany, Hungary, Ireland). Key themes are industrialisation and the rise of the labour movement; urbanisation and its impact on gender roles; the flowering of bourgeois culture and its fin de siecle crisis; the transformation of revolutionary into "integral" nationalism and imperialist jingoism; great power rivalry and the origins of the First World War. Aims to understand how the period laid the foundations for the dramatic events of the "short twentieth century".

IRSH3472
Modernism - Joyce
School of English
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ENGL2453, ENGL3320, ENGL3472

Intensive study of James Joyce's 'Ulysses' to enquire into selected aspects of modernism. Of particular interest will be the writer's negotiations with language and with structure, the function of history and/or myth, the role of the comic, and the tensions between innovation and various forms of tradition.

ITAL1001
Introductory Italian 1
School of Modern Language Studies
UOC6 HPW5
Excluded: GENT0429

Introduces the main structures of Italian language and provides an overview of contemporary Italian history and society. The language component develops all four language skills, with a particular focus on the development of grammatical accuracy. The cultural component consists of a series of lectures which offer insights into some of the salient issues of Italian history from Unification to the present.

Note: Students who have taken HSC Italian and students who have any formal training from another source should apply to enrol as Cross Institutional students at the University of Sydney. Excluded: Students qualified to enter a higher level course.

ITAL1002
Introductory Italian 2
School of Modern Language Studies
UOC6 HPW5
Prerequisite: ITAL1001

Builds on the structures acquired in ITAL1001. The cultural component explores aspects of twentieth-century Italian cultural, social and political life through weekly lectures that examine major literary and cultural movements and figures, followed by a guided reading and analysis of texts in weekly seminars.

JAPN1000
Japanese Communication 1A
Department of Japanese & Korean Studies
UOC6 HPW6
Excluded: GENT0430

Introduces some of the basics of modern Japanese through listening, speaking, and reading activities. Covers five broad themes including introducing oneself, talking about university experiences, housing, Japanese geography, and daily routines. Hiragana and katakana are also introduced. Communicating in socio-culturally appropriate ways are stressed throughout the course.

JAPN1001
Japanese Communication 1B
Department of Japanese & Korean Studies
UOC6 HPW6
Prerequisite: JAPN1000

Introduces more of the basics of modern Japanese through listening, speaking, reading, and writing activities. Covers several broad themes including daily routines, talking about likes and dislikes, how to go shopping, food, and family. 90 kanji are introduced. Communicating in socio-culturally appropriate ways are stressed throughout the course.

JAPN2000
Japanese Communication 2A
Department of Japanese & Korean Studies
UOC6 HPW5
Prerequisite: JAPN1001

Further development of beginners' Japanese interactive skills. Prepares students to become competent in anticipated Australia - Japan contact situations and basic survival situations in Japan. Continued emphasis on oral-aural skill acquisition. Approximately 100 new kanji are introduced.

JAPN2001
Japanese Communication 2B
Department of Japanese & Korean Studies
UOC6 HPW5
Prerequisite: JAPN2000

Consolidation of oral-aural skills up to intermediate level. Development of reading and writing skills, with another 150 kanji introduced.

JAPN2500
Introduction to Japanese Studies
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: JAPN3900

Examines Japanese society, culture, politics, and economy. Key themes include: the structure and transformation of Japan's political system; gender; popular culture; social movements and protest; identity; economic growth and its costs; and social, political, and economic transformation and stagnation in post-bubble Japan.

JAPN2510
Japan and Korea: Cultures in Conflict
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Examines in comparative perspective cultural changes in Korea and Japan in the late 19th to early 20th centuries. Focus given to how Japan's response to these changes was interpreted by Koreans and how they in turn attempted to respond to the actions of the Japanese. Special attention given to the relationship between the purposes of Japanese cultural reform in Korea and Korean 'cultural nationalism' in its mature form.

JAPN2600
Hospitality Japanese
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: JAPN2000; Excluded: JAPN4000, JAPN3400, JAPN3401, JAPN37** range of courses

Aims to develop interactive competence in spoken Japanese for the hospitality industry, particularly in professional situations relating to tourism and leisure. Includes finance and banking, hotel, advertising, restaurant and other work situations. Emphasises comparative cultural aspects, covering honorifics and etiquette as well as non-linguistic aspects of interaction between hospitality personnel and tourists.

Note: A formal dinner is a compulsory component of the course and will incur a personal cost.

JAPN2700
Talking Japanese Pop Culture
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: JAPN2001 or higher

Explores contemporary Japanese culture including Manga, Anime, films, theatre, and J-pop songs. The course combines the studies of culture and language through selected texts, tapes, videos and other materials, and field trips when possible. Different levels of language proficiency are catered for by options in assignments.

JAPN2701
Learning Japanese by Reading Manga
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: Available to students who have completed at least Japanese 2A. Not available to students who have completed Japanese 4A or higher; Excluded: JAPN37** range of courses

Investigates the vocabulary, grammar and kanji using manga as the primary resource. Socio-cultural aspects of each manga are also studied. Includes reading out loud, the creation of an original manga narrative, and specific language based assignments.

JAPN3000
Japanese Communication 3A
Department of Japanese & Korean Studies
UOC6 HPW5
Prerequisite: JAPN2001

Equips students with solid linguistic skills at intermediate level, with increasing emphasis on reading and writing. Introduction to a variety of local Australia-Japan contact situations and expanding practical usage of students' interactive skills. Approximately 200 new kanji are introduced.

JAPN3001
Japanese Communication 3B
Department of Japanese & Korean Studies
UOC6 HPW5
Prerequisite: JAPN3000

Further development of communicative skills and competence attained in JAPN3000. Students use Japanese in a wider context, thereby increasing vocabulary and knowledge of grammatical structures. Another 200 kanji are introduced.

JAPN3205
Business Japanese
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: JAPN2001; Excluded: JAPN3500, JAPN37** range of courses

Concentrates on interactive skills for business situations, including reading and writing. Introduction to technical language of accounting, finance, economics and marketing and develops skills needed in typical formal and informal business contact situations, such as business introductions and meetings, business conversation, written channels of communication and business etiquette.

JAPN3300
Discover Japanese Grammar A
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: JAPN2001

The grammar of modern Japanese will be introduced systematically as interrelated choices Japanese language users make in order to exchange meaning in the context of social communication. Provides students who already have an intermediate to advanced knowledge of Japanese with an opportunity to (re)discover the workings of the grammar of Japanese. A wide variety of natural spoken and written text examples will be used holistically in order to illustrate various features of the grammatical system of Japanese.

Note: Instruction will be given mainly in Japanese but also in English.

JAPN3400
Japanese Communication 4A
Department of Japanese & Korean Studies
UOC6 HPW5
Prerequisite: JAPN3001; Excluded: JAPN4000

Concentrates on acquisition of late-intermediate to early-advanced interactive skills in Japanese with continued emphasis on reading and writing. Introduction to basic linguistic features of advanced level Japanese and provides opportunities to practise skills needed in typical formal and informal Australia-Japan contact situations. Approximately 150 Kanji are introduced.

JAPN3401
Japanese Communication 4B
Department of Japanese & Korean Studies
UOC6 HPW5
Prerequisite: JAPN3400 or JAPN4000; Excluded: JAPN4001

Prepares students in acquisition of well-rounded linguistic and communicative competence necessary for advanced learners. Further extension and systematic practice of interactive skills. Another 150 Kanji are introduced.

JAPN3601
Cultural Studies and Japan
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Critically explores how popular culture, leisure and consumption are inter-related with identity construction in Japan, as well as how social and cultural ideologies, beliefs and values are produced, reproduced, challenged and changed within the fields of popular culture. Also examines the globalisation of Japanese popular culture both inside and outside of Japan and discusses how this relates to such issues as cultural imperialism, cultural hybridity, transnationality and diaspora.

JAPN3702
Politeness in Interaction with (the) Japanese
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: JAPN3401 or JAPN4001

Focuses on improving performance in politeness in interaction with Japanese. Deals with the range of theoretical approaches to politeness. Explores the ways in which participants in Contact Situations negotiate and manage the levels and expressions of politeness as scenes develop in the situation.

JAPN3703
Approaches to Japanese Discourse Analysis
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: JAPN3000

Introduces specific features of Japanese discourse and how they are socio-culturally interpreted. Presents a variety of approaches to Japanese discourse analysis through an application of the structures and strategies of Japanese discourse to daily communication in Japanese.

JAPN3900
Introduction to Japanese Studies (Advanced)
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: 36 uoc in Level 1 including 6 uoc in JAPN at Distinction level; Excluded: JAPN2500

An in-depth examination into Japanese society, culture, politics, economy, and language. Explores topics ranging from Japan's political and economic system to popular culture, consumer society, gender, and globalisation. Emphasis is given to a critical examination of these issues within a multidisciplinary analytical framework.

JAPN3901
Introduction to Research in Japanese Studies
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: JAPN2001 plus a Distinction average in JAPN courses

Provides students with a framework for analysing problems in the field of Japanese Studies, including a theoretical framework and types and sources of problems. Where possible, students carry out empirical data collection and are guided through the analysis of and search for possible solutions to these problems.

JAPN3902
Readings in Japanese Studies (Advanced)
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: JAPN3000 or higher plus a Distinction average in JAPN courses

Students read Japanese and English writings in selected fields of Japanese Studies. Students intending to enter the Honours program read extensively in the area of their research fields. They develop ability to read academic writings proficiently and critically, acquire comprehensive understanding of the fields and produce an annotated bibliography of their reading.

JAPN4500
Japanese Studies Honours (Research)
Department of Japanese & Korean Studies
UOC24 HPW5
Prerequisite: 54 units of credit in Japanese Studies, including JAPN3901 and JAPN3902, an overall WAM of 65 or higher, Distinction average or higher in all Japanese courses and the completion of a major with a minimum language level of JAPN3001

The Honours program consists of a thesis between 15,000 and 20,000 English words or 32,000 - 40,000 Japanese characters in an approved area of Japanese Studies as well as compulsory language study.

Note: Students who complete the honours program with JAPN4101 or a higher level will be recognised as having completed the Japanese Studies Advanced Program.

JAPN4550
Combined Japanese Studies Honours (Research)
Department of Japanese & Korean Studies
UOC12 HPW3
Prerequisite: 48 units of credit in Japanese Studies, including JAPN3901 and JAPN3902, an overall WAM of 65 or higher, Distinction average or higher in all Japanese courses and the completion of a major with a minimum language level of JAPN3001

The Honours program consists of a thesis between 15,000 and 20,000 words in an approved area of Japanese Studies as well as compulsory language study.

Note: Students who complete the honours program with JAPN4101 or a higher level will be regarded as having completed the Japanese Studies Advanced Program.

JAPN4555
Japanese Honours (Research) Part Time
Department of Japanese & Korean Studies
UOC12 HPW2
Prerequisite: 54 units of credit in Japanese Studies, including JAPN3901 and JAPN3902, an overall WAM of 65 or higher, Distinction average or higher in all Japanese courses and the completion of a major with a minimum language level of JAPN3001

The Honours program consists of a thesis between 15,000 and 20,000 English words or 32,000 - 40,000 Japanese characters in an approved area of Japanese Studies as well as compulsory language study.

Note: Students who complete the honours program with JAPN4101 or a higher level will be recognised as having completed the Japanese Studies Advanced Program.

JWST1000
The Modern Jewish Experience: Emancipation to the Holocaust
School of History
UOC6 HPW3
Excluded: HIST1030

The progress towards emancipation of the Jews in the 18th and 19th centuries was driven not only by Enlightenment ideas of equality and tolerance, but also by highly pragmatic considerations. While initially, for the most part, enthusiastic objects of this process, European Jews grew increasingly aware of the conditions attached to it and of its real and potential dangers. Traces the history of emancipation, its achievements and failures, and the light it sheds on the development of European societies.

JWST1001
The Modern Jewish Experience: Nationalism and Statehood
School of History
UOC6 HPW3
Excluded: HIST1031

Explores the origins of modern Jewish nationalism, Zionism, in the mid-nineteenth century and charts its development through to the creation of the State of Israel in 1948. Discusses the influence of emancipation, nationalism, socialism and anti-semitism. Concludes by considering the debate on post-Zionism and the challenges it may present for Israel and the Jewish Diaspora.

JWST2101
Holocaust and Genocide in Historical Perspective
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2074

Introduces students to the field of genocide and Holocaust studies, beginning with competing definitions of genocide and moving to a detailed treatment of various cases of mass death in world history. The Holocaust as a paradigm case of genocide and the legal prosecution of genocide will be considered.

JWST2103
The German-Jewish Experience
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: EURO2300, HIST2485, SOCA3310

The contribution of 'Jewish Germans' to the social, political and cultural life of Germany and Austria from 1900 to 1933. The impact of attempted integration as reflected in the work of Herzl, Schnitzler, Kafka, Buber, Feuchtwanger, Scholem and others; the failure of the German-Jewish symbiosis as a basis for discussion of the concepts of assimilation, acculturation, ethnicity, identity and nationality.

KORE1000
Korean Communication 1A
Department of Japanese & Korean Studies
UOC6 HPW6
Excluded: GENT0431

Designed to provide beginners with practical language skills for effective communication. Emphasis is on use of the language in basic survival situations. Communicative methods are used to develop in students the four language skills: listening, speaking, reading and writing, within a cultural context. The Korean script, Han-geul, is taught progressively.

KORE1001
Korean Communication 1B
Department of Japanese & Korean Studies
UOC6 HPW6
Prerequisite: KORE1000

Further development of communicative skills in introductory Korean, with emphasis on a variety of real life situations. New communicative functions, vocabulary and grammatical structures are progressively added to knowledge and skills acquired in KORE1000.

KORE2000
Korean Communication 2A
Department of Japanese & Korean Studies
UOC6 HPW5
Prerequisite: KORE1001

Further development of communicative skills on the groundwork covered in introductory-level Korean. Allows students to build upon their spoken and written language skills, enabling them to interact in a wider range of communicative situations.

KORE2001
Korean Communication 2B
Department of Japanese & Korean Studies
UOC6 HPW5
Prerequisite: KORE2000

Consolidates and further expands knowledge and skills developed in the previous courses as well as laying the foundation for students who wish to proceed to a third year program. A number of selected Hanja, Sino-Korean characters, is introduced to further enhance the students skills to read and comprehend modern Korean mixed script.

KORE2500
Korean Civilisation and Culture
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: KORE3900

An introduction to Korean society, culture, politics and economy examined from historical perspectives. Topics include changes in social stratification, family life, role of women, education, religion, arts and popular culture, economy, technological development, role of governments, politics and diplomacy and inter-Korean relations.

KORE2601
Gender/Politics in Korean Literature
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Examines key Korean literary works and secondary critical writings in English which address the political implications of gender in Korean literature. Three primary questions to be addressed are the ways men and women have imagined their own and alternative worlds, how they have imagined each other, and how political events have shaped gender relations in Korean literature.

KORE3000
Korean Communication 3A
Department of Japanese & Korean Studies
UOC6 HPW5
Prerequisite: KORE2001

Consolidation of students communicative skills in both spoken and written Korean at intermediate level, with increasing emphasis on reading and writing. It introduces a wider range of communicative topics, vocabulary and grammatical structures and further expands practical usage of students knowledge and interactive skills. Approximately 100 new Hanja are also introduced.

KORE3001
Korean Communication 3B
Department of Japanese & Korean Studies
UOC6 HPW5
Prerequisite: KORE3000

Further development of communicative skills attained in KORE3000 and a new orientation to specific needs in everyday business situations. It equips students with a variety of practical language skills and background information necessary not only for everyday conversation but also for Korean-Australian business situation. Includes systematic practice of communicative skills in the classroom and some field work at the real-life situations in the Sydney Korean business community. Another 150 Hanja are introduced.

KORE3400
Advanced Korean A
Department of Japanese & Korean Studies
UOC6 HPW4

Integrated literary course: a variety of writing, including art, music, folktales, dialogues and everyday writing in all its forms is explored for language study. Familiarises students with different genres of Korean discourses and culturally rich texts. Designed for students who have acquired grammatical knowledge and need to enhance their vocabulary, reading and writing skills.

KORE3401
Advanced Korean B
Department of Japanese & Korean Studies
UOC6 HPW4
Prerequisite: KORE3400; Excluded: KORE2101

Continuation of the work done in KORE3400. Designed for students who have acquired literacy skills but still need to develop their vocabulary learning and reading strategies. Focuses on the reading of authentic Korean texts by utilising various reading strategies. Includes participation in a variety of writing, such as song writing, poster creation and literature responses.

KORE3500
Professional Korean A
Department of Japanese & Korean Studies
UOC6 HPW4

Introduces a repertoire of professional discourses along with reading-writing activities. Various genres are introduced, including social commentaries, art reviews, science reports, business documents and literature. Includes the study of the subtleties of grammar, idiomatic expressions and rhetorical structures.

KORE3501
Professional Korean B
Department of Japanese & Korean Studies
UOC6 HPW4

Designed for students who need enriched language experiences to use their literary skills. Includes the reading of newspaper articles for intensive language study and participation in various writing tasks, such as descriptive, expressive, analytic and persuasive writing for class presentation.

KORE3600
Korean Translation A
Department of Japanese & Korean Studies
UOC6 HPW3

Introduces translation theory and practice in Korean. Focuses on skills of translating English into Korean and provides native-speaker level students with foundations for professional translation. Examines techniques for analysing and rendering texts of different styles and complexity. Addresses cross-linguistic and cross-cultural problems relevant to professional translation, including lexical/grammatical problems and ethical implications. Covers a range of authentic texts and a variety of topics including socio-cultural, educational, commercial, political, medical, etc.

KORE3601
Korean Translation B
Department of Japanese & Korean Studies
UOC6 HPW3

Concentrates on more advanced authentic texts in key areas for professional translation such as public, academic and legal documents and excerpts from media. Includes practical skills and strategies relating to translators' examinations and professional practice.

KORE3900
Introduction to Korean Studies (Advanced)
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: 36 units of credit including 6 units of Korean at credit level; Excluded: KORE2500.

Introduces a wide range of topic areas in Korean Studies, such as history, politics, economics, business, society, culture, language and literature, with a particular focus on the rapid changes in the twentieth century and the strength and continuity of Korean culture. Also focuses on critical examination of research in these areas.

KORE3901
Topics in Korean Studies (Advanced)
Department of Japanese & Korean Studies
UOC6 HPW3
Prerequisite: KORE2001 plus a credit average in all KORE courses

Critically examines a range of research work and familiarises students with the research tools and methods available for research in the field of Korean Studies. Covers various theoretical frameworks and empirical methods available for identification of problems, data collection and analysis, and interpretation of results. Designed primarily for intending Honours students.

KORE4000
Korean Studies Honours (Research) Full-Time
Department of Japanese & Korean Studies
UOC24 HPW5
Prerequisite: 54 units of credit in Korean Studies, including KORE3900 and KORE3901, an overall WAM of 65 or higher, Distinction or higher in all KORE courses and the major with a minimum language level of KORE3001

The Honours program consists of a thesis between 15,000 and 20,000 words in an approved area of Korean Studies as well as compulsory language study.

KORE4050
Korean Studies Honours (Research) Part-Time
Department of Japanese & Korean Studies
UOC12 HPW3
Prerequisite: 54 units of credit in Korean Studies, including KORE3900 and KORE3901, an overall WAM of 65 or higher, Distinction or higher in all KORE courses and the major with a minimum language level of KORE3001

The Honours program consists of a thesis between 15,000 and 20,000 words in an approved area of Korean Studies as well as compulsory language study.

LAND1101
Design Fundamentals: Studio 1
Landscape Architecture Program
UOC9 HPW6

Introduction to design as fundamental to coherent thought and action in your discipline. Exploration of the influences on design thinking and practice, including the philosophical, historical, social and environmental precedent studies. Critical thinking and expression in different forms. Studio projects and assignments to develop skills and understanding of design elements and principles. Introduction to a basic vocabulary of representation techniques used by designers to facilitate the development and communication of design ideas including: colour, freehand drawing, sketching, painting, construction, mixed media, desktop publishing, photomontage techniques, technical drawing and drafting.

LAND1102
Landscape Design 2: Design Process
Landscape Architecture Program
UOC6 HPW4
Prerequisite: LAND1101 Corequisite: LAND1142.

An introduction to site design and design process. A number of small-scale projects will allow exploration of design process through site planning, the use of historical precedent and design generation. Studio based projects will be supported by theoretical readings.

LAND1121
Introduction to Landscape Architecture
Landscape Architecture Program
UOC3 HPW2

Introduction to the principles of design education. Overview of landscape architecture as a practice, as a profession and as an academic discipline. Study of contemporary landscape architecture as a design field and as a creative component of the environmental movement. Introduction to the art and technique of reading the landscape.

LAND1122
History of Landscape Architecture
Landscape Architecture Program
UOC3 HPW2

Critical analysis of cultural landscapes through the investigation of philosophical, aesthetic and social aspects of landscape architecture and garden art in Eastern and Western traditions.

LAND1142
Design Communication
Landscape Architecture Program
UOC3 HPW3
Prerequisite: BENV1141; Corequisite: LAND1102.

This course encourages students to develop a personal vocabulary of representation techniques to facilitate the development and communication of design ideas. Students develop a range of techniques including: perspective, freehand drawing and sketching, colour rendering, advanced creative drawing, the use of different media and graphic thinking.

LAND1151
Horticulture
Landscape Architecture Program
UOC3 HPW3

This course introduces students to a botanical understanding of plants, their structure and function, taxonomic classification. The relationship between plants and their environments, habitats, communities and life cycle. Introduction to horticultural practice and plant identification.

LAND1152
Landscape Analysis
Landscape Architecture Program
UOC9 HPW6
Prerequisite: GEOG1701, LAND1151

Observation and interpretation of both physical, biological and cultural environments and their interrelationships. Landscape character through sensory inputs and historical understanding. Fundamental characteristics of a range of biological systems, with emphasis on relationships with the physical environment. Survey of Australian plant communities and associated fauna with particular emphasis on the Sydney Region. Recording and presentation techniques associated with landscape surveys, field excursions.

LAND1171
Landscape Technology 1
Landscape Architecture Program
UOC3 HPW3

Developing proficiency in site surveying and mapping techniques. Principles of grading and their application to a variety of site requirements and conditions. Land shaping, contour manipulation, drainage, earthworks.

LAND1201
Landscape Design 3: Site Planning
Landscape Architecture Program
UOC9 HPW6
Prerequisite: LAND1152, LAND1102, LAND1171

Response to a specific site with a program of uses, in natural or urban settings. Emphasis is on gaining further skills in site design, effective communication of design concepts and integration of ecological issues with landscape design.

LAND1202
Landscape Design 4: Landform and Planting Design
Landscape Architecture Program
UOC9 HPW6
Prerequisite: LAND1171, LAND1201, LAND1251

In this studio students undertake more sophisticated site research and analysis. They will develop an understanding of the relationship between natural systems, constructed environments and ecological sustainability. Focussing on planting and landform manipulation, students will explore techniques for developing and resolving design ideas.

LAND1221
Environmental Sociology for Landscape Architects
Landscape Architecture Program
UOC3 HPW2

Students will be introduced to the study of people-place relationships and sociological techniques for understanding specific user-group requirements in the design of public spaces. Human perception of shared and personal space and the effect of environmental change on individuals and communities will be explored. Universal design and accessibility in design of public areas is also covered.

LAND1222
History and Theory Elective
Landscape Architecture Program
UOC3 HPW6

Students are required to select one of the landscape electives listed in the History and Theory elective courses section. These include: BENV2218, BENV2219, BENV2220 and BENV2221.

Note: LAND1222 is not a course and should not appear on your enrolment.

LAND1251
Advanced Horticulture
Landscape Architecture Program
UOC3 HPW2
Prerequisite: LAND1151

Based on the knowledge gained in Horticulture, this course will provide students with the horticultural theory and practice necessary for supporting landscape design and documentation.

LAND1271
Landscape Technology 2
Landscape Architecture Program
UOC3 HPW3
Prerequisite: LAND1171, LAND1102

Description and selection of materials, their properties, origin and production. Understanding the relationship between materials and design. Use of Australian Standards. Construction principles and methods.

LAND1272
Landscape Technology 3
Landscape Architecture Program
UOC3 HPW3
Prerequisite: LAND1271

Preparation of documentation for landscape works including; grading, drainage, earthworks, roads and pavements, planting and structures. Critical analysis of design development and documentation. Design a development of construction documentation and detailing for a wide range of materials, elements and structures.

LAND1301
Landscape Design 5: Design Resolution and Documentation
Landscape Architecture Program
UOC9 HPW6
Prerequisite: LAND1202, LAND1272, BENV1242

This studio will focus on design resolution and documentation of one project. Students will develop skills in detailing, use of materials and CAD.

LAND1302
Landscape Design 6: Design with a Complex Program
Landscape Architecture Program
UOC9 HPW6
Prerequisite: LAND1301

This studio will introduce students to projects with more complex programs and different approaches to dealing with them. It will focus on developing skills in the manipulation of architectonic space and form.A personal design portfolio forms part of this studio. A satisfactory portfolio is a requirement for completion of this studio.

LAND1321
Research Methods
Landscape Architecture Program
UOC3 HPW2
Prerequisite: LAND1221, LAND1351

Investigation of various research methods with application to study in landscape architecture. Development of the critical logical and stylistic skills involved in researching, writing and presenting essays, theses, articles, papers and reports. Each student researches and prepares an approved thesis proposal including a bibliography, chapter outline and first draft chapter.

LAND1351
Landscape Management
Landscape Architecture Program
UOC3 HPW2
Prerequisite: LAND1152

Planning and management of both natural and cultural landscapes. Historical review of landscape planning and management in Australia and overseas. Overview of environmental policy and legislative framework. Examination of a range of landscape management methodologies and processes.

LAND1371
Landscape Engineering
Landscape Architecture Program
UOC3 HPW3
Prerequisite: LAND1272

Understanding structural design and construction techniques for a range of elements including; earthworks, drainage, retaining and freestanding walls, pavements and roads, masonry, steel and timber structures. Structural design and construction techniques applied to a range of difficult site problems.

LAND1381
Landscape Practice 1
Landscape Architecture Program
UOC12

Students are required to obtain a minimum of 40 days of practical industry experience during enrolment in the program. This forms part of a total requirement of 90 days work experience.

LAND1401
Landscape Design 7: Urban Landscape Design
Landscape Architecture Program
UOC12 HPW8
Corequisite: LAND1402; Prerequisite: LAND1302, LAND1382

An exploration of the relationships within the fabric of the urban environment including concepts of city functions and the analysis of disparate parts of the city with physical design being the primary focus. Context and place, history and theory are considered as well as analytical techniques. Design studios, lectures and seminars. This course generates the urban design context for the Graduating Project undertaken in LAND1402 Landscape Design 8.

LAND1402
Landscape Design 8: Graduating Studio
Landscape Architecture Program
UOC12 HPW8
Co: LAND1401 Pre: LAND1302 & LAND 1382

Students are called upon to employ all the knowledge, skill and understanding they have gained in previous years and to explore issues and approaches in design which are of particular interest to them. The graduating design project follows from LAND1401 Landscape Design 7 and involves sketch design and detailed design development. Graduating project is related to the natural, urban or rural environment. The studio will critically assess aspects of theory through design speculation.

LAND1421
Landscape Thesis
Landscape Architecture Program
UOC15 HPW0
Prerequisite: LAND1321

A specialised individual study, enabling each student to gain or extend knowledge and understanding in some aspect of landscape architecture. The proposed topic area and title must be approved by the Course Authority and the Program Head. The thesis is essentially evidence of this individual study, under staff supervision and culminating in a written document deposited in the Faculty library. The course requires each student to carry out the required research, organization of material and writing in order to submit a complete draft of a written thesis in week 7. Each student then refines the draft and undertakes the preparation of illustrative material and completion of all necessary references and bibliography, before the submission of the final unbound manuscript for assessment. The unbound manuscript is assessed by two readers and returned with corrections noted, so that a bound copy of the thesis can be lodged with the Faculty Student Centre. This one session course is graded in accordance with the normal University grading system.

LAND1431
Advanced Research Project in Landscape Architecture
Landscape Architecture Program
UOC9 HPW2
Prerequisite: LAND1321

This course is an alternative to LAND1421 Landscape Thesis. Students in this course prepare a report following professional guidelines and gain further insight into the practice of landscape architecture. Students work closely with the instructor on the development of a set research topic and the preparation of a report. The course work refines skills in research, writing and report production. The course is structured as a combination of lectures and workshops, all of which support specific aspects of report preparation.

LAND1481
Landscape Practice 2
Landscape Architecture Program
UOC12

Students are required to obtain a minimum of 40 days of design office experience during enrolment in the program. This forms part of a total requirement of 90 days work experience.

LAND1583
Professional Practice
Landscape Architecture Program
UOC6

An introduction to the practice of landscape architecture, its scope and potential with a focus on current issues and practices. Topics include the framework of commercial and environmental law; project stages and procedures; contracts, consultancy and client relationships; legal and professional responsibilities with specific reference to ethics, negligence and risk; contract law and tender procedures. Assessment includes case studies, preparation of contract documents, preparation of a professional portfolio and a test.

LATN0102
Women, the Law and Society in Ancient Rome
School of Modern Language Studies
UOC6 HPW3

Students will read in Latin portions of Cicero's speech Pro Caelio, and a selection of Catullus' love poetry and Juvenal's sixth satire. Through this reading students will gain a good understanding of aspects of Roman legal oratory (and practice) and poetry (both lyric and satire) as they focus on representations of the behaviour of some aristocratic Roman women. At the same time, these demanding texts will improve considerably students' ability to handle the Latin language. Students will be expected to read in the original, approximately 40 pages of prose and poetry.

Assumed Knowledge: HSC Latin.

LATN1000
Introductory Latin A
School of Modern Language Studies
UOC6 HPW5
Excluded: GENT0432

Provides an introduction to the basic forms of the Latin language and essential grammatical constructions. It will be of particular interest to those who want to acquire a knowledge of Latin to support study in other fields, such as language learning, linguistics, ancient history, mediaeval studies or law, as well as those with a primary interest in Roman literature. The classes will be devoted to practice in translating from English into Latin and from Latin into English, and will also introduce students to some simple examples of Latin literature.

Note: Excluded HSC Latin or equivalent.

LATN1001
Introductory Latin B
School of Modern Language Studies
UOC6 HPW5
Prerequisite: LATN1000

Follows on from LATN1000, extending knowledge of Latin grammatical constructions and reading Latin texts of increasing difficulty. One class per week will be devoted to grammar, the others will be devoted to reading Latin texts. Language assignments will require translation from English into Latin as well as Latin into English.

Note: Excluded HSC Latin or equivalent.

LATN2001
Reinventing the Past: Roman Mythological Epic
School of Modern Language Studies
UOC6 HPW3
Prerequisite: HSC Latin or LATN1001

Students will read in Latin portions of Virgil's Aeneid 4 and Ovid's Metamorphoses 3. Through this reading students will gain a good understanding of how mythology and epic in Rome could be used to shape a vision of the past which problematized (Roman) imperial ideology. Students will also gain a good understanding of the Roman formulation of narrative epic. At the same time these texts will improve considerably students' ability to handle the Latin language. Students will be expected to read, in the original, approximately 1000 lines of poetry.

LATN2002
Mothers and Roman Sons: Suetonius and Tacitus on Families
School of Modern Language Studies
UOC6 HPW3
Prerequisite: HSC Latin or LATN1001

Students will read in Latin portions of Suetonius' life of Nero and Tacitus' Annals 14. Through this exemplary reading students will gain a good understanding of Roman social history and historiography. At the same time, these demanding texts will improve considerably students' ability to handle the Latin language. Students will be expected to read, in the original, approximately forty pages of prose.

LAWS1001
Criminal Law 1
Faculty of Law
UOC6 HPW4
Currently enrolled in a program in the Faculty of Law.

This course examines the principles of criminal law and liability. The aims of the course are: to promote and refine research and social policy analysis skills; develop a rigorous analytical and socially oriented approach to the study of criminalisation and criminal law; investigate the constitution of concepts like crime, criminal and criminal law; question traditional approaches which assume a unified set of principles; suggest an approach to criminal law as a number of diverse fields of regulation; acknowledge the importance of forms of regulation outside the criminal law; examine empirical material on the actual operation of the NSW criminal process such as court statistics and a court observation exercise; and examine the substantive rules developed in selected criminal offence areas. Topics include: the phenomenon of crime, the criminal process, components of criminal offences, drug offences, public order offences.

LAWS1002
Advanced Criminal Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Builds upon the introduction to criminal law and process in the compulsory core curriculum. Topics vary from year to year depending on current developments. The focus is on recent statute and case law, and current research developments in criminalisation, law and order politics, criminal responsibility, defences, criminal process and sentencing.

LAWS1003
Crime and Society
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This subject seeks to provide students with a theoretical framework in which to understand crime as a particular social phenomenon: the criminalisation of particular social activities, who commits crime and whose social activities are more likely to be policed. Through an analysis of selected readings and case studies, we will look at the role of sex, race and class in explaining men's and male adolescents disproportionate participation in crime, men's and women's involvement as victims of specific types of crime and why, when women and female adolescents do commit crime, their criminality disrupts the construction of normative, 'law-abiding' femininity. The case studies we will examine this semester include:

(i) The Trouble with Men and Boys

(ii) The Colour of Crime: race and crime statistics

(iii) The Creation of Crime through Moral Panics: sex crimes and the criminal body.

LAWS1005
Penology
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

A critical interdisciplinary subject involving historical, sociological, political and legal materials. Topics include: prisoners and the prison movement; discipline and punishment; media issues; the legal regulation of the administration of punishment through imprisonment; privatisation of prisons; reform. The emphasis on different topics may vary from year to year according to contemporary developments.

LAWS1006
The Criminal Appeals Project
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course provides an opportunity for students to combine class work on appellate procedure, client-centred representation on appeal, issue spotting and persuasive writing, with work on an actual criminal trial transcript for the purpose of developing grounds of appeal and an appellate brief.

It is envisaged that there will be one, three hour class per week. The classes will be used to discuss appellate procedure, the ethics of appellate representation, issue spotting and the art of persuasive argument. Classes will also be set aside for discussion and analysis of a trial transcript. An excursion is envisaged to the Court of Criminal Appeal.

LAWS1011
Criminal Law 2
Faculty of Law
UOC6 HPW4
Prerequisite: LAWS1001

This course examines the principles of criminal law and liability. The aims of the course are the same as for Criminal Law 1. Topics include homicide, criminal defences, offences against the person, offences of dishonest acquisition, attempts, complicity, conspiracy, sentencing and penal practices.

LAWS1031
Information Technology Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This computer law course - known informally as Cyberspace Law - examines the law governing the Internet/cyberspace. Topics may include governance of cyberspace (the role of self-regulation, control of domain names etc), the special significance of encryption technologies;

digital signatures and electronic transactions; property in cyberspace (copyright in hypertexts, liability of ISPs etc), computer crime, privacy and surveillance, internet censorship, and tortious and other civil liability issues. E-commerce issues are discussed. No prior computing knowledge is required. Computing and data communications concepts are explained where necessary. This course may be taught via the Internet, or via a combination of Internet and face-to-face classes. Further details are on the subject web pages (http://www2.austlii.edu.au/itlaw/).

LAWS1033
Communications Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course provides an introduction to the two broad areas of law regulating the content and carriage of communications in Australia. These include laws relating to the planning and licensing of telecommunications and broadcasting services; rules about who can establish, own and control media and communications businesses; the regulation of media content - classification and censorship, free speech and defamation, laws affecting journalists, and local content; and consumer protection. It is a very topical course, with current issues including regulation of the internet, the introduction of digital broadcasting, and convergence. The course provides an excellent introduction to areas of media and communications law, which can be studied in more detail in the LLM program.

LAWS1052
Foundations of Law
Faculty of Law
UOC6 HPW5
Currently enrolled in a program in the Faculty of Law.

This course considers the legal significance of the arrival of the British in Australia to the original inhabitants and the settlers, the principal institutions of the legal system and their historical roles, interrelationships, and operation. The course considers the State legal institutions' development up to Federation, and the move to independence from British institutions. The course emphasises the doctrine of precedent and statutory interpretation in relation to these institutions. A number of torts are then studied, notably intentional torts and nuisance, as an example of the legal system in action.

This course also includes an integrated research component, which introduces students to the literature relevant to the law in Australia, differentiates primary and secondary materials, and familiarises students with both traditional and electronic research methods.

LAWS1061
Torts
Faculty of Law
UOC6 HPW4
Prerequisite: LAWS1051 or LAWS1052

The forms of argument used in tort law as exemplified in the law of negligence are examined. There is a detailed discussion of specific issues such as recovery for personal injury, for pure economic loss and the liability of statutory authorities and occupiers. Vicarious liability, defences and assessment of damages are covered as well as breach of statutory duty and some intentional torts. A second strand of the course introduces students to the wide-ranging debates about the appropriate role and function of tort law. This requires developing a working knowledge of feminist, economic and various other theories (eg corrective justice) of tort law. In developing this working knowledge students will be exposed to secondary materials which build upon and refer to the cases and statutes which are included in the course.

LAWS1071
Contracts 1
Faculty of Law
UOC3 HPW2
Currently enrolled in a program in the Faculty of Law.

LAWS1071 Contracts 1 is the first of two compulsory components of the undergraduate curriculum which together examine the law governing the formation and performance of contracts. This course initially examines the distinctive nature of contractual obligations and some contemporary social and economic influences upon it. The course then examines systematically the legal principles governing the formation of contracts. Finally, it gives special attention to the possibility of enforcement by third parties, and the manner in which the law of estoppel can result in enforcement of non-contractual promises

LAWS1072
Contracts 2
Faculty of Law
UOC6 HPW4
Prerequisite: LAWS1071

Contracts 2 is the second of the two compulsory contract law components of the undergraduate curriculum. The course presupposes that students have acquired knowledge of the content of LAWS1071 Contracts 1. Topics examined in LAWS1072 Contracts 2 include: the identification and interpretation of contractual terms; factors which may vitiate the formation of a contract, such as misrepresentation, mistake and common law and statutory unconscionability; the effect of exemption clauses; the nature of performatory obligations; breach of such obligations; circumstances in which contractual obligations are terminated; and remedies for contractual breach. Students are encouraged to examine the role of contract law from an historical and contemporary standpoint.

LAWS1081
Property, Equity and Trusts 1
Faculty of Law
UOC6 HPW4
Prerequisite: LAWS1071, LAWS1072; or LAWS1420

Property, Equity and Trusts 1 is one of the compulsory "core" courses of the law program. A central objective of the course is to ensure that students gain a sound understanding of basic principles of the law of property, as well as equity and trusts. Course coverage: the conceptual nature of proprietary interests; the nature of possession; remedies to protect possession of goods and possession of land; an introduction to native title; the doctrine of tenure; fragmentation of proprietary interests and the doctrine of estates; future interests; the history of equity and the nature of equitable interests in land; creation and assignment of proprietary interests in land at law and in equity; the express, implied and constructive trust; express trusts; powers and duties of trustees; estoppel; priority between competing legal and equitable interests in land.

LAWS1082
Property and Equity 2
Faculty of Law
UOC6 HPW4
Pre-requisite: LAWS1081

Property and Equity 2 is one of the compulsory "core" subjects of the law course. The course builds upon the foundation work covered in Property and Equity I. Course coverage: the Torrens system of land title; creation of interests under the Torrens system and the resolution of priority conflicts; the caveat system and protection of unregistered interests; alienability of interests in land and the rule against perpetuities; the law of leases; the law of mortgages and securities; co-ownership and statutory trusts for partition and sale; planning the use of land; easements and covenants.

LAWS1091
Business Associations 1
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

An introduction to a number of important legal and theoretical aspects of the operation of business corporations. In addition, there is a brief overview of partnership law. The corporate law component of the course falls into two parts. The first deals with the process and incidents of incorporation, including the derivation of the modern corporation and an introduction to regulatory structures; an introduction to the corporate constitution, organs and capital; the separate personality of the corporation and its exceptions. The balance of the course is concerned with the structure and governance of the corporation. It examines the corporate organs (the board of directors and the general meeting) and the division of corporate powers between them; the duties and liabilities of directors and other officers; the remedies available to shareholders for the enforcement of directors duties and protection against oppression or overreaching by controllers. While much of this legal doctrine is equally applicable to the large corporation as to the small enterprise, the course stresses the problems, processes and transactions typically encountered by small incorporated businesses.

Note: If taken as a compulsory course, it is LAWS4010 UOC6.

LAWS1092
Business Associations 2
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS4010 or LAWS1091

Areas of company law and securities regulation not covered in LAWS1091 Business Associations 1, and particularly those of relevance to larger companies. Students who wish to complete a comprehensive study of company law and securities regulation are advised to take this course in addition to LAWS4010 or LAWS1091. The areas of law covered in this course are: The role of the ASX and ASIC as bodies regulating companies and securities markets; The restrictions on the capital structure of the company, ie. the creation of classes of shares and the rights attaching to those shares, the issue of shares at a discount, and the reduction of capital; The restrictions arising out of the various forms of the capital maintenance doctrine, ie. the circumstances in which a company may buy back its own shares, the rules against the giving of financial assistance, and the restrictions on the payment of dividends; The terms and conditions upon which companies may raise funds from the public, ie. the issue and content of prospectuses; The structure and regulation of the market for corporate control (ie. takeovers). The course approaches these topics in two different ways. The first way of approaching each of the topics will be to focus specifically on the scheme of regulation established by that law. The second way of approaching each of the topics will be to establish some themes common to each of these areas of law. In particular, the course will focus on the approaches to regulation adopted in each of these areas.

LAWS1812
Sport and the Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Sport is a central part of modern Australian society and culture. Not surprisingly, as professionalism has become the norm, those involved with sport, be they players, managers, administrators and supporters, are increasingly looking to the law to protect their rights and/or resolve their problems. How and why has this happened? The course touches on a number of different areas of law such as torts, contracts, criminal law, administrative law, and business associations. The aim is to draw upon specific issues from these various branches of the law and to place them in an historical and modern day context so as to give participants an understanding of the developing role the law is making in the world of sport as well as the policy and ethical issues facing those involved.

LAWS2019
Financial Economics and Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course aims to educate students in topics in the theory and applications of Financial Economics relevant to Law. Legal applications include prejudgment interest; analysis of securities fraud (including damages); taxation of new financial products; analysis of liability for negligent investment advice; market efficiency and insider trading; aspects of the business judgment rule.

LAWS2021
Industrial and Intellectual Property
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1081, LAWS1082; or LAWS3010

Areas of the law relating to concepts of intangible property including the law of patents, trademarks, trade designs, copyright, confidentiality, passing off and the protection of business reputation. This course is a survey of the areas of law relating to the protection of ideas and new technology and is an excellent introduction to further study in communications, information technology and internet law.

LAWS2022
Trade Practices
Faculty of Law
UOC8 HPW3
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Analyses the operation of competition law in Australia and the types of conduct and practices that are anti-competitive. The focus is on the restrictive trade practices provisions of the Trade Practices Act 1974, the decisions of the Federal Court and the determinations of the Trade Practices Commission and the Trade Practices Tribunal. Where relevant, US, UK and European decisions are considered.

LAWS2023
Trusts
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The nature, history and classification of trusts; the use of trusts in modern law; interaction of the trust and contract; express private trusts; purpose trusts; discretionary and protective trusts; the creation and variation of private trusts; trusts in commerce; resulting and constructive trusts; charitable and public trusts; powers and duties of trustees.

LAWS2024
Commercial Finance
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Commercial Finance aims to provide an introduction to some principal areas of commercial law of general relevance to legal practice and of particular relevance to those interested in banking. Topics: 1. Negotiable instruments, including a study of commercial bills against the background of a description of the operation of the commercial bills and money markets. 2. Secured transactions: students are introduced to the law on securities over personal property including priorities; reference is made to credit arrangements in use in the distribution and sale of goods and services. 3. Introduction to law of bankruptcy.

Note/s: This course may be studied on its own but students wishing to complete an introductory study of banking law should take LAWS2033 The Law of Banking as well. Students wishing to complete an introductory study of commercial law are advised to take LAWS2026 Commercial and Consumer Sales. Other areas of commercial law are dealt with in LAWS2037 Consumer Protection Law.

LAWS2025
Advanced Contract Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1071, LAWS1072; or LAWS1420

This course normally covers some significant topics of the law of contract which are usually omitted from the compulsory contract law courses, LAWS1071 Contracts 1 and LAWS1072 Contracts 2 (eg illegality; agency). It then deals in depth with a selection from the following list of topics which are very important in commercial practice, but are dealt with somewhat briefly in the initial courses: uncertainty and incompleteness in contract formation; economic duress; termination for breach and frustration; privity and third party rights; interpretation). The course constantly considers the increasing impact of equitable principles, and of the law of restitution, on the common law of contract. There is likely also to be an examination of some leading theories on the nature and likely development of contract law.

LAWS2026
Commercial and Consumer Sales
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This is an introduction to principal areas of commercial law of relevance to legal practice. This course deals primarily with the intersection of property and contract law in the sale of goods, a species of personal property. It includes a study of product liability, including the liability of the sellers, manufacturers and credit providers. It provides a foundation for the study of risk in the rules for the transfer of property in goods. A major component of the course is the study of Trade Practices law particularly the prohibition against misleading and deceptive conduct. The course examines available statutory remedies.

LAWS2027
Industrial Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The Commonwealth and New South Wales systems of regulation of industrial disputes. The Commonwealth and New South Wales systems of workplace bargaining. The Commonwealth and New South Wales legislation regulating the activities of trade and industrial unions, including their internal administration. The Commonwealth and New South Wales systems for arbitration of unfair dismissals.

LAWS2028
The Law of Employment
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The employer-employee relationship with particular attention to the individual contract of employment on which that relationship rests, the legal concept of an employee, incidents of the employment relationship, the mutual rights and duties of the employer and the employee; the termination of the relationship with particular reference to the discharge of the contract of employment by performance, by notice and for cause and the remedies for wrongful termination; individual contracts and workplace agreements; the legislation which is designed to protect wages, hours and various leave entitlements; legislation with respect to unfair dismissal; AntiDiscrimination; programs for Equal Employment Opportunity and Affirmative Action.

LAWS2031
Occupational Health and Safety Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The law relating to compensation for work-related injuries and disabilities and to the regulation of safety standards in workplaces. Topics include: the employer s common law duty of care; the common law duty of care of manufacturers of products for use at work; the development and application of workers compensation schemes; existing protective legislation in Australia; individual rights under protective legislation.

LAWS2032
Employment Protection Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The law relating to protection against dismissal from employment. Topics include: basic concepts of substantive and procedural fairness; statutory protection against unfair dismissal under Commonwealth and State legislation; the British system; international conventions; directives of European Parliament; regulation of redundancies; employment protection provisions in industrial awards; employment protection through regulation of unfair contracts; employment protection through equitable remedies; the labour market implications of employment protection.

LAWS2033
Law of Banking
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The Law of Banking provides an introduction to aspects of the practice of banking and to relevant legal principle. Both traditional views and contemporary developments are adverted to. While the central focus is on the relation of banker (in legislation now authorised deposit-taking institution) and customer, not only the cheque but also a range of recently developed and developing banking instruments and processes are considered. Regulation and deregulation are discussed and in that context functionally related activities are traversed.

Note: This course may be studied on its own but students interested in a wider view of banking law should also enrol in LAWS2024 Commercial Finance.

LAWS2035
Land Dealings: Residential and Commercial Contracts
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The law of vendor and purchaser with special emphasis on the standard form contract for sale of land in use in New South Wales. Aims to benefit those intending to practise in any field of land law and property law, whether in large, medium or small legal firms, city, suburban or country. The course focuses upon both commercial and residential contracts. The course will also benefit those at the bar practising in the property and equity area. Topics: whether a binding contract of sale exists, auction contracts; vendor disclosure and anti-gazumping legislation, the requirements of the Statute of Frauds, exchange of contracts, proper preparation of the contract of sale, detailed examination of the standard Law Society approved contract of sale, the law concerning notices to complete and other remedies available to vendor and purchaser, remedies for breach of contract, damages, liquidated and unliquidated, termination, specific performance; the law of deposits.

LAWS2037
Consumer Protection Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Legislative strategies for the protection of consumers and the effect of this legislation upon markets. The following protective strategies are considered: advertising self regulation; statutory regulation of advertising; the regulation of packaging and labelling; protection against sales promotion techniques; franchising; the licensing of persons dealing with consumers; product liability; statutory regulation of unconscionable conduct; and special procedures for consumer claims.

LAWS2040
Interests in Securities
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course focuses primarily on the principles under various strands of law that underlie dealings in securities and in interests in securities. It is a mix of the laws of property (and, in particular, relating to intangibles and secured transactions), contract and corporate insolvency as well as thorny questions of the conflict of laws. We look at these not only from an Anglo-Australian perspective but on a comparative basis examining the analysis in other countries including the United States, Japan and Germany. We also consider international initiatives underway to harmonise law in this area. The course necessarily provides background on the modern clearance and settlement structures used in Australia and around and the variety of holding patterns that are now common place

LAWS2041
Financial Services Regulation
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The course provides an analysis of the Financial Services Reform Act 2001 (now in the Corporations Act), Australia's most thorough reform of financial regulation. It studies the main techniques of financial regulation: disclosure, licensing, prohibitions of market misconduct, self regulation and powers of investigation and enforcement. It does this through considering the rules and practices constituting financial regulation, the market institutions and regulatory context in which it operates and the additional insights we gain from contemporary regulatory studies. The course tackles current issues in financial regulation such as the impact on law of product and market convergence, intermediary conglomeration, globalization, use of computer and telecommunications and responses to recent ethical failures in financial services.

LAWS2051
Elements of Income Tax Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

1. Introduction: the policies served by taxation with particular reference to distributional and economic objectives; the uniform tax system: the structure of the current Income Tax Assessment Act and its administration. 2. A critical analysis of the principal concepts of the law of income taxation and the taxation of capital gains and fringe benefits; the law on income

and deductions as applicable to individuals; the trading stock provisions and tax accounting; concepts of residence and source. 3. The judicial interpretation of taxing statutes; ethical and policy questions concerning tax avoidance.

LAWS2052
Advanced Revenue Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS2051

Areas of income tax introduced in LAWS2051 Elements of Income Tax Law in greater depth. Several areas of income tax law and other revenue law not touched on in the earlier course. Topics: 1. taxation of partnerships, trusts and companies, including capital gains tax; 2. assignment of income; 3. tax avoidance and evasion - analysis of general, and specific, antiavoidance legislation and penalties legislation; 4. an introduction to aspects of international tax including some international tax agreements; 5. tax decisionmaking and review in the context of a mass decision making process; 6. an introduction to goods and services tax.

Note: Students should have completed LAWS4010 Business Associations 1 6UOC or LAWS1091 Business Associations 1 6UOC or be taking that course concurrently with LAWS2052.

LAWS2065
Comparative Law
Faculty of Law
UOC6 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Some of the principal legal systems of the world, and the advantages in looking at legal problems from a perspective broader than that of one's own legal system. Three parts: 1. An introduction to the Modern Civil Law, Roman, Hindu and Islamic legal systems, wherever possible comparing them with the Common Law system, and with each other. The history and uses of Comparative Law, and a discussion of the manner in which the Civil Law and Common Law systems have interacted with the others, and with each other; 2. a more detailed study of the Civil Law system, through the medium of criminal procedure and administrative law in Europe, especially France, against the background of the common law; 3. student-led seminars examining, comparatively, topics of world-wide concern, eg. consumer protection, the role of the corporation in modern society, protection of civil liberties, judicial review of administration action, and environmental protection.

LAWS2079
Restitution
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Unjust enrichment, along with such subjects as contract and tort, is one of the law's primary sources of rights and obligations. This course examines unjust enrichment, and the law's response to unjust enrichment, called restitution. Liability in unjust enrichment is encapsulated in the phrase "unjust enrichment at the expense of the plaintiff". We commence with enrichment. Not all benefits received by the defendant are enriching and the courts have developed tests to determine whether the defendant is enriched and whether this enrichment is at the plaintiff's expense. The next question is injustice, this question being answered by the unjust factors. We will cover various unjust factors, including mistake, failure of basis, pressure and policy motivated unjust factors. Finally, we will look at two defences: change of position and estoppel.

LAWS2081
Public International Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

International law seeks to order human affairs at the international level. It accordingly covers a vast field, extending to issues such as autonomy or otherwise of peoples and territories, the allocation of resources (land, maritime and air), the preservation of the environment, the regulating of interstate transactions, the resolution of disputes and the maintenance of international peace and security. This course aims to provide a solid introduction to certain central topics within the overall field of international law. Topics covered include: the nature and sources of international law, the relationship between international law and domestic law, international agreements, statehood and title to territory, territorial and maritime jurisdiction, recognition of states and governments, immunities, state responsibility, the use of force, and peaceful settlement of international disputes.

LAWS2082
Conflict of Laws
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The Conflict of Laws or Private International Law is a species of private law which deals with problems involving a foreign or an interstate element. The introduction of that foreign or interstate element necessitates an examination by a New South Wales court of three main issues: 1. Whether or not the court has jurisdiction to deal with the problem, and even if it does, whether or not it will assume jurisdiction. 2. If it has assumed jurisdiction the court must then ask itself what is the most appropriate law to apply to the problem before it. 3. Or, the court may have to decide whether or not to recognize and enforce a judgment of a foreign court or the court of another state. Those problems which involve interstate elements may be affected by provisions of the Commonwealth Constitution or by some federal legislation. Failing that, the solution to these interstate problems may call for an approach that is different to the solution of international problems simply on the basis that we are dealing with States of the same Commonwealth. For the purposes of this course the solutions that courts and legislatures have offered to such problems are examined in a few selected areas such as family law, contracts, torts and property. Wherever possible, emphasis is placed on the development of more appropriate solutions to these problems.

LAWS2084
International Trade Law: The Law and Policy of the WTO
Faculty of Law
UOC8 HPW4
Prerequisite LAWS1001, LAWS1011; or LAWS1610. Corequisite LAWS2311 or LAWS1010 AND Excluded LAWS9972

This course introduces students to the legal, business and policy aspects of international trade, focusing on the legal framework of the various WTO Agreements. This course analyses the regulatory legal principles of the WTO and how they operate at both the national and international level. More specifically, the course covers issues such as tariffs and tariff negotiations, quotas, most favoured nation, regional trade agreements, national treatment, intellectual property, anti-dumping, export subsidies, countervailing duties, exceptions for environmental, health and safety and other issues of contemporary importance. The course gives participants a sound understanding of key legal issues and principles relating to international trade and a thorough knowledge and understanding of the importance of domestic and international policy issues to the world trading system. There are no prerequisites for this course and no background in economics, international relations or international law is assumed.

LAWS2085
Comparative Law
Faculty of Law
UOC8 HPW0
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course will introduce students to some of the major legal systems of the world. Comparative law has an important function in enhancing an understanding of our own system and in raising awareness of alternative solutions to legal issues. Increasingly, comparative law is used for law reform purposes and by judges in their decision-making process. By the end of this course students should be able to apply comparative methodology for law reform purposes, compare legal institutions and substantive laws of foreign legal systems in a meaningful way with similar institutions and laws in the Australian legal system, critically assess the possibilities and limitations in transplanting law from one country to another, and explain and discuss the impact of cultural, political and economic factors on law. Topics include functions and aims of comparative law, comparative methodology, the theory of 'legal families', the 'civil law' - 'common law' dichotomy, introduction to the German legal system, comparative approaches to tort law, reception of foreign laws, comparative human rights jurisprudence, the role of the European Court of justice, harmonisation and unification of laws, and globalisation.

LAWS2086
International Law Competitive Moot
Faculty of Law
UOC8 HPW0
Prerequisite: LAWS2088

The International Moot Program is open to students who have been selected to represent UNSW in one of the following competitions: Jessup International Law Court Competition; Jean Pictet International Humanitarian Law Competition; Manfred Lachs Space Law Moot Competition; and Vis International Commercial Arbitration Moot Competition. Each of these competitions is a prestigious international competition which involves extensive research and writing of case memorials followed by participation in oral mooting rounds and the possibility of representing Australia in final competition rounds overseas. Students will be selected for teams early in Session 2 on the basis of academic merit, research, and/or mooting skills and experience. The majority of the work for each competition will be conducted over the summer months. Application is open to all students who have completed International Advocacy, Public International Law or International Humanitarian Law.

LAWS2088
International Advocacy
Faculty of Law
UOC8 HPW4
Prerequisites: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010; Excluded: LAWS4082

This course has a dual aim: to train students in advocacy before courts and tribunals, and to develop and enhance students' understanding of litigation in international fora. Students will be provided with an excellent grounding in issues arising in litigation on the international stage, including jurisdiction, admissibility, interim measures, principles of state responsibility and remedies. The course will focus on a variety of international courts and tribunals, including the International Court of Justice, the International Criminal Court, international commercial arbitration, the WTO Dispute Panel, the UN Human Rights Committee, and others. The course will also have a practical component aimed at enhancing the advocacy skills of participants and applying the theory to the practical aspects of the conduct of international advocacy. Students will be involved in the preparation and presentation of a hypothetical case before an international tribunal of their choice and will be given the opportunity to develop their advocacy skills, including the preparation of written submissions and delivery of oral submissions, in a non-competitive context. Those students not interested in the advocacy dimension of the course have the option of completing an essay focussing on international courts and tribunals. This course is the preferred prerequisite for the International Moot program.

LAWS2091
Introduction to Space Law
Faculty of Law
UOC4 HPW0
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course provides a basic understanding of the legal regime regulating the use of space, which is necessary in order to apply the law to the many space activities currently (and in the future) being undertaken. This course examines the underlying legal principles that specifically regulate the use, exploration and exploitation of space. It examines the evolution, legal framework and organisational structures of this area of law, and concentrates on the 5 specific international space law treaties as well as the various United Nations Principles. The domestic regulatory systems of a number of countries, including the recently implemented Australian legal regime, are also discussed.

LAWS2123
Chinese Legal System
Faculty of Law
UOC8 HPW0
Prerequisite: (LAWS2311, LAWS2321) or (LAWS1010) and LAWS6210

This is a two-week intensive course held in Beijing each January. It provides an introduction into the legal system of the People's Republic of China with particular reference to modern developments in contract and commercial law. China opened up its economy to market forces only in the late 1970s. When it did so, law and the legal system lost the pariah status to which they had been assigned during the Proletarian Cultural Revolution. The course examines the role law is playing in modern China by reference to its historical antecedents. The course examines particular areas of development not only for their own sake but also as indicators of the changing role of law in Chinese society. Areas which are the subject of particular attention include: the elements and institutions of Chinese legal system; the role of law in Chinese society from the perspectives of legal history and philosophy; contract law; intellectual property law; foreign investment law; corporate and securities law; foreign trade law and mediation, arbitration and civil enforcement procedures.

LAWS2140
Public Law
Faculty of Law
UOC3 HPW2
Currently enrolled in a program in the Faculty of Law.

This course introduces the students to the study of public law, including its methods of reasoning, history and fundamental principles. It deals with introductory principles and theories of constitutional and administrative law and the essential features of our system of government. Topics include the Westminster System, Federation, Indigenous Peoples and the Question of Sovereignty, the Federal Parliament, the Separation of powers, Human Rights and Bills of Rights and Constitutional Change.

Note/s: Taken concurrently with LAWS1071 Contracts 1 as a composite course.

LAWS2148
Sir Harry Gibbs National Moot Competition
Faculty of Law
UOC8 HPW0

The Sir Harry Gibbs National Moot Competition is the only national mooting competition in Federal Constitutional Law. It is organised by the T.C. Beirne School of Law at the University of Queensland and supported by the Australian Association of Constitutional Law. The competition began in 2002 with UNSW as a participant. The competition is held in Brisbane each year in early October. The four team members will receive course credit for their participation.

LAWS2150
Federal Constitutional Law
Faculty of Law
UOC6 HPW4
Pre-requisite: LAWS2160

Federal Constitutional Law deals basically with a number of the Commonwealth's legislative powers and their limitations, as discussed in the case law. In particular, the following powers and limitations: trade and commerce, external affairs, corporations, race, aliens, appropriation, grants and taxation, inconsistency of Commonwealth and State laws, freedom of interstate trade and commerce, excise and implied limitations on Commonwealth and State powers, including implied rights. larger ideas concerning the nature of constitutional interpretaion and the basic values of public law are also discussed. Further study of constitutional law may be undertaken in LAWS2292 The High Court of Australia and LAWS 429 Comparative Constitutional Law.

LAWS2156
Issues in Australian Constitutional Law
Faculty of Law
UOC4 HPW4
Prerequisite: LAWS2150

A seven week, 4UOC course on selected topics in Australian constitutional law and conducted in seminar style. The first three weeks of the course centre on discussion and analysis of prepared materials. The remaining four weeks are allocated to student led seminars on topics selected for research essays. Emphasis is on recent constitutional litigation and material not developed in detail in compulsory courses. Issues for inclusion in the prepared materials and/or on the list of suggested research essay topics may include: status of Territories, contemporary problems about State Constitutions, just terms for acquisition of property, re-thinking the conciliation and arbitration power, technology and the Constitution, application of High Court decisions in lower courts, style and method in constitutional argument, developments on Chapter III, viability of proposals for amendment, standing in constitutional cases, amicus curiae, role of special leave in constitutional appeals.

LAWS2158
Principles of Colonial Constitutional Law
Faculty of Law
UOC4 HPW4
Currently enrolled in a program in the Faculty of Law.

This course focuses on the constitutional law principles which have influenced and continue to influence aspects of contemporary Australian constitutional law and structure. The object of the course is to demonstrate that the substance of many current principles may be traced to developments in the colonial era. The first three weeks of the course centre on discussion and analysis of prepared materials. The remaining four weeks are allocated to student led seminars on topics selected for research essays. Topics in the prepared materials and/or on the list of suggested research projects may include: Commonwealth Constitution as an instrument of colonial self-government, judicial review in the colonial period, repugnancy doctrine, significance of the Colonial Laws Validity Act, the legacy of manner and form, origin of the "peace, order and good government" formula, extra-territoriality, colonies and treaties, colonial Governors and military powers, the Viceroy debate, concept of plenary power, structure of colonial constitutions and charters, influence of the British North America Act, the Federal Council of Australasia experiment, role of the Privy Council, long shadow of English constitutional revolutions, non-citizens and prerogative powers, the British connection and colonial constitutional legacies in the twentieth century, colonial models of responsible government.

LAWS2160
Administrative Law
Faculty of Law
UOC6 HPW4
Currently enrolled in a program in the Faculty of Law.

This course considers the law concerning the accountability and control of government officials. Topics covered include: delegated legislation; the duty to give reasons for administrative decisions; freedom of information, the Ombudsman, Administrative Appeals Tribunals; and judicial review of administrative action (the principles of legality and procedural fairness).

LAWS2181
International Humanitarian Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

International humanitarian law (also known as the law of war, or the law of armed conflict) consists of the international rules governing the conduct of hostilities, the methods and means of warfare, and international rules designed to protect the victims of armed conflict. It can also be said to cover international rules relating to treatment of displaced persons and refugees where these persons are fleeing from armed conflict. This course will examine the laws relating to the conduct of armed conflicts, including the four 1949 Geneva Conventions and their historical antecedents; the 1977 Protocols; the laws of the Hague; problems of enforcement of humanitarian law; war crimes; humanitarian intervention; protection of refugees; and the role of NGOs, the Red Cross, and the UN. The proliferation of internal conflicts during the last few decades and the increasing threat of international terrorism is forcing us to reexamine many of the traditional axioms of international human rights and humanitarian law. The course will examine the contemporary relevance of international humanitarian law in light of these challenges.

LAWS2182
International Human Rights Law and Advocacy
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course introduces students to the fundamental legal principles and institutions of international human rights. It focuses particularly on the application of human rights principles to current issues, including the role of human rights in a rapidly globalising world. Special attention is given to economic, social and cultural rights, human rights and developing countries, the expansion of multinational corporations, trade and investment liberalisation, the rise of terrorism, the rights of women, the "cultural relativism" debate and the rights of Indigenous peoples.

LAWS2183
Australian Journal of Human Rights
Faculty of Law
UOC8 HPW0

A student may be deemed, on the recommendation of the Head of School and the Faculty Advisers to the Australian Journal of Human Rights, to have satisfactorily completed this course on the basis of work done as Student Editor for a specified number of issues of the Australian Journal of Human Rights.

LAWS2184
Human Rights in the Global Economy
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course introduces students to the policies and legal principles operating in the global economy and their relationship with human rights law, with particular emphasis on economic and social rights, and analyses the impact on those rights of the global economic institutions and multinational corporations. Controversial issues will be explored, including the lending policies of the Bretton Woods Institutions (the World Bank and the IMF), the human rights impacts of the law of the World Trade Organisation and liberalisation of foreign investment in the Global South. The course studies and evaluates current initiatives for the regulation (and self-regulation) of transnational corporations in relation to human rights. Cases raising relevant human rights issues before the WTO's Appellate Body and before selected national and international courts and tribunals are studied in detail.

LAWS2185
Public Interest Litigation: Origins and Strategies
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Public Interest Litigation: Origins and Strategies will examine how to realise human rights and advance social justice through the practice of law. The course will trace the emergence of the public interest litigation (PIL) movement by reference to the use of law in shaping social policy in America, India and South Africa. Students will evaluate various litigation strategies adopted to advance a public interest in the Australian context. Topics covered will include: test case litigation, amicus curiae interventions, class actions or representative proceedings, and litigating Bills of Rights; barriers to conducting PIL, including standing, resource constraints and the risk of adverse costs orders. A critical aim of the course is to encourage students to recognise both the value and limitations of public interest litigation and to demonstrate a capacity to devise legal strategies, with reference to case and statute law, to promote issues of social importance.

LAWS2186
Human Rights Defender
Faculty of Law
UOC8 HPW0
Currently enrolled in a program in the Faculty of Law.

The Human Rights Defender is a semester-long internship with the journal and the Australian Human Rights Centre (AHRC). The Defender is a tri-annual publication which has a long history with the AHRC and is known for providing high-quality, engaging content on human rights issues, both nationally and globally, in an accessible format. Students will be responsible for overseeing the production of at least one edition of the journal. The Editorship will provide students with an understanding of current human rights issues as well as organisations and individuals operating domestically and internationally that advocate and campaign on these issues. Students will be responsible for liaising with these organisations to commission articles for the Defender. In addition, students will liaise with, and coordinate, volunteeer student editors and assign tasks accordingly. The Student Editor will be working as part of a team within the Defender and also within the AHRC. They will gain skills in editing and proofing, writing, working with and coordinating volunteers, and commissioning and forming relationships with other human rights organisations, academics and members of the legal profession.

LAWS2212
Australian Indigenous Law Reporter
Faculty of Law
UOC8 HPW0

A student may be deemed, on the recommendation of the Head of School and the Faculty Advisers to the AILR, to have satisfactorily completed this course on the basis of work done as Student Editor for two issues of the Australian Indigenous Law Reporter.

LAWS2213
Foundations Enrichment 1
Faculty of Law
UOC2 HPW2

This course will provide students with extra support, and assistance to enhance the successful complete of first year in minimum time. The course provides intensive small group tutoring for Indigenous students, focussing on developing skills in legal writing, reading and comprehension, problem-solving, and critical and analytical skill development.

LAWS2214
Foundations Enrichment 2
Faculty of Law
UOC2 HPW2

This course is an extension of Foundations Enrichment 1 in its focus on providing support and sufficient resources to Indigenous LLB students. The course requires students to attend the Kingsford Legal Centre as a group to gain first hand experience of practical legal problem-solving, community legal practice and client interaction. Communication skills, in particular interviewing skills, will be a major focus of this course, along with increasing student's self-confidence. Students will gain the opportunity to experience law in a practical sense and thus gain an enhanced understanding of the general legal system, the legal aid system and the relevance of legal practice to a community.

Pre-requisite: LAWS2213 Foundations Enrichment 1

LAWS2222
Communications Law: Broadcasting and Telecommunications
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course addresses the law regulating the structure of communications in Australia. This is a very topical course with current issues including digital broadcasting, convergence, and the implications for traditional regulation of broadcasting and telecommunications. Topics include: planning and licensing of telecommunications and broadcasting services; rules about who can establish, own and control media and communications businesses; the introduction of competition into telecommunications in Australia in the 1990s; consumer protection issues in relation to communications; and, rules affecting electronic communications content such as the Australian Content Standard, the Anti-Siphoning rules governing premium sports on free-to-air and pay television; and classification schemes including film censorship guidelines and online content regulation.

LAWS2232
Law After Communism
Faculty of Law
UOC8 HPW4
Prerequisite LAWS1011,LAWS1011, Corequisite LAWS2311. Excluded EURO2700

This course will seek to introduce students to some of the characteristic features of the post-communist world, to some of its difficulties, problems, challenges and triumphs; and to similarities and differences among the developments in post-communist societies. In particular law students will focus on the attempts to build and rebuild legal institutions to replace or transform those which were inherited from communism, and of the problems and prospects facing such attempts. Among the particular issues discussed are the prerequisites for establishing the rule of law after its prolonged absence, the role of constitutions and constitutional courts, the legal requirements for, and problems associated with, privatizing an economy which long had no private property, the legal impact of the legal standards of the European Union on any countries that want to join it and must satisfy those standards, the moral and legal problems associated with attempts to deal with the legacies of an unsavoury past. These latter problems include questions about the present role of former communists and informers of communist secret services. They also include questions of criminal justice in relation to war crimes and crimes against humanity in the former Yugoslavia.

LAWS2241
Jewish Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The course provides a comprehensive introduction, taught in three sections, to the history, philosophy and principles of Jewish Law. The first section addresses some of the fundamental principles of Talmudic Law, including its role as a legal system, its seat of authority, its flexibility, the place of equity and custom, the relationship between halachah (Talmudic Law) and the State of Israel, and its influence on other legal systems. The second section deals with the main headings of the Talmudic legal system - property, torts, contracts, partnership, agency, trusts, employer and employee, criminal law, privacy, marriage and divorce, inheritance, conflicts and choice of law, international law and legal procedure. The third section introduces text material (in English translation) on Talmudic civil and criminal law.

LAWS2242
Law and Religion. Christianity and the Western Legal Tradition
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The course will explore the complicated and fascinating relationship between Christian theology and law. The religious dimension of western law for a long time was forgotten or overlooked. The change started with publication of Harold Berman's "Law and Revolution. The Formation of the Western Legal Tradition". The issue of law and religion has long been pushed to the margins of the main trends of jurisprudence, but in the past few years there is a growing number of publications on 'law and religion'. The aim of the course is to explore that stream of thinking about law and its connection with theology and show the religious sources of many Western legal concepts.

The course will focus on historical and contemporary issues, among them the impact of Christianity and its theology on the western legal tradition from Paul, Augustine of Hippo through to Thomas Aquinas and Luther, Calvin and others. Their impact on changes in the western concept of law will be explored. The reciprocal impact of law on Christianity and its theology will also be investigated. Contemporary scholarship on, and crossing, the borders between Christian theology and law will also be discussed.

LAWS2251
Legal History
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

One of the themes of this course is the nature of legal historiography. The course also examines the emergence of the rule of law. It charts the role played by law and legal institutions in the division of political power, and falls into three parts: 1. the struggles between the courts, the parliament and the monarchy in seventeenth century England, with special attention to the conflict between Sir Edward Coke and James I, the English Civil War and the Glorious Revolution; 2. the political consolidations of eighteenth century England with special attention to Blackstone, as well as to the assessments of modern historians like E.P. Thompson and Douglas Hay; 3. the reception of legal ideas into the penal colony of New South Wales, and the role played by rule of law in the political formation of a new society.

LAWS2272
Australian Immigration Law and Practice
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Examines Australian immigration law and practice. Focus is on the role of law in immigration selection and control, and the notions of citizen and alien. The course considers different models of selection and control. It examines in detail the present law in relation to the main visa classes granting permanent and temporary residence. Topics include: freedom of movement, residence and citizenship, entry for migrants, and temporary residents, admission and stay under international obligations, illegal entry, the function of compliance, the detention and removal of illegal immigrants and the immigration appeal system.

LAWS2275
Regulation of Economic Activity
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Theories, economics and politics of regulation. The role of competition policy; the case for exemption. Regulation v self-regulation. Regulatory reform. Selected case studies in economic regulation.

LAWS2282
Advanced Administrative Law: Adapting to Regulatory Change
Faculty of Law
UOC8 HPW4
Pre-requisite: LAWS2160 Administrative Law; Co-requisite: LAWS2311 Litigation 1

Distinctions between public and private have long troubled administrative lawyers interested in issues of judicial and merits review, regulatory design, and governmental liability in tort and contract. Corporatisation, privatisation, intensified outsourcing, tort law reform, and statutory and Executive compensation schemes in substitution for tort law, have all increased the need to study these issues in depth. Professors Mark Aronson (UNSW) and Carol Harlow (London School of Economics) will conduct the bulk of the course, with additional guest classes by Professors Dennis Pearce and John McMillan (former and current Commonwealth Ombudsmen) and Professor Mike Taggart (Auckland).

LAWS2292
The High Court of Australia
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The role of the High Court of Australia as a legal, political and social institution in the framework of Australian government. Topics include: the relationship of the High Court to the other institutions of government; the relationship of the Court to other courts within the judicial system; the historical development of the Court and its distinctive features through different periods of that development; the Court's composition and internal working, its style of legal reasoning, its contribution to the development of distinctively Australian law in selected areas and the place of its individual members in the Australian judicial tradition. The course is divided broadly into five parts: the history of the Court and its justices; appointment and removal of justices; the jurisdiction and operation of the Court; the Court's role and record in public and private law; and the Court's relations with the political branches of government, including its public accountability. About half of the course is based on discussion of prepared materials, and the other half on research essays by each student presented to the class in the style of a seminar. One or more High Court justices may be invited to address the class. In 2001 former Chief Justices Sir Gerard Brennan and Sir Harry Gibbs addressed the class.

LAWS2293
Constitutionalism
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course will introduce students to discussion and criticism of the institutional and theoretical underpinnings of a liberal-democratic constitutional order. It will do this by way both of examination of some of the key moments in constitutional development and design, and of discussion of some of the central issues of political and legal theory which constitutionalism raises. Among the topics considered are: 1. Philosophical history of the notion of constitutionalism and of such related ideas as: sovereignty, rights, the rule of law, separation of powers, republicanism, and federalism; 2. Issues in the design of constitutional order: the American Founding Fathers, the nineteenth century idea of the Rechtsstaat (law-governed state), and contemporary constitutional experiments in post-communist Europe; 3. Constitutional interpretation via judicial review, particularly the problem of applying constitutional texts in changing circumstances; 4.The sources of constitutional legitimacy.

LAWS2301
Remedies
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

A study of the principal private law remedies at common law and in equity. The course analyses the nominate remedies of Australian law by reference to the remedial goals of the legal system, namely compensation, restitution, punishment and coercion. The relationship between the various remedies is also explored, as are the ways in which remedies are enforced in practice. The course aims to synthesise the law studied in courses, such as Torts, Contracts and Property and Equity from a remedial perspective.

LAWS2303
Clinical Legal Experience (Intensive)
Faculty of Law
UOC16 HPW16
Prerequisites: LAWS6210; LAWS2311

Clinical legal education takes students out of the classroom and places them in a legal practice. This enables students to analyse the effect of law in practice and engenders in students an appreciation of the ethical, social and practical complexity of the legal system. Students are required to attend the Faculty's clinic, Kingsford Legal Centre, two full days a week. The clinic is a community legal centre which provides a free legal service to the local community. Students manage clients' files under the supervision of experienced clinical supervisors who are practising solicitors. Students take responsibility for the interviewing of clients and the research, drafting and preparation necessary to resolve legal difficulties by litigation or other means. In addition to two days attendance, students are asked to attend evening advice sessions during which they interview people attending for legal advice with volunteer lawyers. A daily tutorial and a weekly class provide an opportunity for discussion and analysis of students' experiences, and for instruction in legal procedure and skills. There are regular opportunities to attend Court and Tribunals. Major areas of work in which students will be involved include domestic violence, discrimination, consumer credit, victims compensation, family law, employment law, wills, legal aid and criminal justice issues. As well as clients files, students take part in community education, and in policy and reform work. The course is offered in both teaching sessions and over summer. A student who has enrolled in and who has passed or failed LAWS2304 Clinical Legal Experience may not enrol in this course without the approval of the Associate Dean. Students should note that due to requirements of caseloads, students will be required to attend during midsession holidays and study breaks.

LAWS2304
Clinical Legal Experience
Faculty of Law
UOC8 HPW8
Prerequisites: LAWS6210; LAWS2311

Clinical legal education takes students out of the classroom and places them in a law practice. This is both to enable students to analyse the effect of law in practice, and to engender in students an appreciation of the ethical, social and practical complexity of the legal system. Students are required to attend the Faculty's clinic, the Kingsford Legal Centre, one full day a week. The clinic is a community legal centre which provides a free legal service to the local community. Students work on clients files under the supervision of experienced clinical supervisors who are practising solicitors. This involves interviewing clients, and the research, drafting and preparation necessary to resolve legal difficulties by litigation or other means. Students are also required to attend evening advice sessions during which they interview people attending for legal advice from volunteer solicitors. A daily tutorial and a weekly class provide an opportunity for discussion and analysis of the students' experiences, and for instruction in legal procedure and skills. There are also regular opportunities to attend Court and Tribunals. Major areas of work in which students will be involved include domestic violence, discrimination, consumer credit, victims compensation, family law, employment law, wills, legal aid and criminal justice issues. As well as clients files, students take part in community education, and in policy and reform work. The course is offered in both teaching sessions and over summer. A student who has enrolled in and who has passed or failed LAWS2303 Clinical Legal Experience (Intensive) may not enrol in this course without the approval of the Associate Dean. Students should note that due to requirements of caseloads, students will be required to attend during midsession holidays and study breaks.

LAWS2305
Clinical Program - Employment Law
Faculty of Law
UOC16 HPW16
Prerequisites: LAWS6210; LAWS2311

The Employment Law clinic requires students to undertake work for real clients while providing the student with opportunities to analyse the effect of the law in practice. Through their work for disadvantaged clients on

case, education and policy files students develop their understanding of substantive and procedural law and ethical issues in the area of employment. Students undertaking this Clinic will be working in a legal practice at Kingsford Legal Centre on employment law matters. They will be required to attend the Centre two days a week, 9am to 5pm, attend a weekly seminar of two hours and undertake evening and daytime public advice sessions. Students will be responsible for files under the supervision of the clinical supervisor. Students will conduct interviews with clients, make strategic decisions about conduct of the file, undertake research, draft all documents and where appropriate undertake advocacy in court or tribunals for the client.A daily tutorial and regular lectures provide opportunities for discussion and analysis of students' experiences and for instruction and development of ethical issues, employment law, legal procedure and skills. The course is offered in both teaching sessions and over summer. Students should note that due to requirements of caseloads, students will be required to attend during midsession holidays and study breaks.

LAWS2306
Aboriginal and Torres Strait Islander Social Justice Project
Faculty of Law
UOC8 HPW0

The Aboriginal and Torres Strait Islander (ATSI) Social Justice Project provides an opportunity for Indigenous undergraduate students to participate in a special project planned and developed with the Social Justice Unit within the Human Rights and Equal Opportunity Commission. Under the supervision and direction of the Social Justice Unit Indigenous students will conduct research, prepare written material and develop networks of organisations and individuals. This course is assessed on a Satisfactory/Unsatisfactory basis. In addition to the research and writing undertaken within the project, students must submit a journal of their activities to the supervising lecturer.

LAWS2307
Social Justice Intern Program
Faculty of Law
UOC8 HPW0

This program involves an internship for one day per week at one of the eight specialist centres associated with the Law Faculty. The principal goal is to provide students with training and practical experience in research, writing and advocacy on aspects of policy and practice relating to social justice (especially the reduction of inequality and exploitation).

LAWS2308
Public Interest Internship Program
Faculty of Law
UOC8 HPW8

The Law Faculty Public Interest Internship Program affords students the opportunity to undertake, for course credit, internships in slected Public Interest Host Organisations. The focus of the Program is on experiental learning. Students will work under the supervision of both the Host Organisation and the Faculty, and will obtain training and practical expereince in research, writing and advocacy on aspects of policy and practice relating to any area of public interest law. This program is only offered to students in the final year of their Law program.

LAWS2311
Litigation 1
Faculty of Law
UOC6 HPW4
Pre-requisites: LAWS1001 and LAWS1011

Litigation 1 examines civil pre-trial procedure and criminal pre-trial procedure. Civil procedure focuses on Supreme Court actions and topics such as the legal constraints relating to who may be a party to an action, the types of process for initiating a case, pleading rules, serving court process, discovery and exchange of information between parties. Supreme and Federal Court Rules are examined to determine the extent to which they facilitate just, accurate and speedy resolution of disputes. The course examines problems of delay and cost in litigation with particular reference to alternative dispute resolution mechanisms, case management initiatives and the courts increasing control over the pre-trial litigation process.

Criminal pre-trial procedure involves an examination of the law (and related policing issues) associated with arrest, warrants, search of the person and of premises, police questioning of suspects, the admissibility of illegally obtained evidence and the fundamentals of drafting indictments and informations. Comparisons are drawn between the civil and the criminal pre-trial processes on many issues.

LAWS2312
Trial Process
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS2311, LAWS2321; or LAWS1010

An advocacy training course concerned with the procedural and practical aspects of trial litigation and focusing on the role of the lawyer. Preparation of cases for trial, from initial investigation to final submission. Major emphasis is given to developing skills of interviewing, collecting facts, examining and cross-examining witnesses, and addressing judges. Begins with a series of practice exercises simulating real life litigation problems and students initially play all the courtroom roles: lawyer, witness, orderly and judge. Concludes with a series of mock trials derived from actual cases and presided over by judges and barristers. The course is based upon the conduct of civil trials.

LAWS2313
Evidence and Advocacy
Faculty of Law
UOC8 HPW4
Prerequisite: (LAWS2311, LAWS2321) or (LAWS1010) and LAWS6210

This course is designed to follow and expand upon the compulsory Litigation courses. Students are expected to know the fundamentals of evidence law and trial procedure. Evidence and Advocacy concentrates on the criminal trial and is designed to allow a hands-on approach to learning evidence law and developing expertise in trial practice and procedure. The advocacy component requires students, working in groups, to prepare cases for trial. Effectively, students will be learning what US advocacy writers have called 'case theory'. This is the pre-trial preparation of examination-in-chief, cross-examination, opening and closing addresses for trial.

The evidence component builds on students' basic knowledge of the doctrine, principles and rules relating to criminal litigation. Outside classroom hours students must attend criminal trials in progress to observe the conduct of judges, jurors, accused, witnesses and lawyers in real cases. Classroom discussion focuses on commentaries in the course text that examine a variety of issues associated with the dynamics of criminal trials. These commentaries are from a multidisciplinary perspective, incorporating the observations of historians, psychologists, sociologists and linguists. Course assessment includes witness examination exercises, trial presentations and an essay that is a comparative analysis of the conduct and practices of participants in observed trials with what the law expects, requires or assumes exists in relation to those participants.

LAWS2314
Dispute Resolution
Faculty of Law
UOC8 HPW0
Prerequisite: LAWS2311 or LAWS1010

Most legal education in common law systems scrutinises the interpretation and development of the law via decisions made by courts in the process of litigation. This fosters the assumption that litigation, or legal advice predicting the outcome of litigation, is the normal method of resolving disputes. In fact only a small proportion of disputes are resolved by litigation and there is a growing dissatisfaction with the cost, speed and adversarial character of litigation, and a corresponding interest in alternative forms of dispute resolution. This course review the development of the ADR continuum, identify key processes, analyse their comparative advantages and disadvantages, introduce students to the skills involved. Particular attention is paid to negotiation and mediation and students have the opportunity to participate in role plays using these processes. The course is delivered as an intensive program focussing on experiential learning.

Detailed information on the course is available at www.strategicaction .com.au/unsw

LAWS2315
Strategic Public Advocacy and Civil Society
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Legal practitioners, particularly in civil society organisations, are often called upon to lead, or contribute to, public advocacy campaigns. An understanding of the public advocacy process is also valuable for the development and implementation of policy. The course addresses the interface between media, public relations, communications theory,

legislation and litigation in order to further public advocacy. It combines the theory and principles of public advocacy with the practical skills required to develop successful advocacy programs at local, state, national and international levels, and has relevance for advocacy on community development, environment, human rights, etc., without being exclusive to those areas. It is relevant for legal practitioners in civil society, government, semi-government instrumentalities, international agencies and organisations such as the UN.

LAWS2316
Expert Evidence
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

LAWS2317
Strategic Public Advocacy for Civil Society
Faculty of Law
UOC4 HPW0
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Legal practitioners, particularly in civil society organisations, are often called upon to lead, or contribute to public advocacy campaigns. An understanding of the public advocacy process is also invaluable for those working in any policy area. The course addresses the interface between public law, media, public relations, marketing, political science, and litigation to further public advocacy. It combines theory and principles with the practical skills required to develop programs at local, state, national and international levels, and has particular interest for community development and social justice issues, without being exclusive to those areas. The course teaches an approach combining both project management and flexible creativity, and is relevant for legal practitioners in civil society, government, semi-governmnet instrumentalities, and international agencies.

LAWS2318
The Principles & Practice of Trial & Appellate Advocacy
Faculty of Law
UOC4 HPW0
Prerequisite: LAWS2321; Excluded: LAWS2313

This 4 uoc course is designed for undergraduate students in their final year who have an interest in advocacy and/or litigation. It concentrates on the principles and practice of advocacy in the context of the rules of evidence, and follows on from the treatment of evidence and procedure in Litigation 2. The course has 2 aspects. After initial direction, the student will spend 2 days observing criminal trial advocacy and prepare firstly a synopsis (250 words), and then a course essay (2,500 - 3,000 words). The second aspect is classroom based and involves 7 three hour seminars addressing the constituent elements of case preparation and advocacy. Students will take part in practical advocacy exercises designed to reinforce teaching in key areas. On assessment, the essay, including its synopsis, will attract 40%, class participation 30% and practical advocacy exercises 30%. The course will be limited to 30-32 students.

LAWS2321
Litigation 2
Faculty of Law
UOC6 HPW4
Prerequisite: LAWS2311

Litigation 2 introduces students to the legal principles and rules relating to the presentation of evidence in court. The course provides a comprehensive examination of the rules of evidence (the accused at trial, prosecutorial obligations, relevance, the rule against hearsay, the treatment of unreliable evidence, proof, witness questioning, protections for vulnerable witnesses, tendency and character evidence). Litigation 2 emphasises the context of evidence law and procedure - including for example an examination of the role of the trial judge, the impact of adversarialism and the difficulties faced by the accused (particularly the unrepresented accused) and certain witnesses in the courtroom. The Evidence Acts 1995 (Clth) and (NSW) form the backbone to the course.

LAWS2323
The Criminal Trial
Faculty of Law
UOC4 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The Criminal Trial builds on students' basic knowledge of the doctrine, principles and rules relating to criminal litigation. Outside classroom hours students must attend criminal trials in progress to observe the conduct of judges, jurors, accused, witnesses and lawyers in real cases. Classroom discussion focuses on commentaries in the course text that examine a variety of issues associated with the dynamics of criminal trials. These commentaries are from a multidisciplinary perspective, incorporating the observations of historians, psychologists, sociologists and linguists. Assessment is an essay that is a comparative analysis of the conduct and practices of participants in observed trials with what the law expects, requires or assumes exists in relation to those participants.

LAWS2331
Legal Theory
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

For details, see LAWS8320 Legal Theory earlier in the compulsory course section.

LAWS2332
Law and Social Theory
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

For details, see LAWS8820 Law and Social Theory earlier in the compulsory course section.

LAWS2335
Economic Analysis of Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The use of concepts of economics as a means of evaluating the appropriateness of legal rules. The concepts drawn from microeconomic theory and public economics (dealt with at a comparatively elementary level) are used to analyse existing and hypothetical legal rules within selected areas of law, such as property, tort, contract, constitutional law, environmental law, trade practices and business regulation, consumer protection and crime. Prior training in economics is not essential for students taking the course.

LAWS2341
Feminist Legal Theory
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Feminist analyses of law provide some of the most significant and challenging explanatory frameworks for understanding the practice and organisation of laws and legal institutions. This course examines the development of feminist legal thought, including a critical examination of feminist theorising about equality, power, the public/private divide, intersections between categories such as race, gender, disability, class and sexuality, and the representation of gendered identities within legal and popular culture.

This course explores the ways theory enhances our understanding of the potential of law to create and perpetuate inequalities, and the potential of theory to effect social transformation by creating new knowledge and understandings. It will also consider the usefulness and limits of feminist legal theory as an explanatory and transformative tool, with a focus on a range of substantive issues of particular relevance to Australian society. The course will encourage students to take a cross-disciplinary approach to the study of law, drawing on feminist work from disciplines such as sociology, criminology, philosophy, and cultural studies.

LAWS2361
Environmental Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course examines environmental law in both a theoretical and a practical sense. From the theoretical point of view, environmental law is

considered through interdisciplinary perspectives in a policy setting. The non-legal perspectives in terms of which environmental law is considered include ecology, economics and philosophy. The practical orientation of the course is toward developing an understanding of the legal framework for environmental decision making in Australia, particularly in N.S.W. Topics to be covered include the relevance of ecology to environmental law, environmental ethics, international environmental law, Commonwealth powers with respect to the environment, a range of Commonwealth and NSW legislation relating to the environment, and different legal techniques for enhancing protection of the environment (eg. regulation through the criminal law, through traditional common law techniques such as nuisance and private covenants, through economic incentive schemes, and through systems of consents and licenses). Litigation and alternative dispute resolution techniques are examined. Attention is also given to: (1) the part played by political and administrative discretion in the field of environmental decision-making, with some emphasis on the tensions which exist between various levels and bodies of government; (2) the role of public participation in the decision making process; and (3) environmental law in other countries, particularly the U.S. Students are encouraged to take an interest in topical environmental issues.

LAWS2391
Family Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course examines the constitutional framework of family law; marriage and divorce; the legal recognition and regulation of different types of domestic relationships and families , including de facto and gay and lesbian relationships; the resolution of disputes between married and unmarried domestic partners relating to care and custody of children, personal protection, property and maintenance; child support; legal status of children (including legal issues arising from artificial insemination and current techniques of assisted reproduction], and the rights and responsibilities of parents and others relating to children; adoption of children; and procedural aspects of family law, including the roles of lawyers and court counsellors.

LAWS2392
Children and the Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The course is intended both for students who are interested in legal practice relating to children, and those who wish to broaden their understanding of the legal system by a critical examination of how it operates in a controversial and rapidly changing area. The present law in New South Wales is considered as well as the historical development of laws relating to children, proposed reforms, and comparative material from other jurisdictions. The materials draw on disciplines other than law (such as sociology, child development theory) so that legal developments can be related to the position of children in society and different perspectives on their rights and interests. There may be some variation in the topics to be covered, according to the interests of the particular teacher and students, but in general the course deals with the concept of children's rights; child welfare laws; the application of the criminal law to children and the jurisdiction and procedures in children's courts; education; foster care, and other forms of alternative care. It is desirable that students have completed LAWS2391 Family Law.

LAWS2393
Succession
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1081, LAWS1082; or LAWS3010

The law governing succession to property on death including the rules relating to wills, administration of assets, family provision and intestate succession. The law relating to death and the body is also part of this course. Equitable doctrines relating to the law of wills and administration of estates, including construction of wills, marshalling, satisfaction, and ademption are also studied. Emphasis is placed on Australia, but there is a significant comparative aspect to this course: Civil law systems, Aboriginal customary law and Islamic law of inheritance, inter alia. This is both an illuminating way of considering the relevant doctrines, and also is appropriate for practitioners in a multicultural country.

LAWS2394
Families, Property & Death
Faculty of Law
UOC4 HPW0
Prerequisite: LAWS1081, LAWS1082; or LAWS3010

This course covers some academic aspects of the law of Succession, that is, the law regarding the transmission of property from one generation to another, usually on death. It will not equip students to draft wills, but it will ensure their understanding of the framework within which will-drafting operates. It offers a fascinating insight into the impact of this area of the law on relationships, property and death.

LAWS2401
Health and Medical Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Health and Medical Law is a relatively new and growing discipline in Australia. This subject aims to provide a sound introduction to the law relevant to the health system, the delivery of health services and related scientific and technological developments. There is no one discrete area of law involved. Rather, several different areas of law apply, including torts, contract, discrimination law, criminal law, trade practices, equity, administrative law as well as substantial statutory provisions. As law is just one of the forces impacting on the delivery of health services social, ethical, political and economic issues will also be considered. An important aim of the course is to encourage and develop critical thinking and to challenge participants to consider the interaction between law and society. Hence, a range of carefully chosen relevant theory will be considered in relation to each topic.

Topics covered include patient rights, medical negligence, confidentiality and privacy, access to medical records, tissue transplantation, HIV/AIDS, genetics, assisted reproductive technology and surrogacy, end of life decision-making/euthanasia, research and experimentation, drugs and mental health. Although the subject will concentrate on the Australian jurisdiction, comparisons and contrasts will be made with other jurisdictions.

LAWS2411
Disability, Rights and the Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

Real concerns have arisen in recent years about the rights of people with disabilities. This has resulted in the enactment of the Disability Discrimination Act 1992 (Cth) and in a number of legislative reforms at State level including the Guardianship Act 1987 (NSW) and amendments to the Anti-Discrimination Act 1977 (NSW). In order to understand these developments, this course examines the legislation in the light of the historical treatment of disability, both physical and intellectual, and critically evaluates the social construction of disability and the ensuing policies and practices. A variety of models explaining disability will be discussed and evaluated. The theoretical and legal context for disabilities will then be tested by an examination of a number of case studies. These may include case studies on integration in education, sexuality, medical treatment, employment and treatment in the criminal justice system. Finally, the role of law and social policy in facilitating change for people with disabilities will be considered.

LAWS2412
Discrimination and the Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course deals with the law and policy of anti-discrimination and equal opportunity. The problem of arbitrary denials of equality to many different sorts of groups, in many different aspects of life, is one which is increasingly recognised. The law has an important role as an instrument of public policy in this area. The course examines legal mechanisms , particularly those in Australia, which seek to end or control discrimination. Some aims of the course are to provide a good working knowledge of Australian anti-discrimination law (broadly understood, and covering legislation), as well as informal means of dispute resolution and to encourage a critical assessment of the relevant law and its limits.

LAWS2413
Housing Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

This course examines residential tenancy law, practice and procedure with particular reference to the Residential Tenancies Act. Other relevant statutory provisions contained in the Strata Schemes legislation and Landlord and Tenant (Amendment) Act will also be examined. In addition, attention will be given to housing policies, the provision of public housing, strategies for dealing with homelessness, and tenancy law reform. There will be some focus on residential tenancy law and policy in other jurisdictions, as well as social theories of the built environment. Part of the assessment scheme will include attendance at, and a report on, the Consumer, Trader and Tenancy Tribunal.

LAWS2414
Social Security Law
Faculty of Law
UOC8 HPW4
Prerequisite: LAWS1001, LAWS1011; or LAWS1610; Corequisite: LAWS2311 or LAWS1010.

The role of the state in the provision of community resources, in particular in the redistribution of taxation revenue through the income maintenance system, and the role of law in the redistribution process. The major focus is an examination of the law, policy and practices of the Australian Social Security system. Other matters covered include: an examination of the causes and extent of poverty in Australia; the role of the state in the alleviation of poverty; the relationship between the Social Security Act 1991 (Cth) and other Commonwealth and State laws, such as the Income Tax Assessment Act 1936 (Cth); the Family Law Act 1975 (Cth) the Child Support legislation and common law and statutory compensation systems; the role of law in effecting social change in general and redistribution in particular. Some of these topics will be dealt with in outline only.

LAWS2421
Research Project
Faculty of Law
UOC2 HPW0

This course permits individual students to undertake a research project upon a legal topic of their choice. The project will be undertaken in a topic area in which the student has studied or is already studying and where the research topic is undertaken in addition to assessment for that course. The indicative length of the Research Project is 2,500 words. The Research Project must have a clearly defined topic which has been approved by the academic supervisor of the project. The supervisor shall also examine the project. Unless the supervisor agrees otherwise, the final date of submission shall be the last day of the session in which the student is enrolled in the Research Project.

LAWS2422
Research Thesis: 16 uoc
Faculty of Law
UOC16 HPW0

Enrolment in a Research Thesis shall be approved by the School of Law if: 1. A clearly defined project is proposed: the thesis topic must be approved at the outset but may be modified at a later stage. 2. The student has a sufficient academic background in legal study to enable the thesis to be completed in a satisfactory manner. (An average mark of 65% in previous law courses is normally required). 3. Adequate supervision is available: supervision may be conjoint but at least one supervisor should be a full-time member of the School of Law's academic staff. A group research project may be undertaken (but by no more than three students) if a statement of the proposed division of work among members of the group is approved in advance by the supervisor or supervisors.

The School of Law will initially limit its approval for a Research Thesis to the 8UOC enrolment (LAWS2423). A student who has received approval for the 8UOC enrolment may be given subsequent approval to transfer to a 16UOC enrolment (LAWS2422). Similarly a student who has received approval for a 16UOC enrolment may be given retrospective approval for transfer to the 8UOC enrolment.

Thesis: The thesis must be typed on A4 bond paper and two copies must be prepared in a cover (spring back folder or bound). References may appear at the foot of each page or at the end of each chapter. As a general rule the thesis shall be a maximum of 12,500 words for an 8UOC enrolment or 25,000 words for a 16UOC enrolment.

Examination: Each thesis shall have two examiners, one of whom may be the supervisor or one of the supervisors. Unless the supervisor or supervisors otherwise agree, the final date for submission shall be the last day of the session in which the student is enrolled in the Research Thesis. Examiners may require a candidate or group of candidates to attend an oral examination on the subject matter of the thesis; examiners may require a thesis to be resubmitted under such conditions as the examiners may determine.

* These electives permit selected students to obtain credit for approved research projects undertaken individually or in groups. No student shall be permitted to obtain more than 16 UOC in any combination of the subjects LAWS2422 and LAWS2423.

LAWS2423
Research Thesis
Faculty of Law
UOC8 HPW0

LAWS2424
Research Thesis: Two Session Elective
Faculty of Law
UOC8 HPW0

LAWS2425
Research Thesis
Faculty of Law
UOC4 HPW0

LAWS2441
Law Journal
Faculty of Law
UOC8 HPW0

A student may be deemed, on the recommendation of the Dean and the Faculty Advisers to the Law Journal, to have satisfactorily completed this course on the basis of work done as an editor of the University of New South Wales Law Journal.

LAWS2731
Comparative Criminal Justice: From Investigation To Trial
Faculty of Law
UOC8 HPW0
Prerequisite: (LAWS2311, LAWS2321) or (LAWS1010) and LAWS6210

This course introduces students to the aims and objectives of comparative law study, and the strengths and limitations of such an enquiry by focusing on aspects of criminal trial practice in various jurisdictions. Students will critically evaluate our criminal trial process by focusing on a number of themes, including: confessions and the right to silence, plea bargaining in different legal cultures, double jeopardy, adversarialism and the role of accusatorial justice etc.

LAWS4010
Business Associations 1
Faculty of Law
UOC6 HPW4
Pre-requisite: LAWS1081

An introduction to a number of important legal and theoretical aspects of the operation of business corporations. In addition, there is a brief overview of partnership law. The corporate law component of the course falls into two parts. The first deals with the process and incidents of incorporation, including the derivation of the modern corporation and an introduction to regulatory structures; an introduction to the corporate constitution, organs and capital; the separate personality of the corporation and its exceptions. The balance of the course is concerned with the structure and governance of the corporation. It examines the corporate organs (the board of directors and the general meeting) and the division of corporate powers between them; the duties and liabilities of directors and other officers; the remedies available to shareholders for the enforcement of directors duties and protection against oppression or overreaching by controllers. While much of this legal doctrine is equally applicable to the large corporation as to the small enterprise, the course stresses the problems, processes and transactions typically encountered by small incorporated businesses.

Note: If taken as an elective, it is LAWS1091 UOC8.

LAWS6210
Law, Lawyers and Society
Faculty of Law
UOC6 HPW4
Currently enrolled in a program in the Faculty of Law.

This course is a course in applied legal ethics. It examines the different values, rules and regulation that affect legal practice. Students will (1) learn to identify the values, rules and norms that lawyers should apply in practice; (2) judge what roles lawyers do play in society and the justice system, and what roles lawyers ought to play; (3) identify and begin to develop the skills necessary for ethical practice. The course considers the lawyer-client relationship, the regulatory framework governing legal practice including the role of self-regulation, the role of lawyers as advocates including the responsibility of lawyers for access to justice and the special duties and roles of the criminal defence lawyer, the prosecutor, and the public interest lawyer.

LAWS7420
Advanced Legal Research
Faculty of Law
UOC2 HPW2
Co-requisite: LAWS2311 Litigation 1

This subject revises and expands upon students' legal research skills. It introduces students to more specialised legal research tools such as digests and loose leaf services,and also introduces students to some of the tools used in researching foreign and international law. There is considerable emphasis in this subject on the use of electronic research tools.

LAWS8008
Law and Bioethics
Faculty of Law
UOC8 HPW0

LAWS8320
Legal Theory
Faculty of Law
UOC6 HPW4
Pre-requisite: LAWS2160

The course is composed of two parts. In part one we discuss a number of basic notions associated with contemporary legal philosophy. These include - the nature of legal analysis, the separation of law from other areas of social life, the character of legal positivism, the role of the legal decision-maker, legal practice as an interpretive activity, the character of moral judgment, the difference in moral theory between the right and the good, liberalism as a political theory and its opponents, and liberalism's attitude to rights and to cultural difference.

In part two we apply some of these ideas to a number of 'problems' in contemporary legal practice. Just which problems varies from semester to semester but typical areas of study would be - human rights in East Asia, the legal response to cultural diversity, feminism and difference, legal responsibility, punishment, rights and judicial power, citizenship, the character of legal decision-making.

Note/s: If taken as an elective, it is LAWS2331 (UOC8)

LAWS8820
Law and Social Theory
Faculty of Law
UOC6 HPW4
Pre-requisite: LAWS2160

This course has to do primarily with interrelationships between law and other institutions and practices in society, particularly modern society; with what law does in society and what other elements of society do to it. These questions are approached, first, by examination of the great social theorists - especially Marx, Durkheim and Weber - who sought to explain the distinctive character of modern societiese, and then by examination of transformations in contemporary law and society, and of different theoretical attempts to understand that law and those transformations. Those attempts include feminist and post-modernists analyses. LAWS8320 and LAWS8820 form part of the compulsory core of the LLB and BJuris degree courses with respect to students who entered the Faculty in 1981 or later. Students are required to take one of these two courses to fulfil compulsory requirements and are permitted to take the other as an elective.

Note/s: If taken as an elective, it is LAWS2332 (UOC8)

LEGT1711
Legal Environment of Commerce
School of Business Law and Tax
UOC6 HPW3

The entire fabric of commerce is woven from a complex legal regime, judicial and statutory, which regulates all commercial activity. This subject deals with the Australian legal system; the Constitution and Commonwealth/State relations; Parliament and statute law; the courts and case law; the executive and administrative law; the legal process and alternative dispute resolution. Areas of substantive law relevant to commerce are examined including property law (with particular reference to intellectual property), torts law (with particular reference to negligence), contract law, criminal law, commercial entities and transactions, competition and consumer protection.

LEGT2712
Business, Ethics and the Law
School of Business Law and Tax
UOC6 HPW3
Prerequisite: LEGT1711 or 12UOC offered by Commerce and Economics or approval of the Head of School

Society increasingly demands ethical and social responsibilty. This course provides an ethical dimension to the conduct of contemporary commerce in Australia. Although ethic exist independently of the law, legislative and common law developments are increasingly imposing higher standards of commercial morality. This course examines the conceptual basis of ethical behaviour, and the increasing attempts by the law to prescribe ethical behaviour, through a series of case studies drawn from disciplines within the Faculty's jurisdiction.

LEGT2721
Business Transactions
School of Business Law and Tax
UOC6 HPW3
Prerequisite: LEGT1711

Contract law forms the basis of all important commercial transactions and is essential to a proper understanding of more specialised areas of commercial law. This course examines the general principles of contract law and how they are developed and expanded in relation to specialised commercial transactions including agency, contracts for the sale of goods, guarantees, bankruptcy, negotiable instruments, securities and insurance law. Relevant areas of consumer protection and competition law are also discussed. The common contractual themes in which these areas are grounded will be highlighted, along with the different requirements attaching to the rights and obligations of parties to the transaction in such areas.

LEGT2731
Marketing and Distribution Law
School of Business Law and Tax
UOC6 HPW3
Prerequisite: LEGT1711 or 12UOC offered by Commerce and Economics or approval of the Head of School

The marketing and distribution of goods and services operates within a comprehensive regulatory framework. This course examines that framework. Topics include restrictive trade practices implications of distribution with special reference to collusive activity, exclusive dealing, resale price maintenance and abuse of market power; consumer protection and fair trading implications of sales promotion with particular reference to misleading or deceptive conduct and other unfair practices; advertising self regulation; product liability; protection of intellectual property; franchising, licensing and character merchandising.

LEGT2732
Franchising
School of Business Law and Tax
UOC6 HPW3
Prerequisite: LEGT1711 or 12 UOC offered by Commerce and Economics or the approval of Head of School.

Franchising is rapidly becoming the dominant force in the distribution of goods and services. This course examines the nature, development and significance of franchising in the Australian and international economies and addresses relevant legal and commercial issues. The legal nature and commercial implications of licensing arrangements to commercialise intellectual property are also examined.

LEGT2741
Business Entities
School of Business Law and Tax
UOC6 HPW4
Prerequisite: LEGT2721

The law relating to the legal structures available for business including partnerships, joint ventures, trusts and companies. The primary focus is

on the modern company and its operation under the Corporations Act. Topics include the nature of the corporate entity; establishing the company and fund raising; shares and dividends; the rights and duties of directors; the position of management; shareholders rights and remedies for their enforcement; insolvency and liquidation.

LEGT2744
Corporate Fraud and Crime
School of Business Law and Tax
UOC6 HPW3

Prerequisite: LEGT1711 or 12 UOC offered by Commerce and Economics or the approval of Head of School.

Corporate fraud costs Australian business billions of dollars every year. This course examines aspects of fraud and corporate crime in their legal and commercial contexts. Topics include the analysis of the various laws relating to theft, fraud and other white collar crimes; the detection and investigation of fraud and associated issues including the powers of employers and law enforcement agencies, surveillance, and privacy; strategies for minimising legal exposure to fraud.

LEGT2751
Business Taxation
School of Business Law and Tax
UOC6 HPW4
Prerequisite: LEGT2721

The complexity and comprehensiveness of the Australian taxation system demands that tax considerations must be taken into account in most business decisions. An understanding of the structure of the Australian taxation system and of the policy factors that guide legislators is essential to professional business advisors. This subject concentrates on income taxation in Australia. Topics include: concepts of income; allowable deductions; tax accounting; taxation of partnerships, trusts and corporations; anti-avoidance provisions; tax administration; capital gains tax; fringe benefits tax.

LEGT2756
International Business Tax.
School of Business Law and Tax
UOC6 HPW3
Prerequisite: LEGT1711 or permission of the Head of School

This course discusses the principles relevant to international taxation and uses Australian international tax rules to highlight possible international tax policy choices and problems. Special emphasis is given to tax strategies relevant to international direct investment.

LEGT2761
Law of Banking and Finance
School of Business Law and Tax
UOC6 HPW3
Prerequisite: LEGT1711 or 12UOC offered by Commerce and Economics or the approval of the Head of School

This course examines the regulatory environment for banking and finance with particular reference to lending transactions and the securities taken by all financial institutions that lend for profit. Topics include legal concepts underlying the bank-customer relationship and duties of banker and customer; foreign currency loans; consumer issues in lending; electronic banking; use and regulation of negotiable instruments (cheques, promissory notes and bills of exchange); corporate fund raising; domestic and international methods of fund raising.

LEGT2771
Information Technology Law
School of Business Law and Tax
UOC6 HPW3
Prerequisite:LEGT1711 or INFS1602

This course examines the laws governing information technology. The topics examined include intellectual property law - patents, copyright and confidential information; licensing; technology contracts; tortious liability; product liability; computer crimes; data protection and privacy; and current issues.

LEGT2791
International Business Law
School of Business Law and Tax
UOC6 HPW3
Prerequisite:LEGT1711 or 12UOC offered by Commerce and Economics or the approval of the Head of School

Business today increasingly operates in an international market place. This course provides an introduction to the legal and commercial considerations affecting the conduct of business at an international level. Various types of international business activities and the more appropriate structures for them are considered, as are basic questions of finance, transport, property, intellectual property, fair trading and dispute resolution.

LEGT3001
Legal Aspects of Tourism
School of Business Law and Tax
UOC6 HPW3
Prerequisite: SERV1001; Excluded: TAHM3001

The tourism and hospitality industry operates within a comprehensive domestic, and international, legal and regulatory framework. This course examines that framework.

Topics include: national and international regulation of the travel and hospitality industry; consumer contracts law; the law of carriers and inns; the duties of travel operators and agents; travel insurance law; the law of bailment; the responsibilities of travel agents and tour operators; hotel management law; liquor licensing law; catering law; gaming law; marketing law; consumer rights and complaints; the law regulating payments (including international credit card payments); the finance of carriers and inns; criminal and civil liability of people working in the travel and tourism industry.

This course also examines the law regulating the issue of visa and travel documentation, and considers the liability of the operators, agents, carriers and government instrumentalities in relation to health and safety issues (including acts of terrorism).

LEGT3752
Capital Gains Tax
School of Business Law and Tax
UOC6 HPW3
Prerequisite: LEGT2751

Capital Gains Tax in Australia potentially applies to an exceptionally wide range of transactions. The disposal of assets, the creation of rights, the granting of leases and options, and the forfeiture and surrender of rights all involve Capital Gains Tax issues. This course examines the basic structural features of Capital Gains Tax in Australia. Issues concerning the scope of Capital Gains Tax and the boundaries between Capital Gains Tax and ordinary income are then examined through a series of business related case studies. The Australian approach to taxing capital gains is compared with the approach taken by some of our major trading partners and reform options are discussed.

LEGT3753
GST and FBT
School of Business Law and Tax
UOC6 HPW3
Prerequisite: LEGT2751

The first part of this course examines Goods and Services Tax (GST). Emphasis is placed on the practical operation of GST. Topics discussed include: registration; taxable supplies; input tax credits; adjustments; accounting for and documenting GST; treatment of GST free supplies; treatment of input taxed supplies; and anti-avoidance provisions. The second part of this course deals with Fringe Benefits Tax (FBT). Topics include: the calculation of FBT liability; the rationale behind grossing up the taxable value of fringe benefits; definition of fringe benefit; valuation rules for fringe benefits; exempt fringe benefits; reconciliation with income tax; treatment of income tax exempt employers; and the use of fringe benefits in salary packaging.

LEGT3755
Taxation of Business Entities
School of Business Law and Tax
UOC6 HPW3
Prerequisite: LEGT2751

Australia currently taxes the different types of business entities in ways that are consistent with their legal form. It follows that some economically equivalent business structures are treated quite differently from each other for tax purposes. Issues relating to the choice of a particular type of business entity and its operation produce tax planning opportunities and tax policy challenges. This course examines tax issues relevant to the creation, operation and termination of partnerships, trusts and companies. It places particular emphasis on a detailed examination of the dividend imputation system and on issues arising when dividend income moves

through a partnership, a trust or an interposed company. It also examines tax issues relevant to other selected business entities such as joint ventures, cooperatives, and superannuation funds.

LEGT3757
Corporate Tax Strategy
School of Business Law and Tax
UOC6 HPW3
Prerequisite: LEGT2751

What are the tax implications of the different financing alternatives available to corporations? Are all the different methods of profit distribution from a company equally tax effective? How should a merger or a demerger be structured from a tax perspective? Why are the tax consequences of restructuring the capital of corporations? What are the implications of the tax consolidation provisions for corporate groups? What tax considerations might be relevant when undertaking a corporate restructuring? This course will examine these and similar questions through a series of case studies and simulation games.

LEGT3758
Taxation of Financial Products
School of Business Law and Tax
UOC6 HPW3
Prerequisite: LEGT2751

This course deals with the taxation treatment of financial products. It examines the current classifications of financial products for tax purposes and the tax consequences that flow from those classifications. Topics dealt with include: public offers of equity and debt instruments; hybrid securities; discounted and deferred interest securities; derivatives; foreign exchange gains and losses; asset financing; lease financing; and international taxation issues associated with financial products.

LEGT4721
Special Topic in Business Law
School of Business Law and Tax
UOC6
Prerequisite:LEGT1711 and approval from the Head of School

A specially assigned project, program or set of readings relating to research in business law.

LEGT4722
Special Topic in Taxation
School of Business Law and Tax
UOC6
Prerequisite: LEGT2751 and approval from Head of School

A specially assigned project, program or set of readings relating to research in taxation.

LEGT4725
Contemporary Issues in Taxation
School of Business Law and Tax
UOC6 HPW3
Prerequisite: LEGT2751 and approval from Head of School

This course examines selected contemporary issues in taxation research. Students are exposed to relevant research literature on the issues and researchers discuss the current and possible future directions of research in relation to those issues.

Note: only available to student undertaking B Com (Honours) in Taxation.

LEGT4726
Research Methods in Taxation
School of Business Law and Tax
UOC6 HPW3
Prerequisite: LEGT2751 and approval from Head of School

This course aims to familiarise students with techniques and methods used in taxation research. The course examines electronic and hard copy resources for finding primary and secondary sources of taxation law. It also introduces students to the use of empirical methods in taxation research. The conventions of the discipline regarding the presentation of research findings in written form are also discussed.

Note: only available to students undertaking

B Com (Honours) in Taxation.

LEGT4900
Taxation Honours Thesis
School of Business Law and Tax
UOC6
Prerequisite: LEGT2751 and approval from Head of School

Note: Only available to students undertaking B Com (Honours) in Taxation.

LIFE1001
Life Science Advanced Seminar 1
Faculty of Science
UOC3 HPW2

An introduction to the professional abilities underlying key advances in research across the Life Sciences, and insights into how these advances impact on their fields and on society.

Examples of the latest research and future directions from a broad range of disciplines are examined critically, with fields covered including biomedical science, environmental science, biotechnology, and psychology. Library and WWW searches consolidate material, which focuses on research activities and facilities within the University, including laboratory visits and discussions with laboratory staff.

Note: Restricted to Advanced Science students.

LIFE2001
Life Science Advanced Seminar 2
Faculty of Science
UOC3 HPW2

An introduction to the nature of research in the life sciences, theories of research process, research ethics, the nature of creativity in research, and the concepts of discovery and innovation. Literature and electronic information resources for research, collaboration, and written communication of science are introduced. Critical evaluation of scientific data and its presentation is discussed. Small group analysis of a specialised and innovative aspect of research.

Note: Restricted to Advanced Science Students

LIFE2101
Introductory Biochemistry & Microbiology
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOS1201 and (CHEM1011 or CHEM1031) and (BIOS1101 or CHEM1021 or CHEM1041 or BIOS2021 or BIOS2621); Excluded: BIOC2101, BIOC2181, MICR2201.

Introduces modern biochemistry and the fascinating world of micro-organisms covering functional aspects of the structure and function of proteins; the biology, diversity and function of bacteria; and intermediary metabolism in micro- and higher organisms. Major topics include: the three domains of life (i.e. Eubacteria, Archaea and Eucarya) and viruses; the nature and function of enzymes; the metabolic working of cells, tissues and organs; the interrelationships between pathways of carbohydrate, lipid and amino acid metabolism; the vital roles of enzymes in catalysis and metabolic regulation; the energy-trapping mechanisms of micro-organisms, animals and plants; comparative aspects of microbial growth; bacteria biosynthetic pathways; bacteria and disease; the action of antimicrobial agents.

Note: Restricted to Bioinformatics Program

LING1000
The Structure of Language
Linguistics
UOC6 HPW3

An introduction to general linguistics, focusing on the traditional core areas of language structure (phonology, morphology, grammar and semantics) and on the acquisition of language. This course is particularly recommended not only for those interested in the nature and structure of the English language, but also for those studying ESL or a foreign language.

LING1500
The Use of Language
Linguistics
UOC6 HPW3

Examines how contemporary linguists deal with issues of language use, such as the nature of human communication, the influence of social attitudes on language, the principles of pragmatics, the historical development of languages, language universals and language typology,

the nature and evolution of writing, regional and situational variation in language.

LING2400
Language, Text and Context
Linguistics
UOC6 HPW3
Prerequisite: LING1000 or LING1500; Excluded: ENGL2503, ENGL2820, LING3903

How does language make meaning? How can we critique and evaluate meanings made in texts? What is the role of ideology and social context in the construction of meaning? We will develop a set of analytical tools which focus on the lexis, grammar, and discourse patterns of a variety of texts from different genres and registers, including literary, academic, media, and everday texts. Explores how language in use constructs social interpretations of our world(s) and positions readers in various ways.

LING2510
Analysing Talk
Linguistics
UOC6 HPW3
Prerequisite: LING1000 or LING1500

Explores conversation and other forms of talk from an ethnomethodological perspective, with the main focus on how participants in conversation structure and organise their contributions and interactively construct meanings and activities in their talk. Special attention will be paid to methods speakers employ to distribute turns at talk, the ways in which the actions performed in these turns are coherently sequenced, how speakers and listeners deal with disagreements and disaligning talk (preference organisation) and with troubles in hearing, speaking and understanding (repair). Students will be required to transcribe a short conversation, and then analyse it in terms of one or more features of the talk that have been discussed in the class.

LING2530
Visual Communication
Linguistics
UOC6 HPW3
Prerequisite: LING1000 or LING1500; Excluded: ENGL2821, ENGL3504, ENGL3550

Communication in contemporary society increasingly combines language with one or more different modalities, such as visual images, sound and spatial layout. Explores the techniques and theoretical frameworks useful in analysing how such multi-modal texts create meaning and construct positions for readers, and considers a range of texts from printed advertisements and magazines, to web pages, CD Roms, and public sites such as shops, museums and galleries. Aspects covered include the 'grammar' of visual images, the interaction of verbal and other modalities, ideological dimensions of multi-modal texts, literacy and access.

LING2540
Semantics and Pragmatics
Linguistics
UOC6 HPW3
Prerequisite: LING1000 or LING1500; Excluded: LING2603

Considers the nature and scope of semantics and pragmatics and their place within linguistics. Begins with an examination of the nature of linguistic meaning. Particular attention is paid to the different theoretical approaches to lexical semantics, the relationship between semantics and grammar, and semantic change. Considers the way language is used in real world contexts and how meanings are shaped by contextual factors, such as who is speaking to whom, in what kinds of spatio-temporal and sociocultural situations. Includes an exploration of speech act theory, conversational maxims, politeness theory, and notions of context and culture.

LING2551
Contemporary English Grammar
Linguistics
UOC6 HPW3
Prerequisite: LING1000 or LING1500; Excluded: LING2200, LING2550

Introduces the concepts, categories and terminology of English grammar, beginning with the parts of speech and progressing, through phrases and clauses, to the sentence and beyond. While the approach is traditional, it is informed by the work of contemporary grammarians. Applies the analytical methods presented to the analysis of texts representing a range of genres, to issues of 'good' and 'bad' usage, and to the development of writing.

LING2590
The English Language: Its first Millenium
Linguistics
UOC6 HPW3
Prerequisite: LING1000 or LING1500

Examines early English from the first written texts to the development of Standard English. Studies a variety of texts from the Old English & Middle English periods and considers how these differ from Modern English in sounds, sentence formation and vocabulary. Particular attention will be paid to exploring the reasons for the seeming illogicality of Modern English spelling.

LING2700
Social Contexts of Language Learning and Teaching
Linguistics
UOC6 HPW3
Prerequisite: LING1000 or LING1500; Excluded: EDST2046

Examines socio- and geo-political forces outside the educational institution that shape which languages we learn, and how we learn them. Explores the concepts of global languages, linguistic imperialism, language death, language planning, and language birth, and examines the acquistion of the first language, bilingualism, and general factors affecting the choice and learning or acquisition of second and subsequent languages.

LING2900
The Linguistics of Signed Languages
Linguistics
UOC6 HPW3
Prerequisite: LING1000 or LING1500

Introduces the fundamental structure of natural signed languages, covering the essentials of signed language phonology, morphology and syntax, and examining the important features of all these levels of structure. Compares the basic properties of signed languages with those of spoken languages in order to see in which ways signed languages are similar to spoken languages and in which ways they differ. Examines signed languages in terms of their acquisition as first and second languages, and some sociolinguistic issues that arise for users of signed languages.

Note: Students do not need to be able to sign in order to take this course.

LING3000
Analysing Talk - Advanced
Linguistics
UOC6 HPW3
Prerequisite: LING2510

Develops some of the topics introduced in LING2510 (turn-taking, sequence organisation, repair) and analytic skills, as well as introducing some new topics (story and other extended turns, talk in institutional settings).

LING3001
Current Issues in English Grammar
Linguistics
UOC6 HPW3
Prerequisite: 12 units of credit at the LING2000 level; Excluded: LING2800

Explores current issues in descriptive grammar, including the distinction between structure and function, the nature of constituency, the language particular - language general distinction, the relationship between grammar and information packaging, the definition of word classes, and the description of subordination and coordination.

LING3002
Institutional Factors in Language Learning and Teaching
Linguistics
UOC6 HPW3
Prerequisite: LING2700 or EDST2046

Examines institutional and classroom factors related to language learning and teaching. Includes bilingual education and literacy, the history of language teaching methodology, and current trends in language teaching. Includes an investigation of how the elements of language (grammar, vocabulary, pronunciation) and the four skills (reading, writing, listening and speaking) can be taught.

LING3003
Theoretical and Descriptive Linguistics
Linguistics
UOC6 HPW3
Prerequisite: 12 units of credit at the LING2000 level; Excluded: LING2500 and LING3900

Examines the various schools and movements in linguistics, including traditional approaches to language study, structural linguistics, generative linguistics, typological linguistics, functional linguistics and cognitive linguistics. Introduces students to some of the main theoretical and descriptive issues in contemporary linguistics.

LING4000
Linguistics Honours (Research) Full-Time
Linguistics
UOC24 HPW5
Prerequisite: 54 units of credit in LING at an average of 70%, including two of LING3900, LING3901, LING3902, LING3903 and permission of Head of Department

Honours (Research) students are required to prepare a thesis of between 15,000 and 20,000 words, which must be submitted by a date specified by the Department, and to complete two courses. Please refer to the list of courses under the entry for MA (Pass) in Linguistics (Applied).

LING4050
Linguistics Honours (Research) Part-Time
Linguistics
UOC12 HPW3
Prerequisite: 54 units of credit in LING at an average of 70%, including two of LING3900, LING3901, LING3902, LING3903 and permission of Head of Department

Honours (Research) students are required to prepare a thesis of between 15,000 and 20,000 words, which must be submitted by a date specified by the Department, and to complete two courses. Please refer to the list of courses under the entry for MA (Pass) Linguistics (Applied).

LING4500
Combined Linguistics Honours Full-Time
Linguistics
UOC12 HPW2
Prerequisite: 48 units of credit in LING at an average of 70%, including two of LING3900, LING3901, LING3902, LING3903

This program is undertaken in conjunction with one of the other Schools/ Departments in the Faculty. Students are required to complete a research and seminar program acceptable to both the Linguistics Department and the other School/Department.

LING4550
Combined Linguistics Honours Part-Time
Linguistics
UOC6 HPW2
Prerequisite: 48 units of credit in LING at an average of 70%, including two of LING3900, LING3901, LING3902, LING3903

This program is undertaken in conjunction with one of the other Schools/ Departments in the Faculty. Students are required to complete a research and seminar program acceptable to both the Linguistics Department and the other School/Department.

MANF0420
Production Management
School of Mechanical and Manufacturing Engineering
UOC6 HPW6
Excluded: MANF4420, MANF4430, MANF4440

General principles of management: an overview of the basic ideas and issues of management including the functions and roles of a manager, strategic and operational planning and monitoring systems with an emphasis on production and operations management; classical and modern organisation theories; overview of human and cultural issues in organisations; issues of project management. Quantitative techniques for management: engineering economic analysis including the analysis of investment decisions under risk and uncertainty. Modern techniques of statistical quality control and its extensions to statistical process control. Project management and control using network analysis. Human and cultural aspects of management: motivation and leadership theory; organisational cultures; organisational change and development; TQM cultures and the "internal customer".

MANF1130
Introduction to Manufacturing
School of Mechanical and Manufacturing Engineering
UOC6 HPW7
Excluded: MANF1100, MANF1110, MANF1120

The relationship between product design and manufacturing processes is introduced with theoretical and practical classes. Description and elementary analysis of manufacturing processes such as forming from liquid or solid and material removal. Introduction to non-metallic materials processing. Introduction to drawing techniques for engineering communication which includes freehand sketching and orthogonal projections. Use of computer graphics for modelling and production of detailed drawings of components. Elementary functional analysis of product design for manufacturing and performance. Practical training of approximately 33 hours will involve processes such as welding, fitting and machining as well as introduction to safety in a manufacturing environment.

Note: Protective items e.g. safety glasses, safety boots, overalls or dustcoat, etc are required for the practical training in order to comply with the Occupational Health and Safety Act. Students must possess these items before commencing this course. Students who have done appropriate technology-based courses at school or who have an appropriate trade or certificate qualification or are suitably employed, may seek an exemption for the practical training classes.

MANF3210
Product Manufacture
School of Mechanical and Manufacturing Engineering
UOC6 HPW6
Prerequisite: MANF1120 or MANF1130 Corequisite: MECH2101, MECH2411

Design for economic manufacture. Geometric analysis of product designs and the technology and economics of manufacturing and assembly processes. The principle and technology underlying dimensional metrology for quality product manufacture. The analysis provides a basis for rational process selection and the refinement of product design to suit the chosen manufacturing methods.

MANF3300
Design of Manufacturing Facilities 1
School of Mechanical and Manufacturing Engineering
UOC6 HPW4
Corequisite: MANF3210, MANF3420, MANF3500, MATH2839

The design of workplaces including jigs and fixtures where operations such as assembly and measurement are performed by a human operator or robot. Documentation of manufacturing processes, characteristics of human operators and robots, workplace and methods design. Measurement of workplace element characteristics.

MANF3420
Industrial Experimentation
School of Mechanical and Manufacturing Engineering
UOC3 HPW2
Prerequisite: MATH2839

Statistical design and analysis of experiments to investigate the quality of products and the performance of manufacturing processes. Experiments of comparison, classical correlation and regression analysis, multiple linear regression analysis, accelerated experiments, analysis of variance.

MANF3500
Computers in Manufacturing 1
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: ELEC0807, MANF1130, MECH1500

Selection and use of computer-controlled devices such as robots and machine tools in manufacturing systems: principles of numerical control and PLCs, NC machine tools, NC programming, CNC/AC/DNC computer controls, accuracy of NC machines, fundamentals and applications of robots.

MANF3601
Manufacturing Operations Analysis A
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MATH2839, MECH1500

Principles and techniques of Operations Research and Analysis including linear and non-linear programming; basic queuing theory and stochastic processes; heuristic techniques; applications to manufacturing.

MANF3602
Manufacturing Operation Analysis B
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MATH2839, MECH1500

Introduction to simulation; use of simulation packages; experimental design in simulation. Simple data modelling and information systems design; running an information system in conjunction with a factory simulation model.

MANF4011
Analysis of Manufacturing Systems A
School of Mechanical and Manufacturing Engineering
UOC3 HPW2

Students will work in project teams to perform a complete manufacturing system design and analysis, involving activities such as: design for manufacture, process selection, tolerance optimisation, workplace design, factory layout, production control system, detailed budget. A satisfactory grade in this course is provisional pending successful completion of MANF4012.

MANF4012
Analysis of Manufacturing Systems B
School of Mechanical and Manufacturing Engineering
UOC3 HPW2
Prerequisite: MANF4011

Further project work, continuing from activities in MANF4011 Manufacturing Systems A.

MANF4300
Design of Manufacturing Facilities 2
School of Mechanical and Manufacturing Engineering
UOC6 HPW4
Corequisite: MANF3300

Introduction to plant layout design, materials handling and assembly systems. Use of ergonomic design for man/machine tasks. Analysis and simulation of various types of manufacturing facilities.

MANF4430
Management for Engineers
School of Mechanical and Manufacturing Engineering
UOC6 HPW6
Excluded: MANF0420

General principles of management: an overview of the basic ideas and issues of management including the functions and roles of a manager, strategic and operational planning and monitoring systems with an emphasis on production and operations management; classical and modern organisation theories; overview of human and cultural issues in organisations; issues of project management. Quantitative techniques for management: engineering economic analysis including the analysis of investment decisions under risk and uncertainty. Modern techniques of statistical quality control and its extensions to statistical process control. Project management and control using network analysis. Human and cultural aspects of management: motivation and leadership theory; organisational cultures; organisational change and development; TQM cultures and the "internal customer".

MANF4440
Strategic Manufacturing Management
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MANF3420, MANF3602

Industry dynamics; Porters model, the value chain and forms of competitive advantage; matching manufacturing strategy to the market; core competencies and process positioning; focused manufacturing; vertical vs horizontal integration; supply chain management, global manufacturing and the virtual corporation; matching performance measures to strategy.

MANF4500
Computers in Manufacturing 2
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MANF3500

Integration of the basic elements of manufacturing facilities into systems: selection of automation equipment, principles of group technology and cellular manufacturing, Flexible Manufacturing Cells, planning and layout of Flexible Manufacturing Systems, integration of CAD and CAM, computer integrated manufaturing, computer aided process planning.

MANF4601
Computer Aided Production Management A
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MANF3601

The dynamics of material flow through a manufacturing system; basic and advanced techniques of production planning and control and their realisation within a factory simulation model; matching different approaches to different types of manufacturing situations.

MANF4602
Computer Aided Production Management B
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MANF3602

Use of decision support and knowledge based systems in production management; designing a production management database; types of integration and integrated decision making; implementation of these concepts with a factory simulation model.

MARK1012
Marketing Fundamentals
School of Marketing
UOC6 HPW3.5

Major concepts and theories relevant to the study and practice of marketing are introduced. Topics include the changing global marketplace, marketing processes and planning, the use of market research, an understanding of consumers and customers, decision-making and the marketing mix, market segmentation, positioning and product differentiation. This introductory subject prepares students for further study across the broad spectrum of product, service, consumer, business-to-business, industrial, global and social marketing.

MARK1014
Customer Relationship Management
School of Marketing
UOC6 HPW3

Customer Relationship Management (CRM) lies at the heart of marketing and management consulting. It has long been the backbone of industrial, trade, purchasing and services marketing, and the trend in recent years has been to use CRM techniques in dealing with final consumers as well. A purpose of the course is to develop relationship-building skills, in areas such as personal selling, direct marketing and commercial negotiations. Another goal is to demonstrate the role of new technology in widening the scope and potential of CRM, especially through the use of interactive and personalisation technologies. Topics include: CRM, loyalty and retention marketing; traditional methods of direct marketing and personal selling; commercial negotiations for lasting results; technology-based methods of relationship-building with customers, including interactive and e-customer management; permission marketing, data protection and privacy concerns. Exercises and cases are an integral part of the course, and this may require some flexibility with the timing of classes.

MARK2051
Consumer Behaviour
School of Marketing
UOC6 HPW3.5
Prerequisite: MARK1012; Corequisite: MARK2052

The need for marketers to understand why consumers act as they do in the marketplace is the crux of this subject. Students are equipped with theoretical and conceptual knowledge of consumer behaviour, drawing heavily on both psychological and sociological viewpoints. This includes the psychology of individual decision-making and choice, patterns of behaviour exhibited by aggregate groups of consumers, and also the sociological and cultural influences on consumer attitudes and behaviour. This prepares students for making informed decisions about how to manage and respond to the needs and wants of consumers.

MARK2052
Marketing Research
School of Marketing
UOC6 HPW3.5
Prerequisite: MARK1012; Corequisite: MARK2051

The sources and types of marketing information relevant to marketing management are examined, with the aim of developing an informed analytical approach to the study of consumers and markets. Topics include problem definition, research design, questionnaire design, sampling, basic numeracy, analysis and interpretation of data, reporting, and also management control of research, including briefing, evaluation of proposals and the distinction between research results and marketing implications. The use of continuous research and new developments such as automated and interactive forms of data gathering are discussed as well.

MARK2053
Marketing Communications and Promotions Management
School of Marketing
UOC6 HPW3.5
Prerequisite: MARK2051; Corequisite: MARK2054

The aim is to offer insights into the various decisions and principles that marketing managers have to consider when developing an overall communications and promotions strategy. Key topics are the promotional mix, the design, implementation and evaluation of communications strategies and the need to make use of both creative and reasoning processes. An integrated approach is adopted, including an understanding of the role of media advertising, promotions, public relations, direct marketing and new interactive media. The course builds on knowledge of consumer behaviour and the analytical skills of marketing research.

MARK2054
Market Analysis
School of Marketing
UOC6 HPW3.5
Prerequisite: MARK2052; Corequisite: MARK2053

This course links the analytical material of MARK2052 with practical issues in marketing management, including the analysis of competitive markets, product positioning, strategic analysis, demand forecasting and financial and budgetary aspects. The course is practical and data driven, with students exposed to specific tools and techniques using computer-based software. The importance to contemporary business of numeracy, problem-solving, measurement and analysis is a central theme, and is explored through exercises and tutorials.

MARK2055
Service Marketing & Management
School of Marketing
UOC6 HPW3
Prerequisite or corequisite: MARK1012.

Service industries now account for 70% of GDP and around 85% of all new employment. Intangible service products including professional (eg engineering, accounting, management consulting services) and other services (eg tourism, hotels, telcos, theatre, sport) possess a set of unique characteristics that require a different approach to the development & execution of marketing strategy. The course builds upon key frameworks and theories in marketing management and adapts them to the service sector. Key themes include the service encounter, service failure and recovery, the notion of the servicescape or service factory, customer service issues, core and supplementary service elements, service quality and customer satisfaction, and customer relationship management, and yield management as a pricing tool.

MARK2999
Industrial Training 1 (Co-op)
School of Marketing
UOC12
Prerequisite: MARK1012; Corequisite: MARK2052, MARK2052

Students consider the practical application of the fundamental principles of marketing in an industry environment.

MARK3071
International and Global Marketing
School of Marketing
UOC6 HPW3
Prerequisite:MARK1012

The purpose of this course is to develop a thorough appreciation of the international aspects of contemporary marketing. Topics include: conceptual and environmental aspects of international marketing; market entry strategies; managing marketing across borders; globalisation strategies, including global branding; developing practical marketing strategies for different world markets; how marketing theory needs to be adjusted or extended for application in an international setting. Skills will be acquired through case analysis, teamwork and creative problem-solving.

MARK3072
Advanced Consumer Behaviour
School of Marketing
UOC6 HPW3
Prerequisite: MARK2051, MARK2052

The principles covered in MARK2051 are explored in a deeper and more questioning way. Content is focused on critical issues in consumer behaviour thought and practice, including an understanding of consumer choice processes, the effects of experience and learning, attitude formation, social networks and their impact on consumption, segmentation, brand management and communications processes. Issues are explored through theoretical frameworks, market research, experiments and detailed case studies.

MARK3081
Distribution Strategy & Retail Channels
School of Marketing
UOC6 HPW3.5
Prerequisite: MARK2053, MARK2054

This course presents an integrated approach to distribution strategy and retail channel management. It addresses analytic, strategic and managerial aspects of distribution (the creation of product and service availability through marketing channels) and retail marketing (the management and marketing assortments of merchandise for direct sale to the consumer). Typically, topics include: marketing channel structure and functions, the retailing industry, channel design, channel structure, channel power and conflict, distribution intensity, retail product selection, assortment planning, retail buying, retailer's own brands, channel integration, wholesaling, franchising, strategic alliances in distribution, international retailing, non-store retailing, electronic retailing and electronic distribution channels.

MARK3082
Strategic Marketing Management
School of Marketing
UOC6 HPW3.5
Prerequisite: MARK2054, MARK3081

A course that integrates knowledge of market analysis with strategic business considerations, to achieve superior performance in sales growth, market share and profit contribution. Topics include: business definition, organisational strategy, and corporate policy; competitive and life-cycle strategies at the level of the business unit; portfolio analysis, diversification, and differentiation; social, ethical, technological, legal and global issues as they impact on marketing performance. Students draw on materials from all previous marketing courses and practical case studies.

MARK3091
New Product and New Service Development
School of Marketing
UOC6 HPW3
Prerequisite: MARK1012, MARK2051, MARK2052

A course focused on how to develop a business plan for a new product or service launch, having diagnosed a market opportunity. This involves an understanding of product-based competition and an appreciation of strategic options available to firms that are adept at development. Themes include: NPD processes, from setting a strategic framework for the development effort through to monitoring post-launch success; methods of market research and the use of analytical approaches such as perceptual mapping, benefit segmentation, trends unbundling and morphological analysis; screening and ranking processes to set priorities for development; converting concepts into prototypes; developing strategies and plans for the commercial launch. Some exercises may require flexibility with the timing of classes.

MARK3092
Brand Management
School of Marketing
UOC6 HPW3
Prerequisite: MARK2053, MARK2054

What brands are, how they are created and managed, and how they add value to consumers and the firm. Topics include: the importance of product, service and corporate brands; how awareness, loyalty, perceived quality, design, legal protection and the name itself combine to produce

brand equity; how these dimensions are tested, measured and valued; strategies and tactics for maintaining and reviving brands; multi-brand portfolios, extensions and brand architectures; brands as a driving force for standardisation and globalisation. Detailed case analysis is an integral part of the subject and this may require flexibility with the timing of classes.

MARK3209
Marketing Internship
School of Marketing
UOC6

Refer to School of Marketing for more information.

MARK3999
Industrial Training 2 (Co-op)
School of Marketing
UOC18
Prerequisite: MARK3081

Students consider the practical application of the fundamental principles of marketing in an industry environment

MARK4999
Industrial Training 3 (Co-op)
School of Marketing
UOC18
Prerequisite: MARK3999

Students consider the practical application of the fundamental principles of marketing in an industry environment

MARK7204
Thesis (Marketing) Part A
School of Marketing
UOC6
Prerequisite: Admission to BCom Honours in Marketing.

MARK7205
Thesis (Marketing) Part B
School of Marketing
UOC18

Note: Admission to BCom Honours in Marketing is required.

MARK7210
Business Research Methods in Marketing
School of Marketing
UOC6 HPW2
Prerequisite: Admission to BCom Honours in Marketing.

The research process - project management and research planning. The role of academic research and published material in the process of advancing marketing thought and knowledge. How to read, critique and prepare research proposals. Asking meaningful research questions: inductive and deductive approaches. Conjectures, propositions and hypotheses. Questions of proof, validity, reliability, robustness, representativeness, generalisability, scope, meta-analysis and marketing knowledge. The role of mediating and moderator variables. Preparing research designs to minimise error and bias. Formal research processes in specific analytical areas (such as Marketing Science, Economics Theory, and Consumer Psychology). The art of the solvable. Using this knowledge to write viable research plans.

MARK7211
Research Seminar in Marketing
School of Marketing
UOC6 HPW2
Prerequisite: Admission to BCom Honours in Marketing.

A study and critique of seminal published papers in selected marketing topics relevant to the interests of research students. Emphasis will be on appreciating the present state of knowlege, and considering future opportunities. Special attention will be given to the knowledge base in various substantive areas (for instance, international marketing, services marketing and service quality, brand management and relationship marketing). The focus will be on understanding the empirical significance of each article and its positioning, methodology and analytical approach. Also studied will be the writing and communication style - including the uses and abuses of narratives, tables, graphs and equations. Preparation of a conceptual journal article of a refereed standard will enable these ideas and concepts to be implemented.

MARK7212
Advanced Quantitative Methods in Marketing
School of Marketing
UOC6 HPW2
Prerequisite: Admission to BCom Honours in Marketing.

Extension of the knowledge of elementary statistics into the area of multivariate statistics, with special attention to the underlying theory and assumptions of the methods used. Discussion of multiple regression and multiple correlation, multivariate analysis of variance, discriminant and logit analysis, conjoint analysis, factor and correspondence analysis, and structural equation modelling. Hands-on practical sessions will enable participants to implement these tools, techniques and methods in the context of specific Marketing applications.

MARK7213
Contemporary Research Methods in Marketing
School of Marketing
UOC6 HPW2
Prerequisite: Admission to BCom Honours in Marketing.

The Marketing discipline - its origin, development and future direction. The use of different methods to examine research questions - quantitative, experimental, qualitative, and ethnographic approaches. Advanced survey-based methods. Experimental approaches to research in marketing, including experimental designs and analysis of variance. Consideration of non-quantitative methods - notably qualitative methods, in-depth interviews, case-study analysis, anthropological and ethnographic approaches, cross-cultural studies and phenomenological work. Post-modernist methods of enquiry.

MATH1000
Modelling Real World Phenomena
School of Mathematics
UOC3 HPW2

Introduction to the process of constructing mathematical models of real-world processes and situations. The emphasis is on seeking reasonable solutions to open-ended problems, not on the application of particular mathematical techniques. Examples will be taken from biology, finance, operations management, computer science, meteorology and other fields. Students will research a large project in teams and present a written and oral report on their results.

Note: Restricted to students in Advanced Science.

MATH1011
General Mathematics 1B
School of Mathematics
UOC6 HPW6
Excluded: MATH1031, MATH1131, MATH1141, MATH1151, ECON1202, ECON2291

Functions (and their inverses), limits, asymptotes, continuity; differentiation and applications; integration, the definite integral and applications; inverse trigonometric functions; the logarithmic and exponential functions and applications; sequences and series; mathematical induction; the binomial theorem and applications; introduction to probability theory; introduction to 3-dimensional geometry; introduction to linear algebra.

Assumed knowledge: A level of knowledge equivalent to achieving a mark of at least 60 in HSC Mathematics. Students who have taken General Mathematics will not have achieved the level of knowledge which is assumed in this course.

Note: This course is not intended for students who propose to study a substantial amount of Mathematics beyond first year level. Many later year courses in Mathematics have completion of MATH1231, MATH1241 or MATH1251 as a prerequisite. This course can be taken as a preparatory course by students who need to take MATH1131 but do not meet the assumed knowledge requirement.

MATH1031
Mathematics for Life Sciences
School of Mathematics
UOC6 HPW6
Excluded: MATH1011, MATH1021, MATH1131, MATH1141, MATH1151, MATH1231, MATH1241, MATH1251, ECON1202, ECON2291

Matrices and systems of linear equations. Functions and modelling. Differentiation. Exponentials and logarithms. Analysis of functions (limiting behaviour, maxima and minima, locating zeros). Functions of several variables. Interpolation and approximation. Discrete time dynamical systems. Complex numbers . Integration. Differential equations.

Assumed knowledge: A level of knowledge equivalent to achieving a mark of at least 60 in HSC Mathematics. Students who have taken General Mathematics will not have achieved the level of knowledge which is assumed in this course.

Note: This course is not intended for students who propose to study a substantial amount of Mathematics beyond first year level. Many later year courses in Mathematics have completion of MATH1231, MATH1241 or MATH1251 as a prerequisite.

MATH1041
Statistics for Life and Social Sciences
School of Mathematics
UOC6 HPW6
Excluded: MATH1049, MATH1059, MATH2829, MATH2839, MATH2841,MATH2859, MATH2899, ECON1203, ECON2292

Probability, random variables, independence. Discrete distributions, Poisson and binomial distributions. Data analysis, Descriptive statistics. Sampling, Continuous distributions, the normal distribution. Estimation of mean and variance. Tests of hypotheses. Linear regression and correlation. Analysis of variance. Tests for goodness of fit. Bayesian statistics.

Assumed knowledge: As for MATH1031

Note: This course is not intended for students who propose to study a substantial amount of Mathematics beyond first year level. Many later year courses in Mathematics have completion of MATH1231, MATH1241 or MATH1251 as a prerequisite.

MATH1081
Discrete Mathematics
School of Mathematics
UOC6 HPW6
Corequisite: MATH1131 or MATH1141 or MATH1151; Excluded: MATH1090.

Role of proof in mathematics, logical reasoning and implication, different types of proofs. Sets, algebra of sets, operations on sets. Mathematical logic, truth tables, syntax, induction. Graphs and directed graphs, basic graph algorithms. Counting, combinatorial identities, binomial and multinomial theorems. Binary operations and their properties, ordered structures. Recursion relations.

Assumed knowledge: HSC Mathematics Extension 1. Students will be expected to have achieved a combined mark of at least 100 in Mathematics and Mathematics Extension 1.

MATH1131
Mathematics 1A
School of Mathematics
UOC6 HPW6
Excluded: MATH1011, MATH1031, MATH1141, MATH1151, ECON1202, ECON2291

Complex numbers, vectors and vector geometry, linear equations, matrices and matrix algebra, determinants. Functions, limits, continuity and differentiability, integration, polar coordinates, logarithms and exponentials, hyperbolic functions, functions of several variables. Introduction to computing and the Maple symbolic algebra package.

Assumed knowledge: HSC Mathematics Extension 1. Students will be expected to have achieved a combined mark of at least 100 in Mathematics and Mathematics Extension 1.

MATH1141
Higher Mathematics 1A
School of Mathematics
UOC6 HPW6
Excluded: MATH1011, MATH1031, MATH1131, MATH1151, ECON1202, ECON2291

As for MATH1131 but in greater depth.

Assumed knowledge: HSC Mathematics Extension 1 and Extension 2. Students will be expected to have achieved a combined mark of at least 186 in Mathematics Extension 1 and Extension 2.

MATH1151
Mathematics for Actuarial Studies and Finance 1A
School of Mathematics
UOC6 HPW6
Excluded: MATH1011, MATH1031, MATH1131, MATH1141, ECON1202, ECON2291

Vectors and vector geometry, linear equations, matrices and matrix algebra, basic input-output linear models, determinants, least squares approximation, probability and statistics. Limits, continuous and differentiable functions, mean value theorem, fundamental theorem of calculus, numerical integration, functions of several variables, introduction to Matlab.

Assumed knowledge: HSC Mathematics Extension 1. Students will be expected to have achieved a combined mark of at least 140 in Mathematics and Mathematics Extension 1 or 180 in Mathematics Extension 1 and Extension 2.

MATH1231
Mathematics 1B
School of Mathematics
UOC6 HPW6
Prerequisite: MATH1131 or MATH1141; Excluded: MATH1021, MATH1031, MATH1241, MATH1251, ECON1202, ECON2291.

Vector spaces, linear transformations, eigenvalues and eigenvectors. Introduction to probability and statistics. Integration techniques, solution of ordinary differential equations, sequences, series, applications of integration.

MATH1241
Higher Mathematics 1B
School of Mathematics
UOC6 HPW6
Prerequisite: MATH1131 CR or MATH1141CR; Excluded: MATH1021, MATH1031, MATH1231, MATH1251, ECON1202, ECON2291.

As for MATH1231 but in greater depth.

MATH1251
Mathematics for Actuarial Studies and Finance 1B
School of Mathematics
UOC6 HPW6
Prerequisite: MATH1151; Excluded: MATH1021, MATH1031, MATH1231, MATH1241, ECON1202, ECON2291.

Complex numbers, vector spaces, polynomial interpolation, linear transformations, Markov processes, eigenvalues and eigenvectors. Exact and numerical solution of ordinary differential equations, sequences, double integrals, Lagrange multipliers.

MATH2011
Several Variable Calculus
School of Mathematics
UOC6 HPW5
Prerequisite: MATH1231 or MATH1241 or MATH1251; Excluded: MATH2019, MATH2039, MATH2049, MATH2100, MATH2110, MATH2111, MATH2510, MATH2610.

Functions of several variables, limits and continuity, differentiability, gradients, surfaces, maxima and minima, Taylor series, Lagrange multipliers, chain rules, inverse function theorem, Jacobian derivatives, double and triple integrals, iterated integrals, Riemann sums, cylindrical and spherical coordinates, change of variables, centre of mass, curves in space, line integrals, parametrised surfaces, surface integrals, del, divergence and curl, Stokes' theorem, Green's theorem in the plane, applications to fluid dynamics and electrodynamics, orthogonal curvilinear coordinates, arc length and volume elements, gradient, divergence and curl in curvilinear coordinates.

MATH2019
Engineering Mathematics 2CE
School of Mathematics
UOC6 HPW5
Prerequisite: MATH1231 or MATH1241; Excluded: MATH2011, MATH2111, MATH2510, MATH2610, MATH2120, MATH2130.

Partial differentiation and applications, vector algebra, double integrals, ordinary differential equations, introduction to vector field theory, extrema of functions of 2 variables, matrices and their applications, Laplace transforms, Fourier series, partial differential equations and their solution for selected physical problems.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2020
Mathematics 2A
School of Mathematics
UOC3 HPW2
Prerequisite: MATH1021(CR) or MATH1031(CR) or MATH1231 or MATH1241

Revision of integration. Differential equations, use of Laplace transforms, solutions by series.

Note: MATH2020 and MATH2030 are intended for students who want to take no more than 6 units of credit in Level II Mathematics. If any other Level II courses in Mathematics other than Statistics courses are taken then neither MATH2020 nor MATH2030 will be counted.

MATH2029
Engineering Mathematics 2A
School of Mathematics
UOC6 HPW6
Prerequisite: MATH1231 or MATH1241; Excluded: MATH2120, MATH2130.

Partial differentiation, ordinary differential equations, matrices, Laplace transforms, Fourier series, partial differential equations.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2030
Mathematics 2B
School of Mathematics
UOC3 HPW2
Prerequisite: MATH1021(CR) or MATH1031(CR) or MATH1231 or MATH1241

Fourier series; multiple integrals, matrices and their applications to the theory of linear equations, eigenvalues; introduction to numerical methods.

Note: MATH2020 and MATH2030 are intended for students who want to take no more than 6 units of credit in Level II Mathematics. If any other Level II courses in Mathematics other than Statistics courses are taken then neither MATH2020 nor MATH2030 will be counted.

MATH2039
Engineering Mathematics 2B
School of Mathematics
UOC3 HPW3
Prerequisite: MATH1231 or MATH1241; Excluded: MATH2011, MATH2111, MATH2510, MATH2610.

Multiple integrals, vector calculus, extrema of functions of several variables.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2049
Mathematics and Statistics for Materials Science A
School of Mathematics
UOC3 HPW3
Prerequisite: MATH1231 or MATH1241; Excluded: MATH2011, MATH2111, MATH2510, MATH2610, MATH2841.

Statistics: graphical data analysis, random variables and their properties, normal and binomial distributions, functions of random variables and their simulation using computers, one and two sample inference methods, simple and multiple linear regression. Mathematics: functions of two variables, double integrals.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2059
Mathematics for Materials Science B
School of Mathematics
UOC3 HPW3
Prerequisite: MATH1231 or MATH1241; Excluded: MATH2120, MATH2130.

Ordinary differential equations. Partial differential equations. Fourier series.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2060
Professional Issues and Ethics in Mathematics
School of Mathematics
UOC3 HPW2
Prerequisite: 24 units of credit in Math courses.

Professional and ethical issues and social responsibility in mathematics. The place of mathematics in the wider sphere of knowledge. Principles and case studies in the ethics and responsible use of mathematics. Communicating mathematics effectively.

MATH2111
Higher Several Variable Calculus
School of Mathematics
UOC6 HPW5
Prerequisite: MATH1231 or MATH1241 or MATH1251 each with a mark of at least 70; Excluded: MATH2019, MATH2039, MATH2049, MATH2011, MATH2100, MATH2110, MATH2510, MATH2610.

As for MATH2011 but in greater depth.

MATH2120
Mathematical Methods for Differential Equations
School of Mathematics
UOC3 HPW2.5
Prerequisite: MATH1231 or MATH1241 or MATH1251; Excluded: MATH2019, MATH2029, MATH2059, MATH2130.

Introduction to qualitative and quantitative methods for ordinary and partial differential equations. The following topics are treated with illustrative applications in physics, engineering and biology. Ordinary differential equations: first order, second order with constant coefficients, power series representations, the Frobenius method, the method of variation of parameters. Orthogonal functions and Fourier series. Sturm-Liouville problems. Eigenfunction expansions. Bessel's

equation. Partial differential equations: The method of characteristics. Classification. The method of separation of variables. The heat equation. The wave equation. Laplace's equation. Applications of Bessel functions and Legendre polynomials.

MATH2130
Higher Mathematical Methods for Differential Equations
School of Mathematics
UOC3 HPW2.5
Prerequisite: MATH1231 or MATH1241 or MATH1251 each with a mark of 70; Excluded: MATH2019, MATH2029, MATH2059, MATH2120.

As for MATH2120, but in greater depth, and with additional material on Green's function methods, nonlinear partial differential equations, Lie group methods and symmetry reduction.

MATH2140
Operations Research: Methods and Applications
School of Mathematics
UOC3 HPW2
Prerequisite: MATH1031(CR) or MATH1231 or MATH1241 or MATH1251; Excluded: MATH2160, MATH2180, ECON2208.

An introduction to modelling and solution techniques for linear optimization problems and their application to business and industry. Formulation of problems, the simplex method, duality and sensitivity analysis, integer programming using branch and bound, networks, transportation and assignment problems. Matlab will be used to solve realistic problems.

MATH2240
Introduction to Oceanography and Meteorology
School of Mathematics
UOC3 HPW2
Prerequisite: MATH1031(CR) or MATH1231 or MATH1241 or MATH1251

An introduction to mathematical models for the circulation of the atmosphere and oceans. The equations of motion are exploited so as to provide simplified models for phenomena including: waves, the effects of the Earth's rotation, the geostrophic wind, upwelling, storm surges. Feedback mechanisms are also modelled: the land/sea breeze, tornadoes, tropical cyclones. Models for large-scale phenomena including El Nino and the East Australian Current will be discussed as well as the role of the atmosphere-ocean system in climate change.

MATH2260
Dynamical Systems
School of Mathematics
UOC3 HPW2
Prerequisite: MATH1031(CR) or MATH1231 or MATH1241 or MATH1251; Excluded: MATH2200, MATH2220.

A comprehensive introduction to continuous time and discrete time dynamical systems. Differential equations and difference equations. Linear systems. Linearization of nonlinear systems Phase plane analysis.

Equilibrium fixed points and cycles, stability analysis and bifurcations. Dynamical modelling techniques with applications selected from environmental, physical, social and economic contexts.

MATH2281
Biomathematics
School of Mathematics
UOC6 HPW4
Prerequisites: MATH1031 (DN) or MATH1231 or MATH1241 or MATH1251, Exclusions: MATH2280

Introduction to mathematical modelling and data analysis for biological and biomedical systems. Examples include: the formation of animal coat patterns, the spread of diseases through the community, the interaction between pathogens and the immune system of the body, the growth of tumours, nerve cell signalling, population dynamics, pharmacokinetics and bacterial growth. The emphasis in this course is on the development of the governing model equations and on computer simulations of the model equations rather than on mathematical methods for solving the model equations.

Note: Exclusions: MATH2280

MATH2301
Mathematical Computing
School of Mathematics
UOC6 HPW4
Prerequisite: MATH1031(CR) or MATH1231 or MATH1241 or MATH1251

An introduction to mathematical computing, programming and visualization using Matlab, with a focus on mathematical modelling and simulation. Introduction to Matlab, floating point arithmetic, difference equations, nonlinear equations, numerical differentiation and integration, initial value problems.

MATH2400
Finite Mathematics
School of Mathematics
UOC3 HPW2
Prerequisite: MATH1081 or MATH1231 or MATH1241 or MATH1251

This is an introduction to those areas of Mathematics which underpin parts of computing. The main topics are integer and modulo arithmetic (including tests for primeness of integers), polynomial algebra (including factorization of polynomials and creation of new fields) and an introduction to cryptography and error correcting codes.

Note: MATH1081 Discrete Mathematics is recommended.

MATH2501
Linear Algebra
School of Mathematics
UOC6 HPW5
Prerequisite: MATH1231 or MATH1241 or MATH1251; Excluded: MATH2509, MATH2601.

Vector spaces, linear transformations, change of basis. Inner products, orthogonalization, reflections and QR factorizations. Eigenvalues and eigenvectors, diagonalization. Jordan forms and functions of matrices. Applications to linear systems of differential equations, quadratics, rotations.

MATH2509
Linear Algebra for Engineers
School of Mathematics
UOC3 HPW3
Prerequisite: MATH1231 or MATH1241; Excluded: MATH2501, MATH2601.

Vector spaces, linear transformations, change of basis. Orthogonalization, least squares approximation, QR factorization. Determinants. Eigenvalues and eigenvectors, diagonalization. Singular value decompositions. Jordan forms. Matrix exponentials and applications to systems of differential equations.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2510
Real Analysis
School of Mathematics
UOC3 HPW2.5
Prerequisite: MATH1231 or MATH1241 or MATH1251; Excluded: MATH2019, MATH2039, MATH2049, MATH2011, MATH2111, MATH2610.

Multiple integrals, partial differentiation. Analysis of real valued functions of one and several variables. Fourier series.

MATH2520
Complex Analysis
School of Mathematics
UOC3 HPW2.5
Prerequisite: MATH1231 or MATH1241 or MATH1251; Excluded: MATH2620.

Analytic functions, Taylor and Laurent series, integrals. Cauchy's theorem, residues, evaluation of certain real integrals.

MATH2601
Higher Linear Algebra
School of Mathematics
UOC6 HPW5
Prerequisite: MATH1231 or MATH1241 or MATH1251 each with a mark of 70 or greater; Excluded: MATH2501

As for MATH2501, but in greater depth, and with additional material on unitary, self-adjoint and normal transformations.

MATH2620
Higher Complex Analysis
School of Mathematics
UOC3 HPW2.5
Prerequisite: MATH1231 or MATH1241 or MATH1251 each with a mark of at least 70; Excluded: MATH2520.

As for MATH2520 but in greater depth.

MATH2801
Theory of Statistics
School of Mathematics
UOC6 HPW4
Prerequisite: MATH1021(CR) or MATH1031(CR) or MATH1231 or MATH1241 or MATH1251 (or, in program 3653, MATH1131 or MATH1141); Excluded: MATH2829, MATH2839, MATH2841, MATH2859, MATH2899, MATH2901, BIOS2041, BEES2041, ECON2215.

Probability, random variables, standard distributions, bivariate distributions, transformations, central limit theorem, sampling distributions, point estimation, interval estimation, hypothesis testing.

MATH2829
Statistics SU
School of Mathematics
UOC3 HPW3
Prerequisite: MATH1231 or MATH1241; Excluded: MATH1041, MATH2841, MATH2801, MATH2901, BIOS2041, BEES2041.

Introduction to probability theory, random variables and distribution functions, sampling distributions, including those of chi-square, t and F. Estimation procedures, including confidence interval estimation with an emphasis on least squares and surveying problems, and computer based exercises.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2831
Linear Models
School of Mathematics
UOC6 HPW4
Prerequisite: MATH2801 or MATH2901; Excluded: MATH2931, BIOS2041, BEES2041.

Multiple linear regression models and examples. Graphical methods for regression analysis. Multi-variate normal distribution. Quadratic forms (distributions and independence), Gauss-Markov theorem. Hypothesis testing. Model selection. Analysis of residuals. Influence diagnostics. Analysis of variance.

MATH2839
Statistics SM
School of Mathematics
UOC3 HPW3
Prerequisite: MATH1021 or MATH1231 or MATH1241 or MATH1011 if in Program 3385; Excluded: MATH1041, MATH2841, MATH2801, MATH2901, BIOS2041, BEES2041.

Graphical data analysis. Review of probability, random variables and their properties. The normal and binomial distributions, the central limit theorem. Applications to statistical quality control. Theory of statistical inference including confidence intervals and hypothesis testing with applications to one and two sample problems based on the t- and F- test. Simple and multiple linear regression including data transformations to normality. Design and analysis of experiments, analysis of variance, introduction to factorial designs. Applications will be drawn primarily from the fields of mechanical and mining engineering and industrial design.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2841
Statistics SS
School of Mathematics
UOC6 HPW4
Prerequisite: MATH1021 or MATH1031 or MATH1231 or MATH1241 or MATH1251; Excluded: MATH2049, MATH2801, MATH2829, MATH2839, MATH1041, MATH2859, MATH2899, MATH2901, BIOS2041, BEES2041, ECON2215.

The goal in this course is to develop skills that are fundamental to data collection and analysis. These general skills are useful for anyone who needs to understand data, particularly science and information systems students. We focus on practical problems from research, business and the media that involve one or two variables. For such problems students should be able to: recognise what analysis procedures are appropriate, describe how to conduct a valid study, apply principles of probability theory, apply and interpret statistical procedures on a computer using SPSS, use a hand calculator for simple statistical procedures.

Note: This course is intended for students who want to take no more than 6 units of credit in Level II Statistics. It does not satisfy the prerequisites for any Level III Statistics course.

MATH2859
Probability, Statistics and Information
School of Mathematics
UOC3 HPW3
Prerequisite: MATH1231 or MATH1241 (or, in program 3648 or 3651 or 3652 or 3653 or 3749, MATH1131 or MATH1141); Excluded: MATH1041, MATH2841, MATH2801, MATH2901, BIOS2041, BEES2041.

Sample spaces, probability, random variables and probability distributions; examples of discrete and continuous distributions; Central Limit Theorem; statistical inference, confidence intervals and hypothesis testing; bivariate normal distribution, optimal mean square estimation, introduction to the multivariate normal distribution; linear regression and least squares estimation; inference in the linear model; on-line and off-line estimation; statistical quality control; models, applications and statistical algorithms relevant to the fields of computer, electrical, software and telecommunications engineering.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2871
Data Management for Statistical Analysis
School of Mathematics
UOC6 HPW4
Prerequisite: MATH1041 or ECON1203 or ECON2292 or PSYC2001 or MATH1231 or MATH1241 or MATH1251 or equivalent.

The course covers the use of database and spreadsheet tools to organise and query statistical data, programming in an advanced statistical package for file management, data manipulation and cleaning; methods for data screening, cleaning, graphical displays and data analysis using a range of statistical procedures; creation of data analysis reports using modern statistical and graphical methods.

The course is based around Microsoft Access and Excel as well as the SAS statistical analysis system and programming tools. Knowledge and skills developed will be generic and applicable to a range of modern statistical software tools.

MATH2899
Applied Statistics for Chemical Engineers
School of Mathematics
UOC3 HPW3
Prerequisite: MATH1231 or MATH1241; Excluded: MATH1041, MATH2841, MATH2801, MATH2901, BIOS2041, BEES2041.

Graphical data analysis. Review of probability, random variables and their properties. The normal and binomial distributions, the central limit theorem. Applications to statistical quality control. Theory of statistical inference including confidence intervals and hypothesis testing with applications to one and two sample problems based on the t- and F- test. Simple and multiple linear regression including data transformations to normality. Design and analysis of experiments, analysis of variance, introduction to factorial designs. Applications will be drawn primarily from the fields of chemical, bioprocess and petroleum engineering. Statistical computing will be based on Matlab.

Note: Available only to students for whom it is specifically required as part of their program.

MATH2901
Higher Theory of Statistics
School of Mathematics
UOC6 HPW4
Prerequisite: MATH1231 or MATH1241 or MATH1251 (or, in program 3653, MATH1131 or MATH1141); Excluded: MATH2801, MATH2829, MATH2839, MATH2841, MATH2859, MATH2899, BIOS2041, BEES2041, ECON2215.

As for MATH2801 but in greater depth.

MATH2931
Higher Linear Models
School of Mathematics
UOC6 HPW4
Prerequisite: MATH2901; Excluded: MATH2831, BIOS2041, BEES2041.

As for MATH2831 but in greater depth

MATH3000
Mathematics/Statistics Project
School of Mathematics
UOC3 HPW2
Prerequisite: 12 units of credit in Level 2 Maths courses.

Under supervision of an academic staff member of the School of Mathematics a student will undertake a course in reading and/or research on a topic in mathematics or statistics or on applications of mathematics or statistics to other disciplines such as physical, biological or social sciences, economics, finance, computing, etc. The student is expected to write an essay summarising the results of their project.

MATH3001
Mathematics/Statistics Project
School of Mathematics
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 Maths courses.

Under supervision of an academic staff member of the School of Mathematics a student will undertake a course in reading and/or research on a topic in mathematics or statistics or on applications of mathematics or statistics to other disciplines such as physical, biological or social sciences, economics, finance, computing, etc. The student is expected to write an essay summarising the results of their project.

MATH3002
Mathematics/Statistics Project
School of Mathematics
UOC12 HPW8
Prerequisite: 12 units of credit in Level 2 Maths courses.

Under supervision of an academic staff member of the School of Mathematics a student will undertake a course in reading and/or research on a topic in mathematics or statistics or on applications of mathematics or statistics to other disciplines such as physical, biological or social sciences, economics, finance, computing, etc. The student is expected to write an essay of approximately 12,000 words summarising the results of their project.

MATH3041
Mathematical Modelling for Real World Systems
School of Mathematics
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 Maths courses.

Why are no two snowfakes alike? When will the next major stock market collapse occur? Which is the greatest sporting nation on earth? Addressing real world problems involves the steps of formulating a mathematical description of the problem, solving the mathematical model, interpreting

the mathematical solution and critically evaluating the model. Motivated by real world problems, the course will survey mathematical techniques for: achieving the best possible outcomes, predicting future events and dealing with uncertainties. The course will provide introductions to popular mathematical resources for algebraic manipulation, numerical simulation and presentation. As part of the course requirements, students will be expected to work in groups on mathematical modelling projects and they will be expected to prepare a group report, both written and oral, describing the project. The course aims to equip students with the modelling skills and presentation skills for dealing with real world problems.

MATH3101
Computational Mathematics
School of Mathematics
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 Mathematics courses including MATH2011 or MATH2111 or MATH2510, and MATH2501 or MATH2601; Excluded: MATH3301.

Most mathematical models in engineering, finance and science are based on differential equations. In general these equations cannot be readily solved analytically. This course introduces computational methods for solving, to high accuracy, systems of both initial and boundary value problems for ordinary differential equations. There is a substantial computing component involving implementation of the methods and simulation of some mathematical models using the MATLAB software package on UNIX and Windows-based computer systems. Introduction to approximation of functions based on global interpolation and splines. Explicit and implicit computer methods for non-stiff and stiff initial value problems for ordinary differential equations. Introduction to the shooting, finite difference and orthogonal collocation numerical methods for boundary value problems. Direct computer algebra methods for matrix equations. Implementation of the modern computer methods using MATLAB Spline Toolbox and Ode Suite Package.

Note: This course includes a substantial computing component, and assumes some familiarity with Matlab.

MATH3121
Mathematical Methods and Partial Differential Equations
School of Mathematics
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 Mathematics courses including MATH2011 or MATH2111, and MATH2120 or MATH2130.

Fundamental methods for solution of ordinary and partial differential equations in applied mathematics, physics and engineering. Revision of separation of variables. Sturm-Liouville theory, eigenfunction expansions and generalised Fourier series, orthogonal polynomials. Bessel functions. Fourier and Laplace transforms. The method of characteristics. Introduction to Green's functions.

Note: MATH2520 or MATH2620 is recommended.

MATH3161
Optimization
School of Mathematics
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 Mathematics courses including MATH2011 or MATH2111 or MATH2510, and MATH2501 or MATH2601; Excluded: MATH3181.

Development, analysis and application of methods for optimisation problems. Theory of multivariable optimisation; including necessary and sufficient optimality conditions, stationary points, Lagrange multipliers, Kuhn-Tucker conditions, convexity and duality. Numerical methods for one dimensional minimisation, unconstrained multivariable minimisation (including steepest descent, Newton, quasi-Newton and conjugate gradient methods) and constrained multi-variable minimisation (including linear programming and quadratic programming).

MATH3201
Dynamical Systems and Chaos
School of Mathematics
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 Mathematics courses including MATH2120 or MATH2130, and MATH2501 or MATH2601.

Regular and irregular behaviour of nonlinear dynamical systems. A selection from topics developing the theory of nonlinear differential and difference equations, with applications to physical, biological and ecological systems. Topics from: stability and bifurcation theory, Floquet theory, perturbation methods, Hamiltonian dynamics, resonant oscillations, chaotic systems, Lyapunov exponents, Poincare maps, homoclinic tangles.

MATH3261
Fluids, Oceans & Climate
School of Mathematics
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 Mathematics courses including MATH2011 or MATH2111, and MATH2120 or MATH2130; Excluded: MATH3241.

The dynamics underlying the circulation of the atmosphere and oceans are detailed using key concepts such as geostrophy, the deformation radius and the conservation of potential vorticity. The role of Rossby waves, shelf waves, turbulent boundary layers and stratification is discussed. The atmosphere-ocean system as a global heat engine for climate variablity is examined using models for buoyant forcing, quasi-geostrophy and baroclinic instability.

MATH3311
Mathematical Computing for Finance
School of Mathematics
UOC6 HPW4
Prerequisite: MATH2120 or MATH2130 and MATH2501 or MATH2601 and 6 units of credit in Level 2 Statistics.

In the end, finance is concerned with making definite numerical recommendations which frequently can only be made by analysing sophisticated models using high-speed computers. This course studies the design, implementation and use of computer programs to solve practical mathematical problems of relevance to finance, insurance and risk management. A review of MATLAB, floating point numbers, rounding error and computational complexity. A selection of topics from: approximation and parameter estimation, Fourier series and the FFT, finite difference approximations, partial differential equations (heat equation), sparse linear systems, non-linear algebraic equations, trees, Monte Carlo methods and simulation, random numbers and variance reduction, numerical integration. Computing environments for mathematical finance. Practical examples and programming assignments using MATLAB.

MATH3411
Information, Codes and Ciphers
School of Mathematics
UOC6 HPW4
Prerequisite: MATH1081 or MATH1090.

Discrete communication channels: information theory, compresssion and error control coding, cryptography.

MATH3521
Algebraic Techniques in Number Theory
School of Mathematics
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 Math courses; Excluded: MATH3710, MATH3740.

The integers, residue class arithmetic, theorems of Lagrange, Fermat and Euler, groups of units, Chinese remainder theorem, primitive roots, Gaussian integers, division algorithm and principal ideals in Z[i], quadratic residues, algebraic number fields, extensions, Eisenstein's test, ruler and compass constructions.

MATH3531
Topology and Differential Geometry
School of Mathematics
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 Math courses including MATH2011 or MATH2111or MATH2510 or MATH2610; Excluded: MATH3760.

Curves in the plane and what it means to be curved rather than straight. Curves in space and how they curve and twist. Surfaces and how they bend both internally and externally. Soap bubbles and minimal surfaces. Why a map of the earth must be distorted: Gauss' "Remarkable Theorem" and the Gauss-Bonnet Theorem. Euler characteristic and the platonic solids. Mobius bands and other surfaces. Classification and elementary combinatorial topology of surfaces. Topological spaces, fixed point theorems, Hairy Ball, Pancake and Ham Sandwich Theorems.

Note: Offered in odd numbered years only.

MATH3560
History of Mathematics
School of Mathematics
UOC3 HPW2
Prerequisite: 6 units of credit of Level 2 Mathematics courses

The development of mathematical ideas has often been very slow and at times tortuous, but nearly always interesting. The finished product which is presented at secondary school and in University courses often hides much of the story which led to the development of the subject. This course is a pot-pourri of episodes from the long and fascinating history of the subject. It is of interest to anyone studying mathematics for its own sake, and is of special relevance to those planning a career in secondary teaching.

MATH3570
Foundations of Calculus
School of Mathematics
UOC3 HPW2
Prerequisite: 12 units of credit in Level 2 Math courses; Excluded: MATH3610.

What does it mean for a limit to exist? What does it mean for a function to be continuous or differentiable? There are functions which are continuous everywhere but differentiable nowhere! Are there functions whose integral does not exist? In this course, we look again at the essential concepts of limit, continuity, differentiability and integrability and try to place them on a sure footing. The syllabus includes material on sequences and series of real numbers and also of real valued functions. Although of general interest to those studying mathematics for its own sake, this course is of special relevance to those planning a career in secondary teaching.

MATH3611
Higher Analysis
School of Mathematics
UOC6 HPW4
Prerequisite: 12 UOC of Level 2 Mathematics with an average mark of at least 70, including MATH2111 or MATH2011 (CR) or MATH2510 (CR), or permission from the Head of Department; Exclusions: MATH3570, MATH3610, MATH3620.

Limits and continuity are the central concepts of calculus in one and several variables. These concepts can be extended to quite general situations. The simplest of these is when there is some way of measuring the distance between two objects. Some of the most important examples of these `metric spaces' occur as sets of functions, so this course looks at ways in which one might say that a sequence of functions converges. Taking these ideas one step further, we look at convergence which does not come from a generalized distance function. These are the ideas of point set topology. The course will include topics such as countability, continuity, uniform convergence and compactness, as well as an introduction to the core areas of function analysis. This will include the notions of Banach and Hilbert spaces, including Reproducing Kernel Hilbert Spaces which are important in Applied Mathematics, Statistics and elsewhere.

MATH3701
Higher Topology and Differential Geometry
School of Mathematics
Prerequisite: 12 UOC of Level 2 Mathematics with an average mark of at least 70, including MATH2111 or MATH2011 (CR) or MATH2510 (CR) and MATH2601 or MATH2501 (CR), or permission from Head of Department; Exclusion: MATH3690, MATH3700, MATH3531, MATH3760.

This course begins with a study of curves in space and how they bend and twist. It then considers surfaces, studying the first and second fundamental forms introduced by Gauss, the various measures of curvature and what they mean for the external and internal appearance and properties of surfaces. It continues by examining topological properties of surfaces, such as the Euler Characteristic, and proves the Gauss-Bonnet theorem relating the differential geometry to the topology. The final topics treated are chosen from homotopy, the Poincare-Hopf theorem, Riemannian geometry, and the hyperbolic plane.

MATH3711
Higher Algebra 1: Group Theory
School of Mathematics
UOC6 HPW4
Prerequisite: 12 UOC of Level 2 Mathematics with an average mark of at least 70, including MATH2601 or MATH2501 (CR), or permission from the Head of Department; Exclusions: MATH3710, MATH3720.

In Higher Algebra, we will examine some of the basic notions of modern algebra that arose in the late 19th and early 20th century. The most fundamental notion is that of a group, which is how mathematicians study symmetry. These will be studied in detail both from an abstract point of view and also to study symmetry in 3-dimensional space. The other important concept studied is that of a ring. The algebra of adding and multiplying matrices has many similarities with the algebra of numbers. The notion of rings generalise both these two examples.

Note: Students wishing to enrol in Level III Higher Pure Mathematics courses should consult with the Pure Mathematics Department before enrolling

MATH3801
Probability and Stochastic Processes
School of Mathematics
UOC6 HPW4
Prerequisite: MATH2501 or MATH2601 and MATH2011 or MATH2111 or MATH2510 or MATH2610 and MATH2801 or MATH2901; Excluded: MATH3901.

Probability theory and random variables, convergence of random variables, Poisson processes, Markov chains. Continuous time Markov chains. Brownian motion and its applications, simulation of stochastic processes.

MATH3811
Statistical Inference
School of Mathematics
UOC6 HPW4
Prerequisite: MATH2831 or MATH2931; Excluded: MATH3840, MATH3850, MATH3911, MATH3940, MATH3950.

Coverage of the main parametric and non-parametric and techniques used in statistics. Uniformly minimum variance estimation. Cramer-Rao inequality, Lehmann-Scheffe theorem. Monotone likelihood ratio distributions and uniformly most powerful unbiased tests. Generalised likelihood ratio tests, exact tests and large sample tests. Bayesian point estimation, interval estimation and hypothesis testing. Robustness and bootstrap resampling. Order statistics, goodness of fit, contingency tables. Statistical inference based on ranks. One sample, two sample and k-sample problems, blocked data, independence and association. Nonparametric regression.

MATH3821
Statistical Modelling and Computing
School of Mathematics
UOC6 HPW4
Prerequisite: MATH2831 or MATH2931, MATH2810 or MATH2910; Excluded: MATH3800, MATH3810.

Use of major statistical packages such as Splus, SAS, Matlab. Model selection and regression diagnostics in multiple linear regression. Theory and application of generalised linear model and nonlinear regression. Applications of simulation in statistical inference. Resampling techniques. Nonparametric curve and density estimation.

MATH3831
Statistical Methods in Social and Market Research
School of Mathematics
UOC6 HPW4
Prerequisite: MATH2801 or MATH2901; Excluded: MATH2840, MATH2940, MATH3931.

Development of statistical methods for design and analysis of data for social and market research. Review of research methodology. Sample survey design. Statistical aspects of survey design. Statistical aspects of questionnaire design and analysis. Estimation of means, totals, proportions and ratios. Estimation using auxiliary information. Methods for analysing cross-classified data, binary and ordinal responses, assessment, control and quantification of errors in survey research.

MATH3841
Statistical Analysis of Dependent Data
School of Mathematics
UOC6 HPW4
Prerequisite: MATH3811 or MATH3911; Excluded: MATH3820, MATH3870, MATH3920, MATH3941, MATH3970.

Development of statistical methods for analysis of dependent data arising in multivariate observations, time series and spatial processes. Multivariate normal distribution, Hotelling's T-squared, Wishart distribution. Discriminant analysis, principle component analysis, canonical analysis and factor analysis. Classification methods. Stationary and non-stationary time series models, autocorrelation, linear time series models, forecasting. Models for spatial processes.

MATH3851
Experimental Design and Categorical Data
School of Mathematics
UOC6 HPW4
Prerequisite: MATH2801 OR MATH2901 AND MATH2831 OR MATH2931; Excluded: MATH2810, MATH2910, MATH3830, MATH3930

This course focuses on the principles of good experimental design and the statistical tools appropriate for discrete valued data. Topics include factorial designs and their analysis, response surface designs for product and process optimization, random effects models and components of variance, exploratory and graphical analysis of data using modern statistical packages, data visualization, analysis of cross-tabulated data, logistic and Poisson regression for analysis of binary and count data and log-linear models for contingency tables.

MATH3901
Higher Probability and Stochastic Processes
School of Mathematics
UOC6 HPW4
Prerequisite: MATH2501 or MATH2601 and MATH2011 or MATH2111 or MATH2510 or MATH2610 and MATH2901; Excluded: MATH3801.

As for MATH3801 but in greater depth.

MATH3911
Higher Statistical Inference
School of Mathematics
UOC6 HPW4
Prerequisite: MATH2931; Excluded: MATH3811, MATH3840, MATH3850, MATH3940, MATH3950.

As for MATH3811 but in greater depth.

MATH3931
Higher Statistical Methods in Social and Market Research
School of Mathematics
UOC6 HPW4
Prerequisite: MATH2901; Excluded: MATH2840, MATH2940, MATH3831.

As for MATH3831 but in greater depth.

MATH3941
Higher Statistical Analysis of Dependent Data
School of Mathematics
UOC6 HPW4
Prerequisite: MATH3911; Excluded: MATH3820, MATH3870, MATH3841, MATH3920, MATH3970.

As for MATH3841 but in greater depth.

MATH4003
Mathematics and Computer Science Honours (Full Time)
School of Mathematics
UOC24 HPW24

Undergraduate thesis in Applied Mathematics or Pure Mathematics together with advanced lectures on topics chosen half from MATH4103 or MATH4603, and half from Computer Science.

Note: To enter Mathematics Level IV, students must be have completed a MATH major in the Science program, including at least 30 units of credit in Level III Mathematics, or have completed Stage 3 of one of the MATH plans in the Advanced Science program. In addition, students must have permission from the Head of the appropriate Department.

Students will normally be required to have a credit average in their Level III Mathematics courses and to have shown some evidence of the ability to undertake independent study. In special cases, other courses may be substituted for the Mathematics courses. Students should discuss their selection of Level III courses with the Head of the appropriate Department. Students must complete 48 units of credit of Honours Mathematics in order to be awarded an Honours degree.

MATH4004
Mathematics and Computer Science Honours (Part Time)
School of Mathematics
UOC12 HPW12

Undergraduate thesis in Applied Mathematics or Pure Mathematics together with advanced lectures on topics chosen half from MATH4103 or MATH4603, and half from Computer Science.

Note: See notes for MATH4003.

MATH4012
Mathematics and Finance Thesis Project
School of Mathematics
UOC12 HPW5

Under the supervision of a member of the academic staff of the School of Mathematics a student will undertake a major project in mathematics and finance. The project could range from reading and/or research on theoretical aspects to financial engineering involving implementation of a practical model in C/C++. Research interaction with the finance industry is encouraged. The student will write a thesis summarising the result of their project and make a presentation of it.

MATH4103
Applied Mathematics Honours (Full Time)
School of Mathematics
UOC24 HPW24

Skill in practical numerical computing is highly recommended for students taking this course. Those students who have not already taken a suitable computing course may be required to take a short bridging course. Undergraduate thesis together with advanced lectures on topics chosen from the following fields: advanced mathematical methods for applied mathematics, advanced optimization, numerical analysis, theory of linear and non linear dynamical systems, optimal control, operations research, functional analysis and applications, mathematics of economic models and of economic prediction, fluid mechanics, oceanography, micro- hydrodynamics, and analytical and numerical solution of partial differential equations. May also include advanced lectures given by other Departments or Schools.

Note: See notes for MATH4003.

MATH4104
Applied Mathematics Honours (Part Time)
School of Mathematics
UOC12 HPW12

Skill in practical numerical computing is highly recommended for students taking this course. Those students who have not already taken a suitable computing course may be required to take a short bridging course. Undergraduate thesis together with advanced lectures on topics chosen from the following fields: advanced mathematical methods for applied mathematics, advanced optimization, numerical analysis, theory of linear and non linear dynamical systems, optimal control, operations research, functional analysis and applications, mathematics of economic models and of economic prediction, fluid mechanics, oceanography, micro- hydrodynamics, and analytical and numerical solution of partial differential equations. May also include advanced lectures given by other Departments or Schools.

Note: See notes for MATH4003.

MATH4603
Pure Mathematics Honours(Full Time)
School of Mathematics
UOC24 HPW24

Undergraduate thesis together with advanced lectures on topics chosen from the fields of current interest in Pure Mathematics. May also include advanced lectures given by other Departments or Schools.

Note: See notes for MATH4003. Some Higher level Mathematics courses should normally be included at Levels II and III.

MATH4604
Pure Mathematics Honours (Part Time)
School of Mathematics
UOC12 HPW12

Undergraduate thesis together with advanced lectures on topics chosen from the fields of current interest in Pure Mathematics. May also include advanced lectures given by other Departments or Schools.

Note: See notes for MATH4003. Some Higher level Mathematics courses should normally be included at Levels II and III.

MATH4903
Statistics Honours (Full Time)
School of Mathematics
UOC24 HPW24

Undergraduate thesis together with advanced lectures on topics chosen from the following fields: mathematical basis, experimental design, response surfaces, stochastic processes, theories of inference, sequential analysis, nonparametric methods, multivariate analysis, mathematical

programming, information theory, discrete distributions. May also include advanced lectures given by other Departments or Schools.

Note: See notes for MATH4003.

MATH4904
Statistics Honours (Part Time)
School of Mathematics
UOC12 HPW12

Undergraduate thesis together with advanced lectures on topics chosen from the following fields: mathematical basis, experimental design, response surfaces, stochastic processes, theories of inference, sequential analysis, nonparametric methods, multivariate analysis, mathematical programming, information theory, discrete distributions. May also include advanced lectures given by other Departments or Schools.

Note: See notes for MATH4003.

MATS1002
Microstructure Analysis
School of Materials Science and Engineering
UOC3 HPW3

Specimen preparation techniques; Principles of optical microscopy; Image analysis; Quantitative microscopy and stereology; Electron microscopy; Microchemical analysis.

MATS1013
Diffusion and Kinetics
School of Materials Science and Engineering
UOC3 HPW2

Unit 1 Diffusion
Staff Contact: Dr Nagarajan Valanoor

Fick's first and second laws; Solutions for short and long times by analytical and numerical methods; Boundary conditions for solid-fluid and solid-solid interfaces; Diffusion couples; Atomic level diffusion theory; Diffusion with variable D values, phase boundary migration and Kirkendall effect.

Unit 2 Kinetics
Staff Contact: Dr Haiping Sun

Elementary and non-elementary reactions; Reaction order; Activation energy; Irreversible and reversible reactions; Heterogeneous reactions; Kinetics of solid state-gas (fluid) reactions; Elementary steps; Rate-controlling step; Intrinsic kinetics; Chemisorption; Mass transfer in the gas phase and fluid; Multicomponent system; Knudsen diffusion; Shrinking core model.

MATS1021
Computing in Materials Science
School of Materials Science and Engineering
UOC3 HPW3

The aim of the course is to gain a basic understanding of the computing applications and practices that are relevant to materials engineering degrees and industry practice. Topics covered are: a brief overview of the place of computing in materials engineering; use of common materials software packages; using the internet as a part of the degree; search engines; email; website composition; and computer programming to solve materials based problems.

MATS1092
Materials and Design 1
School of Materials Science and Engineering
UOC3 HPW2

An appreciation of the relationships between the properties of materials, component design, manufacturing and product performance. Materials selection as an integral part of successful design. Long-term potential for materials improvement and substitution.

MATS1111
Materials Science 1
School of Materials Science and Engineering
UOC3 HPW3

Metals, ceramics, polymers and composites, their structure, chemical, physical and mechanical properties, engineering applications and production with particular reference to Australian industries. Role of materials science and engineering in materials industry. Information retrieval. Communication skills. Plant visits. Introductory materials laboratories.

MATS1112
Phase Equilibria
School of Materials Science and Engineering
UOC3 HPW2

Phase rule. Two-component systems: free energy-composition and temperature composition diagrams, solubility limits, compound formation, invariant points. Three-component systems: isothermal sections and liquidus projections. Solidification and crystallization; cooling curves, crystallization paths.

MATS1142
Crystallography and X-Ray Diffraction
School of Materials Science and Engineering
UOC3 HPW3

Introduction to crystallography, crystal structure, Bravais lattices, Miller indices, Miller-Bravais indices. Production, absorption, and diffraction of X-rays. Powder and single-crystal X-ray methods. Stereographic projection. Application of diffraction methods to solid solutions, thermal analysis, stress measurement, X-ray fluorescence spectroscopy, chemical analysis.

MATS1152
Materials Engineering 1B
School of Materials Science and Engineering
UOC6 HPW4

Materials process principles and engineering application. Steady and unsteady state material and energy balances. Heat transfer mechanisms such as conduction, convection and radiation. Principles of steady and unsteady heat transfer and application in the production and application of materials. Materials and heat flow involving high temperature solid, liquid and gaseous phases. Computer programming and application. Course examples are drawn from materials engineering practice in the broadest sense.

MATS1163
Chemistry of the Solid State
School of Materials Science and Engineering
UOC3 HPW2

Crystal chemistry, nature of bonding in solids, silicate structures, and structure-composition relationships. Glass and glass-ceramics. Reactions with solids, grain boundary and interfacial effects, ceramic reactions, and polymorphic transformations (oxides, non-oxides, aluminosilicates).

MATS1172
Physical Properties of Materials
School of Materials Science and Engineering
UOC3 HPW3

The particle and wave nature of matter; The Schrodinger equation; Electrons in a crystal: Zone and band theory; Fermi energy, Fermi surface and density of states; Electrical conduction in materials; Intrinsic and extrinsic semiconductors; Band-gap engineering; Basic semiconductor devices; Superconductivity and superconducting materials; Thermal properties of a solid: Heat capacity and thermal conduction. Magnetic behaviour: Basic concepts, modern theory and types of magnetism; Magnetic materials and applications.

MATS1214
Welding and Other Joining Processes
School of Materials Science and Engineering
UOC3 HPW2

Fusion welding. Capabilities, advantages and limitations. Metallurgical aspects of fusion welding. Cause of welding defects and weldability of carbon and alloy steels, stainless steels, aluminium and other common non-ferrous alloys. Design of welded fabrications to reduce distortion and the risk of failure by fatigue, brittle fracture, etc. Soldering, brazing, adhesive bonding.

MATS1223
Corrosion Control
School of Materials Science and Engineering
UOC3 HPW2

Topics covered: cost of corrosion; basic principles and classifications of corrosion; thermodynamics of corrosion; electrode kinetics; passivity and pitting; atmospheric corrosion; corrosion in soil and biological corrosion; corrosion under stress; liquid erosion failure and liquid metal embrittlement; high temperature corrosion and oxidation; designing against corrosion.

MATS1232
Materials Engineering 1A
School of Materials Science and Engineering
UOC3 HPW3

Fluid flow in materials processing. Application of the principles of fluid flow in the production and application of materials. Examples are drawn from ceramic, materials and metallurgical engineering practices in the broadest sense.

MATS1244
Materials Industry Management A
School of Materials Science and Engineering
UOC6 HPW4

Project Management: the stages of a project; planning; scheduling; personal dynamics; reporting; stakeholders; development of a project plan pertinent to the materials industry.

Accounting: financial accounting; development and analysis financial statements; ratio analysis; financial planning; finance; management accounting.

Career Development: self-promotion to gain employment; development of job applications and resumes; goal setting; performance appraisal; reward structures.

Marketing: market analysis; marketing concepts; product development.

Professional ethics

MATS1262
Mechanical Properties of Materials
School of Materials Science and Engineering
UOC6 HPW5

Nature and significance of mechanical properties. Stress-strain relationships of metals, ceramics and polymers; oriented materials, textiles. Elasticity, anelasticity, plasticity, superplasticity. Young's modulus, Shear modulus, bulk modulus, Poisson's ratio. Creep, fatigue and visco-elasticity. Mechanical testing : tension, compression, hardness and impact tests. Stress and strain transformation. Mohr's circle. Fundamentals of stress analysis. Failure criteria. Application to materials' working processes.

MATS1282
Thermodynamic Materials
School of Materials Science and Engineering
UOC6 HPW4
Pre-requiste/s: CHEM2718

Thermodynamic functions and systems - PVT system, stretched wire, paramagnetic solid, and electrolytic cell. The first and second thermodynamic laws in application to materials engineering. Phase transitions of first and second order. Ellingham and Pourbaix diagrams. Thermodynamics of solutions. Gibbs-Duhem equation. Thermodynamic activity. Perfect and regular metallic and ionic solutions. Thermodynamic stability. Calculation of phase diagrams. Calculation of chemical equilibria in complex systems.

MATS1343
Materials Industry Management B
School of Materials Science and Engineering
UOC3 HPW3

Legal Issues in Management & Business: structure of the Australian legal system; the legal process and alternative dispute resolution; business law; contract law; restrictive trade practises; consumer protection; protection and exploitation of intellectual property.

Micro- and macro-economics: economic principles; supply and demand analysis; market structures; pricing and production; market failures and regulation; the business cycle and government policy; inflation and unemployment.

People management issues: diversity in the workplace: racial, gender, age, educational; leadership styles: leaders and managers, generic vs. trained, motivation, emotional intelligence; group behaviour and intergroup conflict.

Operations management: management principles; operational management; risk management and AS 4360; quality management and ISO 9000; continual improvement, environmental management and ISO 14000

Occupational Health and Safety: OHS management and AS 4801.

Course includes pertinent case studies and guest lecturers from industry.

MATS1354
Design Project
School of Materials Science and Engineering
UOC3 HPW3

This project will cover the design of a selected piece of processing equipment or an engineering component. It will involve selection and specification of materials and other relevant aspects covered within the undergraduate program.

MATS1414
Surface Treatment and Wear
School of Materials Science and Engineering
UOC3 HPW2

Coatings for corrosion prevention, engineering and decorative purposes. Adhesion. Surface modification. Specifications for coating systems. Selection, testing and evaluation of coatings. Classification of wear modes. Mechanisms of adhesive and abrasive wear. Selection, testing and evaluation of matrials for wear mitigation. Wear-resistant materials.

MATS1464
Professional Communication and Presentation
School of Materials Science and Engineering
UOC3 HPW2

Presentation skills: public speaking, presentation techniques, visual aids, library usage. Honours thesis: guidelines for thesis preparation, two oral presentations. Job search skills: curriculum vitae, cover letter, interviews.

MATS1902
Industrial Training A
School of Materials Science and Engineering
UOC24
Industrial Training (Co-op IT. 2)

MATS1903
Industrial Training B
School of Materials Science and Engineering
UOC24
Industrial Training (Co-op IT. 3)

MATS2013
Ceramic Materials
School of Materials Science and Engineering
UOC3 HPW3
Excluded: MATS2313.

Geological origin and classification of ceramic raw materials. Composition, crystal structures, chemical and physical properties, and physical aspects of the production of ceramics and related materials. Chemical and physical reactions during processing and firing of traditional and advanced ceramics, cement, glass, refractories, and composites. Fabrication routes of commercial ceramic materials.

MATS2153
Ceramic Processing Laboratory
School of Materials Science and Engineering
UOC3 HPW3

Laboratory program illustrating processing and engineering aspects of ceramic technology. Students are required to take part in a series of factory inspections.

MATS2183
Refractories
School of Materials Science and Engineering
UOC3 HPW2

Classification of refractories. Chemical and physical properties of refractories. Introduction to raw materials and manufacturing technology. Description of chemical reactions occurring between refractories and solid, liquid, and gas phases in ferrous and nonferrous metal industries. Review of phase equilibria.

MATS2203
Physico-Chemical Ceramics Laboratory
School of Materials Science and Engineering
UOC3 HPW3

Laboratory program illustrating the physical and chemical properties associated with the processing and performance of ceramic materials. Students are required to take part in a series of factory inspections.

MATS2263
Sintering of Ceramics
School of Materials Science and Engineering
UOC3 HPW2

Introduction to sintering: definitions of sintering, brief history of sintering, driving forces of sintering, mass transport mechanisms, and atomic mobility. Solid-state sintering: mass transport mechanisms, stages of sintering, microstructure and processing considerations. Liquid-phase sintering: thermodynamic and microstructural considerations, liquid-phase sintering models. Reactive sintering processes: reactive sintering, reaction bonding, and transient-liquid phase sintering and reactive hot compaction. Pressure-assisted sintering: effect of pressure in sintering, deformation mechanisms, densification maps, and pressure-assisted sintering processes. Secondary phenomena: phase transformation, chemical reactions, and firing shrinkage and warpage. Introduction to sintering technology.

MATS2294
Thermal and Mechanical Properties of Ceramics
School of Materials Science and Engineering
UOC3 HPW3

Heat capacity, measurement of heat capacity, and factors affecting heat capacity. Thermal expansion, measurment of thermal expansion, and factors affecting thermal expansion. Thermal conductivity, thermal diffusivity, measurement of thermal conductivity and thermal diffusivity, factors affecting thermal transport, phonon and photon conductivity, and factors affecting phonon and photon conductivity. Thermal stresses and thermal shock. Influence of structure and composition of pure materials on thermal conductivity of multiphase materials. Effects of composition, microstructure, and physical properties on the mechanical properties of ceramics, design approaches for ceramics, inspection and non-destructive testing of ceramics, and case studies.

MATS2314
Glass-Based Ceramics
School of Materials Science and Engineering
UOC3 HPW2

Raw materials, glass compositions and types of glasses. Glass composition calculations. Glass forming processes. Design and construction of glass tanks. Electric melting. Fusion casting, crystal growth from melts. Relationship between composition and properties of glasses. Glass ceramics: compositions, melt forming, nucleation and crystallisation, and properties. Glazes and enamels: preparation of glazes, glaze calculations, design of glazes for bodies, chemical reactions, glaze body stress and defects, and porcelain enamels.

MATS2363
Ceramic Processing and Design
School of Materials Science and Engineering
UOC3 HPW3
Prerequisite: MATS5013.

Forming of ceramics: forming processes and equipment used in traditional and technical ceramics, advanced forming processes, and forming problems. Drying of ceramics: review of the drying process, statics of drying (psychrometry), kinetics of drying, principles of dryer design, drying problems, and drying case studies. Firing of ceramics: review of chemical and physical processes, statics of firing (mass and energy balances on kilns), dynamics of firing and design of firing cycles, advanced kiln design, fast firing processes, and firing case studies.

MATS3064
Composite Materials
School of Materials Science and Engineering
UOC3 HPW2

Philosophy of a composite. Fibre and matrix materials. Role of the interface. Polymer matrix, metal matrix and ceramic matrix composites. Physico-chemical characteristion. Strengthening and toughening mechanisms. Effect of reinforcement volume fraction. Size and size distribution. Properties of composites. Fabrication techniques. Design with composites. Applications.

MATS3443
Polymer Science and Engineering
School of Materials Science and Engineering
UOC3 HPW3

Polymer structure, monomers, bond strength, addition/condensation polymerisation, amorphous, crystalline, conformation, chain branching, co-polymer, additives in plastics, glass transition. Effect of molecular structure on performance, orientation, structure-property correlation, commodity and specialty plastics; application of polymers in ceramic industry, rheological behaviour.

MATS3524
Materials Engineering Project
School of Materials Science and Engineering
UOC12

An experimental or technical investigation or design related to some aspects of materials engineering in the specific discipline (ceramic engineering, metallurgical engineering or materials engineering).

MATS3564
Polymer Engineering 1
School of Materials Science and Engineering
UOC3 HPW3

Critical effects of temperature on behaviour of thermoplastics under load; Comparisons with thermosets; Factors contributing to strength and toughness; Yield, deformation and fracture; Crazing; Effects of environment.

MATS3574
Polymer Engineering 2
School of Materials Science and Engineering
UOC3 HPW3

Strategies to reduce stress and increase toughness. Creep, recovery and stress relaxation. Time-temperature superposition, fatigue, selection of commodity plastics, engineering plastics and elastomers for particular applications. Degradation. Processing of polymers.

MATS3624
Materials Engineering Project
School of Materials Science and Engineering
UOC9

An experimental or technical investigation or design related to materials engineering in the specific discipline (metallurgical engineering, materials engineering or ceramic engineering). Students with an average mark above 70 will be allowed to do the 24 UOC Project MATS3724, with approval from the Head of School.

Note: This course is 18 UOC in total: 9 UOC per semester over two semesters

MATS3724
Material Engineering Projects
School of Materials Science and Engineering
UOC12

An experimental or technical investigation or design related to materials engineering in the specific discipline (metallurgical engineering, materials engineering or ceramic engineering). Only students with an average mark above 70 will be allowed to do this 24 UOC Project, with approval from the Head of School. Students with an average mark below 70 do the 18 UOC project MATS3624 AND ADDITIONAL 6 UOC Elective courses in Materials Science and Engineering.

Note: This course is 24 UOC in total: 12 UOC per semester over two semesters

MATS4013
Physical Metallurgy
School of Materials Science and Engineering
UOC3 HPW3

Unit 1 Dislocations

Deformation of metals. Atomic and molecular description of deformation. Introduction to dislocation theory and its application to mechanical properties.

Unit 2 Phase Transformations

Solidification. Solid state transformations; diffusional and diffusionless transformations. Kinetics of phase transformations

Unit 3 Alloys

Steels and nonferrous alloys. Development of microstructure.

MATS4023
Phase Transformations
School of Materials Science and Engineering
UOC3 HPW2

Theory of nucleation and growth of a new phase. Interface behaviour during solidification of single component systems. Alloy solidification - Interface stability and constitutional supercooling. Solidification by invariant transformation. Solidification of ingots and castings - Inoculation effects. Single crystal growth. Rapid solidification processing. Nucleation and growth of precipitates - age hardening. Spinodal decomposition and ordering reactions. Diffusional and diffusionless transformations - characteristics; nucleation and growth; crystallographic aspects. Case studies.

MATS4064
Thermomechanical Processing
School of Materials Science and Engineering
UOC3 HPW2

Polycrystalline plasticity and origin of deformation microstructure; stored energy; mechanisms of dynamic and static restoration in materials; flow stress; superplasticity; nucleation and growth of new grains; kinetics; effect of purity, solutes and particles; control of grain size; grain growth and secondary recrystallization; deformation and annealing textures; anisotropy of mechanical and physical properties; case studies.

MATS4083
Physical Metallurgy of Alloys
School of Materials Science and Engineering
UOC3 HPW3

Relationship between composition, thermal processing, phase equilibrium, microstructure and properties in ferrous and non-ferrous alloys. Carbon steels: heat treatment, including annealing, normalising, spheroidising, quenching and tempering, austempering and martempering. Cast irons: grey, white mottled malleable and ductile irons. Wrought and cast aluminium alloys, heat treatable and non-heat treatable aluminium alloys. Copper, low-alloy coppers, and copper alloys. Magnesium alloys. Lead, zinc and tin alloys.

MATS4084
Specialty Alloys
School of Materials Science and Engineering
UOC3 HPW3
Prerequisite: MATS4013

Unit 1 Heat resisting alloys. Microstructure and properties of high temperature alloys based on iron, nickel-iron, nickel and chromium. Strengthening mechanisms. Creep, oxidation and hot corrosion. Coatings and protection. Process metallurgy and applications of high temperature alloys.

Unit 2 Light alloys. Production, processing, properties and development of titanium alloys. Advanced aluminium alloys. Rapid solidification of titanium and aluminium alloys. Powder processing of titanium and aluminium alloys. Advanced magnesium alloys.

Unit 3 Alloy Steels. Effects of alloying elements on phase equilibrium, kinetics of transformation and microstructure. Hardenability, tempering and embrittlement of quenched steels. Alloy engineering (constructional) steels, tool and die steels, corrosion and heat resistant steels, high strength low alloy steels.

MATS4133
Deformation and Strengthening Mechanisms
School of Materials Science and Engineering
UOC3 HPW2
Prerequisite: MATS4013

Grain size dependence of strength, solute strengthening, work-hardening, age-hardening, strain ageing. Point defects and the role of point defects in strengthening. Creep, fatigue and high temperature deformation. Twinning. Interfaces.

MATS4213
Fractographic Analysis
School of Materials Science and Engineering
UOC3 HPW3
Prerequisite: MATS4013

Classification of macroscopic and microscopic fracture mechanisms. Initiation and propagation of ductile, brittle, fatigue, stress corrosion, corrosion fatigue and hydrogen induced fractures. Effect of material defects, design deficiencies and incorrect processing on the origin and cause of fracture. Analysis of various modes of fracture using fractographic techniques involving optical microscopy and scanning and transmission electron microscopy. Non destructive testing techniques. Surface analysis techniques. Analysis of service failures.

MATS4333
Fracture Mechanics
School of Materials Science and Engineering
UOC3 HPW2

Linear elastic fracture mechanics: modes of loading, stress intensity factor concept, effect of finite boundaries, energy release rate concept. Fracture toughness testing and evaluation; ASTM E399 and alternative specimen types. Subcritical fracture mechanics; fatigue, stress corrosion cracking. Elastic-plastic fracture mechanics; crack opening displacement, J-integral. Interface mechanics.

MATS5013
Materials Processing
School of Materials Science and Engineering
UOC6 HPW6

Unit 1: Pyrometallurgical Processes
Staff Contact: Dr Haiping Sun

Roasting processes. Blast furnace and alternative ironmaking. BOF and EAF steelmaking. Steel refining. Aluminium smelting. Non-ferrous pyrometallurgical processes.

Unit 2: Metal Forming Processes
Staff Contact: A/Professor Alan Crosky

Deformation and workability. Hot working, cold working , recrystallisation. Casting, forging, rolling, extrusion, wire drawing. Processing defects and their avoidance.

Unit 3: Ceramic Processing Technologies
Staff Contact: Dr Owen Standard

Overview of unit operations in ceramic industries. Processing of ceramic raw materials. Ceramic forming processes. Ceramic drying and firing technologies.

MATS5033
Extractive Metallurgy
School of Materials Science and Engineering
UOC3 HPW2
Prerequisite: MATS5013.

Unit 1 Hydrometallurgical Processes
Staff Contact: Dr Haiping Sun.

Application of principles of aqueous thermodynamics, electrochemistry, chemical and electrochemical kinetics to hydrometallurgial processes: leaching of minerals and concentrates, solution purification, precipitation, and other separation processes, ion-exchange and liquid-liquid extraction, electrowinning and electrorefining.

Unit 2 Light Metals Production

Bayer process. Thermodynamics and kinetics of electrochemical reactions. Aluminium smelting and refining. Hall-Heroult process and alternative technologies. Technologies for magnesium and titanium production. Economics and environmental issues.

MATS5043
Heat, Fluid and Mass Flow in Materials Processing
School of Materials Science and Engineering
UOC3 HPW2
Prerequisite: MATS1232, MATS1152.

In-depth understanding of fundamental principles dictating transport phenomena in materials processing. Development of governing equations related to the transfer of fluid, energy and mass and their inter-dependence based upon fundamentals to analyse and solve problems encountered in current metallurgical operating environments. Application of the understanding developed to the emerging new technologies for metals processing such as direct reduction and smelting for iron making and near net shape casting.

MATS5113
Materials Engineering Laboratory
School of Materials Science and Engineering
UOC3 HPW4

A laboratory program designed to illustrate property-structure-processing relationships in materials science and engineering through experimentation and analysis. Laboratory experiments are linked directly to lecture materials taught in MATS1013 Diffusion and Kinetics. MATS2013 Ceramic Materials, MATS3443 Polymer Science and Engineering, MATS4013 Physical Metallurgy, and MATS5013 Materials Processing. Students will be exposed to experimental methods and instruments used for materials characterization as well as processing techniques. Implicit

in this course is the cultivation of safe laboratory practices and good experimental techniques, and training in routine property measurements, methods of literature search, reliable data collection, data representation, elementary statistical analysis of data, and writing of technical reports. Two visits to selected manufacturing plants in the Sydney region are compulsory in the course.

MATS5253
Metallurgical Reaction Engineering
School of Materials Science and Engineering
UOC3 HPW2

Metallurgical reactor design: batch and continuous reactors. Gas-solid reactions. Limiting laws for gas-liquid reactions in steelmaking processes. Liquid-liquid reactions, design of extractive and refining operations.

MATS5323
Modelling in Materials Engineering 1
School of Materials Science and Engineering
UOC3 HPW2
Prerequisite: MATH1131 or MATH1231 or MATH2049 or MATH2059

The course introduces a range of numerical and analytical modelling techniques and then applies them to situations faced in materials science and engineering. Initially the pre-requisite knowledge is reviewed. Topics then covered are finite difference modelling and finite element modelling. These techniques are then applied to stress analysis, and heat transfer. A number of commercial software packages are introduced as well as designing computer programs to suit specific situations.

MATS5394
Pollution Control in Materials Processing
School of Materials Science and Engineering
UOC3 HPW2

Pollutants from the different industrial processes. Technical principles and equipment to control the emission of pollutants. Examples of various processes in the metallurgical, ceramic and chemical industries. Pollution control legislation specific to industry and compliance case studies.

MATS5413
Kinetics of Metallurgical Processes
School of Materials Science and Engineering
UOC3 HPW2
Prerequisite: MATS1013.

Application of kinetics of heterogeneous reactions to metallurgical processes. Roasting and solid state reduction processes. Calcination. Coal Gasification. Interfacial reactions, Ideal Langmuir isotherm and surface active elements. Reduction of iron oxides from molten slag. Steel decarburisation in BOF. Desulphurisation process. Nucleation and growth. Kinetics of solidification processes. Experimental techniques.

MATS5423
Pyrometallurgy 1
School of Materials Science and Engineering
UOC3 HPW4
Prerequisite: MATS5013.

Staff contact: Dr Haiping Sun

The course includes two units:

Unit 1: Extractive Metallurgy Laboratory, and

Unit 2: Metallurgical Plant Practice.

MATS5424
Modelling in Materials Engineering 2
School of Materials Science and Engineering
UOC3 HPW2

Principles of mathematical modeling. Types of mathematical models and their main components. Governing equations and boundary/initial conditions. Numerical techniques and computational fluid flow analysis. Application of commercial software packages. Dimensional analysis and application in physical modelling. Surface response methodology. Course examples are drawn from materials engineering practice in a broadest sense.

MATS5524
Pyrometallurgy 2 - Casting
School of Materials Science and Engineering
UOC3 HPW2
Prerequisite: MATS5013; Excluded: MATS1334.

Selected topics in ironmaking, steelmaking and nonferrous metallurgy. Electrometallurgy of steel. Ferroalloy making. Casting and solidification.

MATS9410
Materials for Mining Engineers
School of Materials Science and Engineering
UOC3 HPW3

Microstructure and structure-property relationships of the main types of engineering materials (metals, polymers, ceramics and composites). Micromechanisms of elastic and plastic deformation. Fracture mechanisms for ductile, brittle, creep and fatigue modes of failure in service; corrosion. Metal forming by casting and wrought processes. Phase equilibria of alloys; microstructural control by thermomechanical processing and application to commercial engineering materials. Laboratory and tutorial work includes experiments on mechanical testing, cast and recrystallised structures, ferrous and non-ferrous microstructures, wear, fracture and failure analysis.

MATS9520
Engineering Materials
School of Materials Science and Engineering
UOC3 HPW3

Microstructure and structure-property relationships of the main types of engineering materials (metals, polymers, ceramics and composites). Micromechanisms of elastic and plastic deformation. Fracture mechanisms for ductile, brittle, creep and fatigue modes of failure in service; corrosion. Metal forming by casting and wrought processes. Phase equilibria of alloys; microstructural control by thermomechanical processing and application to commercial engineering materials. Laboratory and tutorial work includes experiments on mechanical testing, cast and recrystallised structures, ferrous and non-ferrous microstructures, and fracture and failure analysis.

MATS9530
Materials Science for Mechanical Engineering
School of Materials Science and Engineering
UOC3 HPW3
Prerequisite: MATS9520

Materials used in Mechanical Engineering and related fields (Manufacturing Engineering Management, Aerospace Engineering, Naval Architecture) are discussed with emphasis on the dependence of properties and performance on microstructure. Aspects of materials selection during the design of engineering components that affect the service performance in applications, where failure can occur by brittle fracture, corrosion, creep or fatigue, will also be discussed.

MDCM1000
New Media Technologies A
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: Enrolment in program 3402 or 3994 or 4764

Introduces students to the field of media and communications through a consideration of the terms of its title, addressing notions of 'the new', 'media', and 'technology' in specific contexts. The history and technology of particular media forms, their spatiality and domestication, and issues of mediation and representation will be examined in relation to: photographic media, TV, and new computer-based media.

MDCM1001
New Media Technologies B
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: MDCM1000

Introduces students to multimedia production: text - and image-based. Students complete a series of short exercises using the resources of the multimedia laboratories and examine the cultural and social context of multimedia.

MDCM2000
Researching and Writing for New Media
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: MDCM1001

Studies formative innovative audiovisual texts and multimedia works. Introduces practices of researching and writing for audiovisual media and multimedia. Students concentrate on one area related to their

media production specialisation. Script writing conventions, genres and presentation formats will be studied, and creative works developed ready for production.

MDCM2002
Media Production
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: MDCM1001; Excluded: MDCM2001

Builds on the skills in multimedia production developed in MDCM1000/1001 by adding workshops in developing content from various audio-visual sources. Workshops cover the capture of video and photographic images, sound, illustration and techniques of interactivity.

MDCM2003
Multimedia Production
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: MDCM2002

Students learn video/audio postproduction and develop their ideas into multimedia works suitable for public exhibition. CD Roms, web-sites and video are produced in small groups, under supervision.

MDCM3000
Media Forms
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: MDCM2001 or MDCM2003; Excluded: MDCM3001, MEFT3105

The relationship between changing media forms and their techno-cultural contexts is studied. Various social and theoretical explanations are given for these relationships. Students are encouraged to develop a critical perspective on the issues together with an appreciation of the way in which forms develop and function in society.

MDCM3002
Advanced Media Production
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: MDCM2001 or MDCM2003; Excluded: MDCM3001

Focuses on writing for and pre-production techniques in multimedia for various genres - narrative, interactive and expository. Students work in small groups under supervision and study in depth various aspects of multimedia production in laboratory workshops.

MDCM3003
Multimedia Production in Industry Contexts
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: MDCM3002

Focuses on multimedia production work in genres studied in MDCM3002 and 3000. Students produce, individually or in pairs, short works in time-based media or in multimedia, suitable for publication or exhibition.

MDCM4000
Media and Communications Honours (Research) Full-Time
School of Media, Film and Theatre
UOC24 HPW5
Prerequisite: 54 units of credit in MDCM at an average of 70% and permission from Head of School

Consists of two seminars or equivalent in Session 1, a thesis workshop in Session 1, and a 15,000 word research-based thesis or a creative, research based media/multimedia project including a theoretical commentary of 5,000-6,000 words to complement the production.

MDCM4050
Media and Communications Honours (Research)Part-Time
School of Media, Film and Theatre
UOC12 HPW3
Prerequisite: 54 units of credit in MDCM at an average of 70% and permission from Head of School

Consists of two seminars or equivalent in Session 1, a thesis workshop in Session 1, and a 15,000 word research-based thesis or a creative, research based media/multimedia project including a theoretical commentary of 5,000-6,000 words to complement the production.

MDSG4001
Integrated Clinical and Community Studies
Faculty of Medicine
UOC24
Prerequisite: MDSG3001, PATH3101, PHPH3055

Objectives: By the end of Year 4, students will be expected to have mastered the skills in communication, history taking, and physical examination. Students will be able to generate a list of the patient s problems which includes the physical, emotional and psychosocial aspects of the case. For each problem, students will develop a plan for problem resolution. Students will learn much about management and drug treatment during Year 4 but only the principles of management and introductory aspects of therapeutics will be assessed at the end of Year 4. Students will be expected to interpret symptoms and signs in terms of disorders of structure and function; to understand the pathological basis of symptoms and signs; to know what special investigations are appropriate for the investigation of a problem and how to interpret the results; and to understand the social and preventative aspects of disease. The major component of the Year 4 program is the clinical attachments. While students will necessarily be assigned to subspecialty units (e.g. cardiology, neurology, etc.), the attachment is not designed primarily to teach the student the details of that discipline, but rather, the approach to a patient's problems and their resolutions, is to be emphasised. Structured teaching during clinical weeks will be limited. Pathology tutorials will be held each week, and one medical and one surgical lecture may be provided. A number of skills are to be acquired during Year 4 or 6 of the course and the acquisition of such skills will be noted in the student s logbook after an appropriate examination. By the end of year 4 students are expected to understand the health issues for populations especially disadvantaged groups and local communities. The social, environmental, economic and behavioural factors associated with illness, how the health system functions in the community, and how to assess the evidence for preventive care and population health interventions are also to be understood. For the 6 week population health term students will be attached to a clinical service which is community based or oriented for about 3 days per week. During this term they will also attend tutorials and workshops in evidence based preventive care and population health, critically appraise evidence, and work in a supervised group on a project about a community health issue. Systematic Pathology will be taught at all hospitals throughout the year and will be integrated with clinical teaching. The program includes one tutorial per week based on prepared clinical protocols (case presentations) which will explore the pathogenesis of those systematic diseases which were not covered in the context of Year 3 teaching in Pathology, or which require greater depth of coverage. Students will be required to prepare and expand on the topics listed, by reference to their own ward cases, by consultation with staff of the various departments in Pathology, as well as by reference to their recommended textbooks and specialised text or journal articles. Each student will be expected to attend a minimum number of autopsy demonstrations during the year. Additional exposure to Pathology will be attained by student attendance at Grand Rounds and Clinico-Pathological Conferences. Campus Weeks: All students will attend the University campus for three weeks throughout the year, during which lectures in Medicine, Surgery, Clinical Pharmacology, Pathology, and Population Health will be provided. Population Health teaching will utilise the knowledge and experience gained during clinical attachments to elucidate basic principles of epidemiology, public health, and continuing care. The Pathology lectures and demonstrations will concentrate on the pathogenesis of complex disease processes which cannot be effectively covered in a tutorial format. An excursion to the NSW State Government Forensic Laboratory and Coronial Courts is a compulsory activity. Where possible, days will be arranged so that a particular subject is approached in a multi-disciplinary way. A series of correlation clinics, held during campus weeks, will further emphasise the interdisciplinary approach to understanding a subject. Assessment: A multiple choice examination and a short answer paper will be given at the end of the year and will examine knowledge of Medicine, Surgery, Population Health, Clinical Pharmacology and Pathology discussed during the campus program and from the directed reading section in the syllabus. There will be two assessment tasks in the Population and Community Health term. Assessment of Pathology will also involve the submission of a project report and a viva examination. In addition to the written papers, a clinical short case examination will be held. Assessment will be based on the approach to clinical examination, eliciting of abnormal signs and the interpretation of their significance.

MDSG6001
Integrated Clinical Studies 6
Faculty of Medicine
UOC22
Prerequisite: MFAC5001, OBST5001, PAED5101, PSCY5001

Objectives: To build on the student s experiences in Years 4 and 5 of the course. To ensure that during clinical attachments in Year 6 students are capable of accepting additional responsibility within clinical teams. To ensure a smooth transition from medical student to Intern. To integrate knowledge and skills gained in the previous three years, so that the student s assessment, documentation and management of clinical problems is sufficiently mature and rounded to warrant graduation and provisional registration. To have students leave medical school committed to the importance of continued medical education. Year 6 of the new curriculum is fully integrated with the fourth year of the program. There are two campus weeks held during the year. The lecture, tutorial and correlation clinic programs build on knowledge of the disease processes gained in Year 4 and a special emphasis is placed on management, therapeutics and practical information needed for students who will soon commence work as Interns. Individual Principal Teaching Hospitals may strengthen the structured learning experience by providing additional lectures. However the time available for such additional programs will be strictly limited so that students are not diverted from their principal work on the wards. Five 6-week attachments complete the year. For one of the six week terms, students will be attached to an emergency room and an intensive care unit at a Principal Teaching Hospital, or a selected rural hospital. The remaining terms assigned to students will complement terms completed in Year 4. One medical and one surgical attachment will be provided at the students Principal Hospital and a further term will be provided at a rural hospital. Students may request a specific program during the flexible fifth term of Year 6, providing their progress has been satisfactory. As in Year 4, clinical attachments provide an opportunity for learning on the job and the steady increase in the responsibility for patient management will be given to students as their experience and proven performance suggests that this is appropriate. On the wards, a significant emphasis will be placed on mastering procedural skills, therapeutics and such practical matters as interaction with ancillary medical staff and discharge planning. Assessment: For students to be eligible to sit the final examinations they must have performed satisfactorily in each of the Year 6 clinical attachments. At the end of Year 6, students will be assessed by means of a focused clinical case examination, a free ranging viva voce examination and a Multiple Choice Examination involving questions related to medicine, surgery, population health and clinical pharmacology. All three components of this examination must be passed.

MECH0130
Engineering Drawing and Solid Modelling
School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Communication of form and layout of real world objects, solid modelling of objects. Engineering drawing layouts, orthogonal projections, dimensioning, tolerancing and standard drawing symbols, principles of detail design drawings and assembly drawings. Use of computer graphics and production of drawings.

MECH0330
Engineering Mechanics
School of Mechanical and Manufacturing Engineering
UOC4 HPW4
Excluded: CEIC1020, IDES1082, MECH1300

Composition and resolution of forces, laws of equilibrium. Friction. Statics of rigid bars, pin-jointed frames and beams. Simple states of stress. Statics of fluids. Rectilinear motion, curvilinear motion using rectangular and natural coordinates. Simple rotation. Equations of motion. Work, energy and power. Impulse and momentum.

MECH0440
Engineering Statics
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Excluded: CEIC1020, IDES1082, MECH0330, MECH1300

Composition and resolution of forces, laws of equilibrium. Friction. Statics of rigid bars, pin-jointed frames and beams. Simple states of stress. Statics of fluids.

MECH1120
Design and the Engineering Profession
School of Mechanical and Manufacturing Engineering
UOC3 HPW3

To introduce the engineering profession; to assess abilities in written expression, to develop a consciousness of the importance of written, pictorial and oral expression in engineering life and to begin to develop these skills; to begin to develop an awareness of the professional attitude. Introduction to engineering hardware and components; geometry, function, manufacture and reasons for various configurations. The design process, problem identification, search for solution concepts, nontechnical considerations in design, decision techniques, detail.

MECH1300
Engineering Mechanics 1
School of Mechanical and Manufacturing Engineering
UOC6 HPW4
Corequisite: MATH1131 or MATH1141 Excluded: MECH0330

Vectors, resultants, equilibrium. Systems of co-planar multiforce members. Mass centre, centroids, distributed forces. Friction. Applications to cables, screw threads, clutches etc. Plane particle kinematics: rectilinear, curvilinear and relative motion. Plane particle kinetics: equations of motion, work, energy, power, impulse, momentum, impact.

MECH1400
Mechanics of Solids 1
School of Mechanical and Manufacturing Engineering
UOC6 HPW4
Corequisite: MECH1300 or MECH0330 or MECH0440 Excluded: MECH0430

Resultants and equilibrium in three-dimensions; stress and strain; internal forces; stresses, deformation and strain energy due to axial loading, bending and torsion; helical springs.

MECH1500
Computing 1M
School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Introduction: history, applications, hardware, software, a model of a computer system, editors, operating systems. Networking and the internet. Program design and development: programming objectives, data structures, algorithms, symbolic names, translation of algorithms, steps in programming, programming style, errors and debugging. Data: data types, declarations, input output, file control. Programming constructs: arithmetic expressions, assignments, relational and logical expressions, selection. Application in sorting, word processing, graphics and plotting, simultaneous linear algebraic equations.

MECH2101
Machine Design A
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MANF1130, MECH1400 Corequisite: MECH1120

Selection and specification of materials and manufacturing processes for engineering items. Communication by means of engineering drawing (including tolerances) of manufacturing information for simple components structures and assemblies. Application of standards and trade literature to design.

MECH2102
Machine Design B
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MECH1120, MECH2101 Corequisite: MECH2411

Design of common engineering components and systems. Simple design-and-build project to meet a published specification and to demonstrate achieved performance.

MECH2300
Engineering Mechanics 2
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MATH1231 or MATH1241, MECH1300

Kinetics of systems of particles; steady mass flow. Plane kinematics and kinetics of rigid bodies: moment of inertia; motion relative to translating and rotating frames of reference; equations of motion; work and energy, impulse and momentum. Virtual work for static and dynamic systems. Engineering applications.

MECH2411
Mechanics of Solids 2A
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MATH1231 or MATH1241 Corequisite: MECH1400

Revision of Statics. The variation with orientation of stress at a point in 2D, Mohr s circle. The variation with orientation of stress at a point in 3D given one principal stress. The variation with orientation of strain at a point, Mohr s circle, strain gauges. The relationships between stress and strain during linear elastic deformation. The interdependence of elastic moduli. The variation with orientation of stress at a point in the general 3D case. Octahedral stresses. Strain energy stored in a linearly elastic body resulting from volume change and from distortion. Yield criteria. Fatigue, stress concentrations, Miner's rule. Material properties and testing.

MECH2412
Mechanics of Solids 2B
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MECH2411

Simple bending and unsymmetrical bending of beams. Second moments of area. Bending of composite beams, reinforced concrete beams. Transverse shear stresses in beams. Shear centre. Combined stresses in beams. Column buckling. Membrane stresses.

MECH2611
Fluid Mechanics A
School of Mechanical and Manufacturing Engineering
UOC3 HPW2
Prerequisite: MATH1131 or MATH1141, Corequisite: PHYS1169

Fluid properties. Fluids in static equilibrium. Buoyancy. Pressures in accelerating fluid systems. Steady flow energy equations. Flow measurement. Momentum analysis. Dimensional analysis and similarity. Pipe flow.

MECH2612
Fluid Mechanics B
School of Mechanical and Manufacturing Engineering
UOC3 HPW2
Prerequisite: MECH2611 or MECH2601

Incompressible laminar and turbulent flow in pipes; friction factor. Laminar flow between parallel plates and in ducts. Elementary boundary layer flow; skin friction and drag. Pumps and turbines. Pump and pipe-line system characteristics.

MECH2711
Thermodynamics A
School of Mechanical and Manufacturing Engineering
UOC3 HPW2
Prerequisite: MATH1131 or MATH1141, Corequisite: PHYS1169

Thermodynamic concepts, systems, property, state, path, process. Work and heat. Properties of pure substances, tables of properties and equations of state. First law of thermodynamics. Analysis of closed and open systems.

MECH2712
Thermodynamics B
School of Mechanical and Manufacturing Engineering
UOC3 HPW2
Prerequisite: MECH2711 or MECH2601

Second law of thermodynamics, Carnot cycle, Clausius inequality, entropy, irreversibility, isentropic efficiencies. Air-standard cycles. Vapour compression cycles.

MECH3000
Professional Responsibilities
School of Mechanical and Manufacturing Engineering
UOC3 HPW3

Professional ethics, responsibility, the environment, liability and intellectual property. Written communication and oral reporting.

MECH3091
Co-Operative Training A
School of Mechanical and Manufacturing Engineering
UOC24
Prerequisite: 144 units of credit

Co-op scholars are required to do a 25 week period of industrial training in Session 1 of their Year 4. The location of the training is at the site of one of the sponsors of scholarships for that year. At the end of the training, they are required to submit a report on the training, which is evaluated by their academic mentor, and normally make a presentation on this topic at the company to company representatives and the academic mentor.

MECH3092
Co-Operative Training B
School of Mechanical and Manufacturing Engineering
UOC24
Prerequisite: 144 units of credit

Co-op scholars are required to do a 25 week period of industrial training in Session 2 of their Year 4. The location of the training is at the site of one of the sponsors of scholarships for that year. At the end of the training, they are required to submit a report on the training, which is evaluated by their academic mentor, and normally make a presentation on this topic at the company to company representatives and the academic mentor.

MECH3101
Machine Systems Design A
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MECH2102, MECH2300, MECH2412 Corequisite: MECH3400

Mathematical modelling for design applications. Force flow through components and assemblies. Dynamically loaded bolted connections and welded joint design. Design of more engineering components and systems.

MECH3102
Machine Systems Design B
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MECH2102, MECH2300, MECH2412 Corequisite: MECH3300

Design of mechanical power transmission systems. Major design project involving broad engineering aspects, concurrent design and the interaction with other group members.

MECH3203
Engineering Experimentation A
School of Mechanical and Manufacturing Engineering
UOC3 HPW2
Prerequisite: ELEC0807, MECH2411, MECH2612, MECH2712

Scientific method, engineering method; experimental program; report writing; error analysis; principles of transducers; selection of instruments.

MECH3204
Engineering Experimentation B
School of Mechanical and Manufacturing Engineering
UOC3 HPW2
Prerequisite: ELEC0807, MECH2411, MECH2612, MECH2712

Dynamic response of instruments; signal processing; digital data acquisition; interfacing transducers to computers; computer control of experiments; smart transducers.

MECH3211
Linear Systems Analysis
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MATH2029, MECH1300

Models of physical systems: differential equations for physical systems including mechanical, electrical, hydraulic, thermal and pneumatic systems; linearisation. System analysis techniques: solution by Laplace transform method. Transfer functions and block diagrams. System response: response of first and second order systems to impulse step, ramp, sinusoidal and periodic inputs; higher order system response; system stability, applications.

MECH3300
Engineering Mechanics 3
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MATH2029, MECH2300

Satellite motion. Gyroscopic torque. Geometry of gear tooth profiles; standard and non-standard gear proportions. Gear trains; epicyclic gears. Static and dynamic balancing of rotating and reciprocating mass systems. Kinematics and kinetics of mechanisms.

MECH3330
Vibration Analysis
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MATH2029, MECH2300 Excluded: MECH2310, MECH3310, MECH9311

Introduction to mechanical vibration. Single degree-of-freedom spring-mass-damper systems; free and forced vibration; undamped/damped responses; vibration isolation; transmissibility. Harmonic analysis. Vibration measuring instruments. Linear vibrations of multi-degree-of-freedom systems; normal modes. Analysis of continuous systems. Wave equation. Transverse vibration of strings; longitudinal/torsional vibration of bars and rods; bending vibration of beams.

MECH3400
Mechanics of Solids 3
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MECH 2411, MATH2029 , MATH2039

Introduction to theory of elasticity and torsion of prismatic bars. The virtual work principle and its application to deflection of beams and trusses. Introduction to the linear elastic fracture mechanics and crack propagation.

MECH3520
Programming and Numerical Methods
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MECH1500 Excluded: MANF3800, MECH3800

Programming language features essential to complex engineering calculations. Logic, control, arrays, functions and subroutines in FORTRAN. Application of numerical methods to solve non-linear equations, linear and non-linear systems, differencing schemes, ordinary and partial differential equations in mechanical engineering applications.

MECH3601
Thermofluid System Design
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MECH2612, MECH2712

Basic concepts of heat transfer, units, dimensions, exchange mechanism. Steady state conduction, multi dimensional conduction. Structure of boundary layers. Internal and external laminar and turbulent forced convection. Heat exchanger design. Radiative heat transfer. Dimensional analysis. Modelling of turbomachines and thermal systems. Experiments and heat transfer measurements.

MECH3602
Advanced Thermodynamics
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MECH2612, MECH2712

Utilisation of energy, availability - open and closed systems; generalised thermodynamic relations; kinetic theory of gases; non-reactive ideal gas mixtures. Combustion, chemical equilibrium, chemical kinetics and emission control. Compressible flow.

MECH4001
Communications for Professional Engineers
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Corequisite: MECH4003 or BIOM5001

Development of skills in the use of various media of communication. Communication within the organisational and social context of engineering. Presenting oral and written reports. Conference organisation and participation. Group projects in communications. Report on industrial training

Note: Corequisites may be adjusted for some mid-course entry plans.

MECH4003
Thesis A
School of Mechanical and Manufacturing Engineering
UOC6
Prerequisite: MECH3000 Excluded: MECH4000

To be taken in the second last session required for the completion of all requirements for the award of the degree. This course, together with MECH4004 Thesis B, which is to be taken in the following session, requires each student to demonstrate managerial, technical and professional skills in planning and executing an approved engineering project within a stipulated time limit. Each student is also required to report on their project work at a thesis conference which is organised under MECH4001 Communications for Professional Engineers. Each student is guided by a supervisor, but successfully planning, executing and reporting on the project is the sole responsibility of each student. Thesis A does not require the submission of a thesis document. A satisfactory grade in this course is provisional pending successful completion of MECH4004.

MECH4004
Thesis B
School of Mechanical and Manufacturing Engineering
UOC9
Prerequisite: MECH4003 Corequisite: MECH4001 Excluded: MECH4000

To be taken in the last session required for the completion of all requirements for the award of the degree, i.e. in the session immediately following that in which MECH4003 Thesis A is taken. This course, together with MECH4003 Thesis A, requires each student to demonstrate managerial, technical and professional skills in planning, executing and reporting on an approved engineering project within a stipulated time limit. Each student is also required to report on their project work at a thesis conference which is organised under MECH4001 Communications for Professional Engineers. The project, on which each student works, will be a direct continuation of the project on which that student worked in MECH4003 Thesis A. Each student is guided by a supervisor, but successfully completing the project, writing the thesis and submitting two bound copies by specified deadlines are the sole responsibility of each student.

MECH8312
Fundamentals of Noise and Vibration Measurment
School of Mechanical and Manufacturing Engineering
UOC6
Excluded: MECH9312

Fourier coefficients of periodic signals. Power spectral density. Time windows and spectral analysis. Simple sound pressure measurements. Measurement of special descriptors of sound. Measurement of reverberation time and calculation of absorption coefficients. Measurements of the sound power level of a sound source by the direct and the comparison method. Measurements of the sound power levels of a sound source by the intensity method. Tape recording of noise and vibration signals. Using accelerometers.

MECH9142
Land Transport Vehicle Engineering
School of Mechanical and Manufacturing Engineering
UOC6 HPW3

This course outlines the context of the task for land transport vehicles, develops its technical mechanical engineering aspects and enables students to explore in depth an area of their choice (decided in consultation with the lecturer in charge). Topics covered include: The land transport task; local/global. Modes of land transportation; guided/non-guided, passenger/freight, private/public, practical/fun. Analysis of land transport systems covering; infrastructure, types of vehicles, power systems, structure, vehicle dynamics, manufacture, reliability, economics, safety, sustainability. Recreational land vehicles.

MECH9310
Advanced Vibration Analysis
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Excluded: MECH4310, MECH8310

Introduction to experimental vibration analysis using Fast Fourier Transform (FFT) techniques. Typical sources of vibration in machines. Analysis of continuous systems via classical and finite element techniques. Experimental modal analysis. Torsional vibrations, including geared shaft systems.

MECH9325
Fundamentals of Noise
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Excluded: MECH4321, MECH8325

Development of the acoustic plane wave equation, introduction of concepts of acoustic impedance, characteristic impedance, acoustic energy density, acoustic intensity and acoustic power. Measurement of sound pressure. Decibel scales. Standing waves. The effect of noise on people. Wave propagation in porous media. Transmission phenomena including transmission of plane waves between different media, through walls and along pipes. The analysis of expansion chamber mufflers and pipe side-branches. Basic energy approach to room acoustics.

MECH9361
Lubrication Theory and Design
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Excluded: MECH4361

Types of hydrodynamic bearings and bearing operation; properties of lubricants; theory of steady state hydrodynamic lubrication; hydrostatic and squeeze film lubrication applied to slider and journal bearings; bearing design with side leakage; thermal balance. Journal bearing dynamics; instability analysis. Elastohydrodynamic lubrication. Bearing materials; friction and wear. Grease lubrication.

MECH9400
Mechanics of Fracture and Fatigue
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Excluded: MECH4400

Theories of fracture; failure modes. Ductile, brittle fracture. Mechanics of crack propagation, arrest. Measurement of static fracture properties. Fatigue crack initiation, propagation. Engineering aspects of fatigue.

MECH9410
Finite Element Applications
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Excluded: AERO4401, AERO9415, MECH4410, NAVL4401

Introduction to finite element and associated graphics packages. Principles of mesh design and validation. Specification of boundary conditions including use of symmetry. Estimation of the cost of solution. Interpretation of results. Assessment of the accuracy of the results. Convergence to the exact solution. Selection of applications from linear and non-linear elasticity: three dimensional solids, plates and shells, plasticity, buckling and post-buckling behaviour, thermal stresses, dynamics including natural and forced vibration.

MECH9620
Computational Fluid Dynamics
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Prerequisite: MECH2612, MECH2712

Incompressible flow: primitive equations, stream function, vorticity equations. The conservative property. Stability analysis. Explicit, implicit methods. Upwind differences. SOR methods. Fourier series methods. Pressure, temperature solutions. Solving the primitive equations.

MECH9720
Solar Thermal Energy Design
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Prerequisite: MECH2612, MECH2712

Characteristics of solar radiation and solar collectors. Collector efficiency evaluation and prediction of long term performance. System modelling, energy storage; computer simulation and modelling of performance and economic worth.

MECH9730
Two Phase Flow and Heat Transfer
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Excluded: MECH4730

Nature of multiphase flow. Flow regime maps. Two-phase flow in vertical, horizontal and inclined pipes. Modelling of two-phase flow: homogenous model; drift flux model; drift velocity model; separated model. Annular and stratified flows. Flow in adiabatic pipes. Flow in heated pipes. The critical flow of a two-phase mixture. Pressure drop and heat transfer correlations in pipes. Subcooled, nucleate, pool and film boiling. Critical heat fluxes in boiling. Mechanisms of heat transfer in boiling. Nucleation, bubble dynamics and bubble parameters. Film and dropwise condensation on flat plates. Condensation on horizontal tubes and tube banks. Condensation inside tubes. Two-phase heat exchangers. Laboratory experiments.

MECH9740
Power Plant Engineering
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Excluded: MECH4740

Energy sources, power plant thermodynamics. Fuel, combustion processes and equipment. Boilers, turbines and condensers. Heat exchangers, pumps, water supply and treatment systems. Air circulating and heating systems. Station operation and performance. Economics of electrical power production. Environmental impacts of power plants. Alternate sources of energy. Power station field trip.

MECH9751
Refrigeration and Air Conditioning 1
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Excluded: MECH4751, MECH8751

Review of thermodynamic principles; evaluation of thermodynamic properties of real fluids. Refrigerants, their properties and applications. Gas cycle refrigeration. Steam-jet refrigeration. Vapour compression refrigeration; analysis and performance characteristics of the complete cycle; analysis and performance of multipressure systems. Analysis of the performance of compressors, condensers, evaporators and expansion devices. Thermo-electric refrigeration.

MECH9758
Air Conditioning Design
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Prerequisite: MECH2612, MECH2712

Pipe and duct design, air conditioning systems, plant room design, cooling towers and evaporative condensers, heat and mass transfer equipment, load calculations, building thermal simulation, life cycle cost minimisation.

MECH9761
Internal Combustion Engines 1
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Excluded: MECH4700

Thermodynamic cycles. Combustion, reaction kinetics. Real engine cycles. Chart, computer analysis. Spark ignition engines. Flame physics. Combustion chamber design. Charging, discharging; heat transfer; friction. Emissions, fuels, computer modelling: efficiency, performance, emissions. Testing. Laboratory.

MECH9920
Special Topic in Mechanical Engineering
School of Mechanical and Manufacturing Engineering
UOC6 HPW3

The syllabus changes to allow presentation of a special topic of current interest particularly by visitors with recognised expertise in the topic.

MEDM8001
Principles of Medicine for Optometry Students
Faculty of Medicine
UOC3 HPW3

An overview of historical, epidemiological, pathophysiological, diagnostic, therapeutic and public health aspects of disease in man and the various clinical categories of practice. Specific topics in eye health are also covered with emphasis on diagnosis and appropriate referral.

Note: Students normally take the course in Year 4 of course 3950. Restricted to program 3950.

MEFT1100
Introduction to Media: Television, Telephones and Everyday Life
School of Media, Film and Theatre
UOC6 HPW3

Introduces students to the breadth of contemporary media studies from television and the tradition of mass media studies to telephony and the study of networked media and communication technologies. Explains how media and communication technologies have transformed the rhythms of everyday life and the organisation of domestic space.

MEFT1200
Introduction to Film
School of Media, Film and Theatre
UOC6 HPW4.5
Excluded: FILM1101, THFI1000, THFI1001

An introduction to the study and analysis of film and its reception.

MEFT1201
Working with Image and Sound
School of Media, Film and Theatre
UOC6 HPW3
Excluded: FILM1105

Explores the creative and communicative possibilities of film, video and other audio-visual technologies. Presents a wide range of examples, from classics of experimental film to the latest music videos and television advertisements: preparing outlines and storyboards, capturing and generating images and sounds, experimenting with existing images and sounds - the editing process. Explores the creative potential of audio-visual media and deals with the practical problems.

MEFT1300
Reading Performance
School of Media, Film and Theatre
UOC6 HPW3
Excluded: THFI1000, THFI1001, THFI1002

Introduces different ways of analysing performance and performance bodies. Focuses on cultural performance, hybridity, authenticity, carnival, liminality, ritual, possession-trance, fieldwork and ethnography, cultural display, tourist performance, everyday life, performance art and avant-garde genres.

MEFT1301
Introduction to Theatre and Performance Studies
School of Media, Film and Theatre
UOC6 HPW3
Excluded: THFI1000, THFI1001, THST1101

Introduces the basic principles of and analytic vocabulary for the study of theatrical performance.

MEFT2100
Global Media: Markets, Flows and Cultures
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: MDCM2102

Explores the balance between globalisation and localisation in different media systems. Identifies key global players. Surveys current and emerging trends, technologies and regulatory regimes. Studies local uses and adaptations of global media and their implications for the nation state.

MEFT2102
Media Technologies and Cultural Change
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 36 units of credit

Examines key contemporary themes and figures in conceptualising society/technology relations; the specific nature of media technologies in relation to cultural change; the history of ideas surrounding media technologies; the diversity of social and cultural practices engaged with media technologies; the convergence of cultural technologies; new media means of artistic expression and as new modes of cultural manufacture.

MEFT2200
Contemporary Approaches to the Cinema
School of Media, Film and Theatre
UOC6 HPW4
Prerequisite: 36 units of credit

Analyses and tests a number of contemporary theoretical approaches to the cinema.

Note: Excluded FILM2001.

MEFT2201
Australian Cinema and Television
School of Media, Film and Theatre
UOC6 HPW4
Prerequisite: 36 units of credit; Excluded: AUST2028

Traces the emergence and significance of Australian screen cultures. Studies the development of the Australian film industry, including analysis of the economic, social and political factors and the myths which have shaped the industry. Studies the role of television in shaping the experience of modern Australia and its place in the world. Looks at a number of of non-mainstream forms of audio-visual production in Australia.

Note: Excluded FILM2002.

MEFT2202
Movie World: National Cinemas
School of Media, Film and Theatre
UOC6 HPW4
Prerequisite: 36 units of credit

Examines both the experience of the global cinema industry in particular places, and also the power of the cinema to articulate compelling visions of collectivity in different places at particular times and considers the following questions: What is the relationship between 'world cinema' and 'national cinemas'? Is it an economic question, a cultural question, or both? Is 'world cinema' anything more than all those films that are not made in Hollywood? What is 'national' about national cinemas? How are films supposed to speak for, as well as to, a mass of strangers who happen to share national citizenship?

Note: Excluded FILM2007.

MEFT2203
The Hollywood System
School of Media, Film and Theatre
UOC6 HPW4
Prerequisite: 36 units of credit; Excluded: FILM2005, FILM2006

Traces the history of Hollywood as an industry, a cultural institution and a global supplier of stories, images and myths from its beginnings through the studio system to today's adaptations to globalisation and new technologies. Introduces different approaches to the study of film history, and includes screenings and analysis of key films.

Note: Excluded FILM2021.

MEFT2300
Staging Australia
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: DANC1002 or DANC1103 or FILM1101 or PFST1002 or THFI1002 or THST1101 or 48 units of credit in Arts and Social Sciences; Excluded: AUST2027, THST2163

Broadly-based study of the rise of Australian theatre since the 1960s, with the focus on recent performance. The emphasis is on wide theatrical movements, including the larrikin theatre of the 1970s, alternative/community theatre; Aboriginal theatre; women's and multicultural performance; and current trends in playwriting and contemporary performance.

MEFT2306
Theories of Acting and Performing
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: THST2143, THST2147

Studies theories and practices of acting and performing in text and non-text based theatre. Combines traditional academic and workshop teaching. Topic areas include: acting as cultural and political expression; relationships between actor/character/persona/spectator; approaches to text and training; analysis of the performing body; performance and performativity; intersections with modernism and postmodernism.

MEFT2351
Live Entertainment & Popular Culture
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: PFST2009, THFI2010

Tracks the influence of popular performance genres on contemporary culture, looking at vaudeville, burlesque, radio and 1950s television. Develops theories of popular culture including the discourse of value and applies these to a variety of case studies in contemporary culture and media.

MEFT3102
Electronic and Digital Aesthetics
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 72 units of credit; Excluded: MDCM3102

Investigates the role of the senses in the way that people engage with electronic and digital media in a variety of contexts, including electronic and digital art, everyday and domestic media technologies, and popular cultural uses such as electronic music, computer games and digital image technologies. Considers how the traditional relation of aesthetics to culture might be changing as the result of electronic and digital media technologies.

MEFT3104
Transnational Media in the Asia Pacific
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 72 units of credit

Explores debates concerning transnationalism, regionalisation and globalisation in the context of Asia Pacific media systems. Considers examples of how nations within the Asia Pacific use media to resist cultural homogenization and provides local resistance to the forces of globalisation. Taking as a point of reference the rise of Asian modernities and especially China's recent market liberalisation, examines the increasing regional integration of the Asia Pacific through the flows of the media and popular cultural products.

MEFT3200
Video Exercise
School of Media, Film and Theatre
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 FILM courses

Introduces the basic concepts that underlie a video production, from script to final cut, plus some practical experience of video-making.

Note: Excluded FILM3001.

MEFT3201
Aspects of Film History
School of Media, Film and Theatre
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 FILM courses; Excluded: FILM2000

Introduces case studies in film history and brings into focus different perspectives, traditions, and methodologies in the historiography of cinema. Involves analysis of key texts, and viewing of a wide range of relevant films. Possible topics include cinema and popular memory; the cinema, modernism and modernity; changing performance styles in American cinema; cinema and the city.

Note: Excluded FILM3002.

MEFT3202
Explorations in Contemporary Film Theory
School of Media, Film and Theatre
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 FILM courses; Excluded: FILM2013

Engages with specific debates in contemporary film theory at an advanced level. Involves critical analysis of key texts, and the viewing of a wide range of relevant films. Possible topics include theories of film spectatorship; psychoanalysis and the study of cinema; feminist film theory; time, history and realism; film sound.

Note: Excluded FILM3003.

MEFT3203
Film Genres and Styles
School of Media, Film and Theatre
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 FILM courses; Excluded: FILM2008

Examines the development, production and exploitation of various styles of film-making and film genres. Involves critical analysis of key texts, and viewing a wide range of relevant films. Possible topics include film comedy; the musical: song and dance on film; fantasy and the cinema; film noir in social and historical context.

Note: Excluded FILM3004.

MEFT3204
Special Program in Film Studies
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 12 units of credit in Level 2 FILM courses

Suitably qualified students wishing either to take more than one topic offered under the rubric of a Level 3 course in the Film Studies program or to work in an area not covered by an existing course may apply to the School to take this option. Approval of an independent study program will depend on its suitability, and the availability of a staff member to undertake supervision.

Note: Permission for enrolment in the special program must be obtained from the Head of School. Only one Special Program in Film can be credited to a degree program. Excluded: FILM3005.

MEFT3205
Cinemas and Cultures
School of Media, Film and Theatre
UOC6 HPW4
Prerequisite: 12 units of credit in Level 2 FILM courses

Introduces case studies in regional, local, and national cinemas. Critical analysis of key texts and a wide range of relevant films. Topics may include French cinema: issues of aesthetics and representation; Japanese cinema; cinemas of Asia and the Pacific Rim.

Note: Excluded FILM3006.

MEFT3300
Aspects of Theatre and Performance History
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 72 units of credit; Excluded: THFI3900

Introduces students to ways of investigating and interpreting the theatrical and performance past. Analyses performance evidence and representations as well as history texts and historiographical theories. Topics include: documentary evidence and iconography, periodisation, historiography and historicisation, biography and autobiography, social history and the performing body, and performance history and methodology from fields such as gender and postcolonial studies.

MEFT3302
Production Exercise
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 72 units of credit; Excluded: THST2135

Practical work on a theatrical presentation wIthin the School aimed at providing direct experience of the production process and its evaluation.

Note: Before enrolling in this course students must study the detailed course outline available from the Io Myers Studio and complete a Production Selection Form. Students should note that rehearsals will commence four weeks before the beginning of Session, and they must be available in the evenings for technical rehearsals in Week 1 of Session and for the performances in Week 2.

MEFT3303
Workshop Exercise
School of Media, Film and Theatre
UOC6 HPW5
Prerequisite: 72 units of credit; Excluded: THST2137

Practical work on a small-scale theatrical presentation within the School. This is timetabled on a weekly basis with more intensive rehearsal close to presentation.

MEFT3351
Live Art and Physical Theatres
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 72 units of credit; Excluded: PFST2015, THFI2011, THST2161

Examines the function and significance of the body in non-text based forms of performance from twentieth century experimental performance to contemporary dance theatre and physical theatre. Studies the various ways in which physical performance practices are constructed and interpreted across disciplines such as visual arts, dance, circus and time-based arts. Examines the kinds of effects produced in, on, and through bodies in theatre and visual culture in different cultural and historical contexts.

MEFT3352
Studies in World Theatre
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 72 units of credit; Excluded: PFST2201, THST2161

A comparative study of world theatre genres looking at vernacular, traditional, ritual, national and ethnic performance traditions of Asia, Africa, the Americas, and Europe.

MEFT3353
Performance in a Mediatised Culture
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 72 units of credit; Excluded: PFST2016

Examines the place of technology in contemporary performance culture from MTV to performance art. Considers the rise of video literacy and the expanding field of digital culture in terms of the ways in which such technologies have shifted the parameters of performance and representation. Looks at questions such as the convergence of performance genres and the remediation of art works and theoretical concepts such as posthumanism and cybernetics. Critiques the notion that live performance forms are discrete and unmediated and therefore cut off from contemporary cultural change.

MEFT3354
Performance Making
School of Media, Film and Theatre
UOC6 HPW3
Prerequisite: 72 units of credit; Excluded: PFST2149

Explores performer/artist-generated and community-orientated work, covering the making of performance works that neither derive from a traditional dramatist script, nor have the creation of a play as their end product. Combines a practical project with critical and theoretical inquiry.

MEFT4000
Media, Film and Theatre Honours (Research) Full-Time
School of Media, Film and Theatre
UOC24 HPW5
Prerequisite: 54 units of credit in FILM/PFST/THFI/THST courses at 70% including THFI3902, THFI3903 and either THFI3900 or THFI3901 and permission of Head of School

Students are required (a) to undertake either an original piece of research extending throughout the year and submit a thesis based upon it or a practical project and report, and (b) to complete two seminars, one of which is compulsory, the other chosen from two alternatives (see School Honours Handbook for further details). The choice of seminars enables students to pursue a specialisation in theatre, or in film, or in theatre/film. In addition to seminar and practical project/thesis work, students are required to attend and contribute to regular thesis workshops.

MEFT4050
Media, Film and Theatre Honours (Research) Part-Time
School of Media, Film and Theatre
UOC12 HPW3
Prerequisite: 54 units of credit in FILM/PFST/THFI/THST courses at 70% including THFI3902, THFI3903 and either THFI3900 or THFI3901 and permission of Head of School

Students are required (a) to undertake either an original piece of research extending throughout the year and submit a thesis based upon it or a practical project and report, and (b) to complete two seminars, one of which is compulsory, the other chosen from two alternatives (see School Honours Handbook for further details). The choice of seminars enables students to pursue a specialisation in theatre, or in film, or in theatre/film. In addition to seminar and practical project/thesis work, students are required to attend and contribute to regular thesis workshops.

MFAC1501
Foundations
Faculty of Medicine
UOC12 HPW15

The overall aim of the Foundations course is to introduce students to the independent and collaborative learning approach that characterises the new Medicine program. Foundations is an integrated eight-week experience for new students, which requires them to work independently and in teams to explore their understanding of the fundamentals of cell biology, the structure of the human body, and a range of professional issues pertinent to medical practice. It consists of two separate but interlinked health scenarios, the first on immunisation for medical students, and the second on stomach pain. The teaching and learning methods are designed to incorporate issues such as information management, and written and oral communication. The Foundations course also provides an orientation for new students into the academic support and mentoring programs. Assessment will be by evidence of satisfactory participation in each of the various activities undertaken.

MFAC1502
Society & Health 1
Faculty of Medicine
UOC12 HPW15
Co-requisite: MFAC1501

The two courses, Society and Health 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter upon completion of both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives: - To gain an understanding of the inter-relationships between the health of individuals or populations and the environment in which they live. The major themes include the societal determinants of health, the diversity of society focusing both on culture and genetics, systems that provide health care and the relationship between health and human rights. These themes will be studied taking global, community and individual perspectives on health.

Infectious diseases will be used as an example of how the environment influences the health of individuals and populations. Areas to be explored will include relevant aspects of genetics, microbiology, cell biology, immunology and inflammation. In one year there will also be a focus on the haematopoietic and lymphoid tissues, as well as skin and structural elements of human tissues, while in the alternate year the focus will be on the respiratory system. Each course will consider the health status of populations, as well as aspects of normal human behaviour.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1503
Beginnings, Growth & Development 1
Faculty of Medicine
UOC12 HPW15
Prerequisite: MFAC1501

The two courses, Beginnings, Growth and Development 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter upon completion of both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives - To gain an understanding of events in the first stages of the human life cycle, through study of conception, pregnancy and birth; childhood growth and development; puberty and adolescence. These themes will be explored by further studies of relevant aspects of cell biology focusing on growth, differentiation, and developmental biology, as well as the biology of reproduction. In the alternate year, there will be an emphasis on upper GIT and aerodigestive tract structure and function, and common childhood illness, as well as the endocrine system, sexuality, and common psychiatric conditions. Clinical skills will focus on antenatal care, as well as the examination of children, assessment of nutritional status and the psychological state.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1504
Health Maintenance 1
Faculty of Medicine
UOC12 HPW15

The two courses, Health Maintenance 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter during both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives: - To gain an understanding of the internal and external mechanisms that maintain a state of health, primarily in adults. The key themes to be studied are homeostasis, sustenance and equilibrium; education, health promotion and disease prevention; host defence; and lifestyle factors that risk health.

In one of the two years, these themes will be explored by a detailed study of the cardiovascular system, including its key role in maintaining internal bodily health, mechanisms leading to cardiovascular disease including relevant lifestyle factors, and basic pharmacological principles, using drugs acting on the cardiovascular system as an example. Additional topic areas will include mechanisms that maintain body temperature, fundamentals of host defence, and physical and psychological responses to stress. Learning of clinical skills will focus on examination of the cardiovascular system and on health promotion. In the other year, the themes will be illustrated by study of digestion, metabolism and excretion, including problems of overnutrition and diabetes. Other topic areas are hepatobiliary structure and function, and its disorders, the renal system, the pharmacology of drug metabolism, and the consequences of failure of these vital organs. Clinical skills will focus on examination of the gastrointestinal and urinary systems.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1505
Ageing and Endings 1
Faculty of Medicine
UOC12 HPW15

The two courses, Ageing and Endings 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter upon completion of both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives: - To gain an understanding of the particular health issues that arise in elders, building upon learning done in previous courses. The themes are menopause; the ageing process; degenerative diseases; and death, dying and palliative care.

In one of the two years, breast cancer and neurological disease will be used to explore these themes. Students will study the structure and function of the brain and central nervous system, and the pathology of stroke, dementia and neoplasia. Relevant aspects of public health, including clinical epidemiology and community resources will be explored, whilst learning of clinical skills will involve examination of the central nervous system and breast examination. In the other year, the focus will shift to the peripheral nervous system and musculoskeletal system, including the cellular and molecular aspects of nerve transmission, membrane physiology and relevant pharmacology. The biological, psychological and behavioural aspects of pain will be used as an integrating concept to link many of these topics. Clinical skills will focus on examination of the musculoskeletal and peripheral nervous system. A second major topic area will be further study of neoplasia, focusing on colorectal cancer.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1506
Society and Health 2
Faculty of Medicine
UOC10 HPW15

The two courses, Society and Health 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter upon completion of both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives: - To gain an understanding of the inter-relationships between the health of individuals or populations and the environment in which they live. The major themes include the societal determinants of health, the diversity of society focusing both on culture and genetics, systems that provide health care and the relationship between health and human rights. These themes will be studied taking global, community and individual perspectives on health.

Infectious diseases will be used as an example of how the environment influences the health of individuals and populations. Areas to be explored will include relevant aspects of genetics, microbiology, cell biology, immunology and inflammation. In one year there will also be a focus on the haematopoietic and lymphoid tissues, as well as skin and structural elements of human tissues, while in the alternate year the focus will be on the respiratory system. Each course will consider the health status of populations, as well as aspects of normal human behaviour. A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1507
Beginnings, Growth and Development 2
Faculty of Medicine
UOC10 HPW15

The two courses, Beginnings, Growth and Development 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter upon completion of both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives - To gain an understanding of events in the first stages of the human life cycle, through study of conception, pregnancy and birth; childhood growth and development; puberty and adolescence. These themes will be explored by further studies of relevant aspects of cell biology focusing on growth, differentiation, and developmental biology, as well as the biology of reproduction. In the alternate year, there will be an emphasis on upper GIT and aerodigestive tract structure and function, and common childhood illness, as well as the endocrine system, sexuality and common psychiatric conditions. Clinical skills will focus on antenatal care as well as the examination of children, assessment of nutritional status and the psychological state.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1508
Health Maintenance 2
Faculty of Medicine
UOC10 HPW15

The two courses, Health Maintenance 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter during both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives: - To gain an understanding of the internal and external mechanisms that maintain a state of health, primarily in adults. The key themes to be studied are homeostasis, sustenance and equilibrium; education, health promotion and disease prevention; host defence; and lifestyle factors that risk health.

In one of the two years, these themes will be explored by a detailed study of the cardiovascular system, including its key role in maintaining internal bodily health, mechanisms leading to cardiovascular disease including relevant lifestyle factors, and basic pharmacological principles, using drugs acting on the cardiovascular system as an example. Additional topic areas will include mechanisms that maintain body temperature, fundamentals of host defence, and physical and psychological responses to stress. Learning of clinical skills will focus on examination of the cardiovascular system and on health promotion. In the other year, the themes will be illustrated by study of digestion, metabolism and excretion including problems of overnutrition and diabetes. Other topic areas are hepatobiliary structure and function and its disorders, the renal system, the pharmacology of drug metabolism, and the consequences of failure of these vital organs. Clinical skills will focus on examination of the gastrointestinal and urinary systems.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1509
Ageing and Endings 2
Faculty of Medicine
UOC10 HPW15

The two courses, Ageing and Endings 1 & 2 are complementary vertically integrated components in phase 1 of the Medicine program. The following description refers to the areas of study students will encounter upon completion of both courses. Depending upon the year of enrolment, the exact content allocated to either component will vary.

Objectives: - To gain an understanding of the particular health issues that arise in elders, building upon learning done in previous courses. The themes are menopause; the ageing process; degenerative diseases; and death, dying and palliative care.

In one of the two years, breast cancer and neurological disease will be used to explore these themes. Students will study the structure and function of the brain and central nervous system, and the pathology of stroke, dementia and neoplasia. Relevant aspects of public health, including clinical epidemiology and community resources will be explored, whilst learning of clinical skills will involve examination of the central nervous system and breast examination. In the other year, the focus will shift to the peripheral nervous system and musculoskeletal system, including the cellular and molecular aspects of nerve transmission, membrane physiology and relevant pharmacology. The biological, psychological and behavioural aspects of pain will be used as an integrating concept to link many of these topics. Clinical skills will focus on examination of the musculoskeletal and peripheral nervous system. A second major topic area will be further study of neoplasia, focusing on colorectal cancer.

A series of learning activities focusing on communication skills and clinical communication operates throughout phase 1 of the Medicine program. It involves learning within clinical environments and will be integrated with content topics specific to individual courses.

Assessment will involve performance in two projects/assignments and an end of course written examination.

MFAC1510
Ageing and Endings 2 plus extension
Faculty of Medicine
UOC12 HPW15

In addition to the standard course content for Ageing and Endings 2, students will receive training in library and information skills relevant to the Arts & Social Sciences, to facilitate completion of their concurrent/ consecutive BA program.

Assessment of the extension work will be by evidence of satisfactory participation in each of the various activities.

MFAC2501
Society and Health 3
Faculty of Medicine
UOC10 HPW15

Objectives: - By using authentic clinical and practical experiences in the community in both urban and rural areas as the basis for learning, students will build upon their understanding (developed in phase 1) of the relationship between the health of an individual or population and the social and physical environment. In addition, students will develop understandings of the population health aspects of relevant illnesses and the role of other health professionals and community based services in prevention of illness and addressing the social and environmental determinants of health. Students will also extend their capabilities in communication with, and assessment of, individual patients and population groups with specific health issues. A case-based teaching methodology is employed to link acquisition of clinical and public health capabilities with the learning of mechanisms and principles underlying health and illness. Approximately 60% of available time will be spent in community based clinical environments associated with the Faculty of Medicine, in which students will encounter patients or health issues relevant to the domain themes. Typical environments and/or experiences will include sexual health and infectious disease services, services for particular population groups such as indigenous people, refugees, homeless people, community specialist services such as drug and alcohol, diabetes infectious disease, respiratory, or public health services that focus on health care based in the community and preventative approaches. There is a 2 week experience based in a rural community and general practice in the 6th and 7th weeks of the course. Clinical experiences will be augmented by a range of tutorials, laboratory classes, and face-to-face and/or electronic resources covering aspects of public health, community medicine, pathology, infectious disease and pharmacology. Assessment will include submission of a project/assignment report, demonstrating integration/ correlation of prior and current learning with linkage to basic biomedical sciences; medical imaging and diagnostic tests; social and behavioural determinants of health, ethics; or population health issues. In addition, the student's performance during the module will be graded as satisfactory/unsatisfactory based on attendance, participation and review of cases and problems managed.

MFAC2502
Beginnings, Growth and Development 3
Faculty of Medicine
UOC10 HPW15

Objectives: - By using authentic clinical or practical experiences as the basis for learning, students will build upon their understanding (developed in phase 1) of the biomedical, behavioural and social science principles involved in the human life cycle stages spanning conception to adulthood. In addition, students will develop understandings of the clinical aspects of illnesses relevant to this stage, whilst extending their capabilities in communication with, and physical examination of, patients with specified health issues. A case-based teaching methodology is employed to link acquisition of clinical capabilities with the learning of mechanisms and principles underlying health and illness. Approximately 60% of available time will be spent in clinical environments associated with the Faculty of Medicine, in which students will encounter patients or health issues relevant to the domain themes. The issues covered include gynaecology and sexual health issues in women of reproductive age, normal pregnancy and delivery, pregnancy complications, the healthy neonate and normal infant development, acute illness and injury in young children, chronic conditions in childhood and adolescent health.. Clinical experiences will be augmented by a range of tutorials, laboratory classes, and face-to-face and/or electronic resources. Assessment will include submission of a project/assignment report, demonstrating integration/ correlation of prior and current learning with linkage to basic biomedical sciences; medical imaging and diagnostic tests; ethics; or population health issues. In addition, the student's clinical performance during the module will be graded as satisfactory/unsatisfactory.

MFAC2503
Health Maintenance 3
Faculty of Medicine
UOC10 HPW15

Objectives: - By using authentic clinical or practical experiences as the basis for learning, students will build upon their understanding (developed in phase 1) of the internal and external mechanisms that maintain health or lead to disease. In addition, students will develop understandings of the clinical aspects of relevant illnesses, whilst extending their capabilities in communication with, and physical examination of, patients with specified health issues.

A case-based teaching methodology is employed to link acquisition of clinical capabilities with the learning of mechanisms and principles underlying health and illness. Approximately 60% of available time will be spent in clinical environments associated with the Faculty of Medicine, in which students will encounter patients or health issues relevant to the domain themes. These will typically include acute disturbances of health leading to hospitalisation including critically ill patients and conditions requiring surgical treatment, patients with acute and chronic conditions cared for in ambulatory settings, as well as learning in some community-based practices. Clinical experiences will be augmented by a range of tutorials, laboratory classes, and face-to-face and/or electronic resources.

Assessment will include submission of a project/assignment report, demonstrating integration/ correlation of prior and current learning with linkage to basic biomedical sciences; medical imaging and diagnostic tests; ethics; or population health issues. In addition, the student's clinical performance during the module will be graded as satisfactory/ unsatisfactory.

MFAC2504
Ageing and Endings 3
Faculty of Medicine
UOC10 HPW15

Objectives: - By using authentic clinical or practical experiences as the basis for learning, students will build upon their understanding of the specific health issues faced by elders that they established in phase 1. In addition, students will develop understandings of the clinical aspects of illnesses occurring in elders, whilst extending their capabilities in

communication with, and physical examination of, patients with specified health issues.

A case-based teaching methodology is employed to link acquisition of clinical capabilities with the learning of mechanisms and principles underlying health and illness. Approximately 60% of available time will be spent in clinical environments associated with the Faculty of Medicine, in which students will encounter patients or health issues relevant to the domain themes. Typical clinical issues encountered will include complex co-morbidity problems in elders, chronic illness and disability, degenerative diseases including arthritis and dementia, rehabilitation, palliative care and cancer medicine, stroke, vascular disease, and terminal illness. These experiences will be augmented by a range of tutorials, laboratory classes, and face-to-face and/or electronic resources.

Assessment will include submission of a project/assignment report, demonstrating integration/ correlation of prior and current learning with linkage to basic biomedical sciences; medical imaging and diagnostic tests; ethics; or population health issues. In addition, the student's clinical performance during the module will be graded as satisfactory/ unsatisfactory.

MFAC4501
Independent Learning Project 1
Faculty of Medicine
UOC8 HPW12

The three courses [MFAC 4501, MFAC 4502, MFAC 4503] collectively comprise the Independent Learning Project and must be taken consecutively. After completing Phase 1, all students (unless exempt) will be required to undertake an Independent Learning Project (ILP) equivalent to 3 x 8-week blocks. During the course of the ILP period the students will also complete 12 units of credit (UoC) in courses offered by Faculties other than the Facility of Medicine (the Flexible course). In order to complete both of these requirements, the 24 week ILP enrolment will be staggered, as 16 weeks full-time and 16 weeks part-time, over 32 weeks.

Objectives: To enhance students' abilities for independent learning, critical analysis and research. During the course of their ILP the students will be expected to achieve the following specific goals:

(1) An ability and inclination to question the basis of current scientific thinking in relation to medical and public health practice.

(2) To retrieve literature on a topic and demonstrate a familiarity with the use of medical databases.

(3) To evaluate current knowledge in a field and to provide a critical appraisal of that body of knowledge.

(4) To identify a problem in their chosen field and to understand and participate in the process of designing a scientific investigation of the problem.

(5) To be aware of the ethical issues involved in medical research and be able to write an ethics proposal for their proposed study.

(6) To critically evaluate data including the appropriate use and interpretation of statistics.

(7) To communicate findings and interpretations in their chosen field, both orally and in writing with experts, peers, the media and general public.

(8) To appreciate the implications of research findings in health decision making and medical practice.

The ILP will offer scope for in-depth study in a variety of possible settings and fields of study. Some examples include laboratory-based work in the biomedical sciences, audits of clinical practice, projects dealing with cross-cultural issues, as well as projects dealing with medical law or ethics and health economics. Projects may be undertaken outside the Faculty, or subject to approval, in another institution.

Although there is considerable flexibility in the choice of topic, all projects must involve;

(1) identification of an issue and related questions relevant to the field or environment where learning will occur;

(2) a review and critical analysis of literature or practice relevant to the issue;

(3) articulation of an approach to address the issue, including consideration of ethical issues;

(4) a period of research or scholarship in which the issue is explored or investigated; and

(5) evaluation, communication and presentation of the results of in-depth study.

Assessment will include the components of progressive assessment (on completion of each of the first two 8-week modules i.e. MFAC 4501 and 4502) and a report submitted at the conclusion of the project (i.e. on completion of MFAC 4503).

MFAC4502
Independent Learning Project 2
Faculty of Medicine
UOC8 HPW12

The three courses [MFAC 4501, MFAC 4502, MFAC 4503] collectively comprise the Independent Learning Project and must be taken consecutively. After completing Phase 1, all students (unless exempt) will be required to undertake an Independent Learning Project (ILP) equivalent to 3 x 8-week blocks. During the course of the ILP period the students will also complete 12 units of credit (UoC) in courses offered by Faculties other than the Facility of Medicine (the Flexible course). In order to complete both of these requirements, the 24 week ILP enrolment will be staggered, as 16 weeks full-time and 16 weeks part-time, over 32 weeks.

Objectives: To enhance students' abilities for independent learning, critical analysis and research. During the course of their ILP the students will be expected to achieve the following specific goals:

(1) An ability and inclination to question the basis of current scientific thinking in relation to medical and public health practice.

(2) To retrieve literature on a topic and demonstrate a familiarity with the use of medical databases.

(3) To evaluate current knowledge in a field and to provide a critical appraisal of that body of knowledge.

(4) To identify a problem in their chosen field and to understand and participate in the process of designing a scientific investigation of the problem.

(5) To be aware of the ethical issues involved in medical research and be able to write an ethics proposal for their proposed study.

(6) To critically evaluate data including the appropriate use and interpretation of statistics.

(7) To communicate findings and interpretations in their chosen field, both orally and in writing with experts, peers, the media and general public.

(8) To appreciate the implications of research findings in health decision making and medical practice.

The ILP will offer scope for in-depth study in a variety of possible settings and fields of study. Some examples include laboratory-based work in the biomedical sciences, audits of clinical practice, projects dealing with cross-cultural issues, as well as projects dealing with medical law or ethics and health economics. Projects may be undertaken outside the Faculty, or subject to approval, in another institution.

Although there is considerable flexibility in the choice of topic, all projects must involve;

(1) identification of an issue and related questions relevant to the field or environment where learning will occur;

(2) a review and critical analysis of literature or practice relevant to the issue;

(3) articulation of an approach to address the issue, including consideration of ethical issues;

(4) a period of research or scholarship in which the issue is explored or investigated; and

(5) evaluation, communication and presentation of the results of in-depth study.

Assessment will include the components of progressive assessment (on completion of each of the first two 8-week modules i.e. MFAC 4501 and 4502) and a report submitted at the conclusion of the project (i.e. on completion of MFAC 4503).

MFAC5001
Geriatrics/General Practice/Subspecialities
Sch Public Hlth and Comm Med
UOC10
Prerequisite: MDSG4001

This nine week term commences with an introductory week of tutorials in Geriatrics, Dermatology, Otorhinolaryngology and General Practice. The remainder of the term consists of four-week teaching blocks in urban general practice and specialty outpatient clinics, 2 weeks in geriatrics and 2 weeks in rural general practice. General Practice Aims:

By the end of the course the students should have acquired: 1. An understanding of the principles and approach in primary health care. 2. An understanding of the knowledge, attitudes and skills required by a competent general practitioner. 3. Skills in communicating with patients especially in history taking and patient education. 4. Skills in identifying and managing common problems and preventive care in general practice. 5. Knowledge of the principles of assessment and management in general practice. 6. An understanding of rural general practice and health issues in rural communities. Tutorials: During the teaching sessions on campus or clinical sites and during the attachments, students are introduced to: principles of primary care; assessment and management GP consultation; management of common problems and preventive care; rural practice and issues in rural health. Assessment: Students will identify 4 cases for presentation at the tutorial day, a written assignment on a rural health issue during their rural GP attachment, and a final viva assessment. Geriatrics **Objectives:** 1. To gain an understanding of diagnosis and assessment in geriatric medicine; 2. To address the management of certain specific disorders in the elderly such as dementia, falls, incontinence, stroke, mobility disorders, dying and terminal care; 3. To gain information on appropriate drug therapy; 4. To gain insight into the roles of workers involved in caring for the elderly including physiotherapists, occupational therapists, speech therapists, community nurses and nurses in nursing homes; 5. To become familiar with the broad spectrum of geriatric services including the day hospital, the acute hospital, the rehabilitation centre, the nursing home, community nursing and hospital care; 6. To stimulate thought concerning future directions for an ageing Australia. Educational activities: The course consists of tutorials and practice experience in a range of health care facilities. Assessment: Students are assessed on a viva voce, written assessments and log book completion. Otorhinolaryngology **Objectives:** 1. To learn the basic skills of the assessment of diseases and conditions affecting the ears, nose and throat. 2. To learn the management of the common diseases of the ear, nose and throat and the management of these conditions. Educational activities: Lectures at beginning of Year 5 and skills transfer tutorial in week 1. Students will also attend approximately 4-6 sessions in specialists rooms or clinics. Assessment: Students will be assessed through completion of a log attendance and final written objective structured clinical examination. Dermatology **Objectives:** 1. To learn the clinical symptoms and signs of the major conditions affecting the skin. 2. To learn the diagnosis of common skin diseases and conditions and their management. Educational activities: Tutorials in week 1. Students will attend approximately 4-6 sessions in dermatology clinics or a week attached to a dermatology registrar or dermatologist in their rooms. Assessment: Students will be assessed through completion of a log attendance and final written objective structured clinical examination.

MFAC6001
Final Year Elective Term
Faculty of Medicine
UOC4
Prerequisite: MFAC5001, OBST5001, PAED5101, PSCY5001

Objectives: These include one or more of the following: to further develop knowledge and skills in Medicine and/or Surgery; to acquire preliminary training for a career in a specialty of medicine; to experience a different pattern of health care delivery from that practised in Australia; to obtain experience which may influence subsequent career orientation; to reinforce an area of study already covered in the undergraduate program; to obtain a short introduction to research methods and philosophy.

The elective term may include work in one of the following areas: in any school or department within the Faculty of Medicine; in a hospital or medical institution either in Australia or in another country; with a medical practitioner either in Australia or in another country.

Students should make individual arrangements for electives and are advised that some overseas universities, governments, health authorities and/or hospitals require very early applications, accompanied by certification that the applicant is an enrolled medical student of the University who is eligible to undertake the specified term. When making the arrangements, students should specifically request that an appropriate person is willing to act as a supervisor. The supervisor is asked to submit a report to the Office of the Dean by the end of the term.

Assessment: Each student is required to produce a report which describes the nature of the work done during the Elective Term. This should be approximately 1000 words in length. The reports from the student and the supervisor must be submitted to the Office of the Dean no later than the last day of the Elective Term. The reports are forwarded to the relevant Clinical Associate Dean for a decision as to whether the student has completed a satisfactory Term, and thence to the Assessment Committee. It is the student's responsibility to ensure that both reports (including the supervisor's report) are received by the due date and in time for consideration by the Assessment Committee.

MGMT1001
Fundamentals of Management
School of Organisation and Management
UOC6 HPW3

This course provides an introduction to the fundamental principles, practices, issues and debates associated with the management of public, business and third sector organisations. The frameworks, concepts and theories covered in the course are introduced to explain how managers deal with the diversity of issues faced in the effective management of contemporary organisations. The underpinning themes of the course centre on how managers can deal with the multiple demands of complex and turbulent environments, promote and sustain competitive advantage, manage changing social, political and technological factors inside and outside the organisation, ensure ethical and social responsibility, develop global organisations and manage diversity in the workforce. How management goes about its principal tasks of managing strategy, structures, people and systems are the key focus issues of the course. The main roles of modern management - planning, leading, innovating, organising and controlling - are also examined. Topics include the emergence, evolution and structure of management, conceptions of managerial work; management fads, fashion and knowledge; the task and internal environment; regulating people; the nature of organising; change and innovation; decision-making; influence processes; power and politics; ethical issues and professionalism in management; performance management: control and planning; and current trends.

MGMT1002
Managing Organisational Behaviour
School of Organisation and Management
UOC6 HPW3
Prerequisite: MGMT1001; Exclusion: IROB1712

This course provides a detailed analysis of macro and micro dimensions of organisational behaviour. It draws on the inter-disciplinary foundations of the theory and practice of organisational behaviour in the context of the management of public, private and third organisations. The course offers a critical introduction to the range of frameworks on organisational strucutres, processes and modes of organising. Central themes include power and resource dependence, the management of culture and meaning, the role of control, gender, social responsibility, organisational performance, and professional and ethical dimensions of management practice. Topics include; organisational design, management environments, organisational learning, managing individuals, motivation, leadership, group and teamwork; decision-making, conflict and negotiations, organisational change. Case studies and exercises are used to illustrate organisational and behavioural issues.

MGMT1101
Global Business Environment
School of Organisation and Management
UOC6 HPW3
Excluded; IBUS1107

This course examines key global environmental factors and issues impacting on the development of international business. Major topics include: globalisation of business; national differences in the political, social and legal environment, political and country risk; cultural differences and their impact on international business; ethical issues in international business; international trade issues; theory and politics of foreign direct investment; international competitiveness; the internationalisation of business activities and the development of multinational enterprises; foreign exchange markets; the international monetary system and development of the global capital market.

MGMT1102
Managing Across Cultures
School of Organisation and Management
UOC6 HPW3

The aim of this course is to develop a conceptual and practical understanding of how people differ across cultures, how these cultural differences impact on international business interactions, and how organisations can recognise and value cultural differences, aspects that are critical to the international business environment. Topics include the nature and dimensions of culture, managing cultural differences, the dynamics of intercultural communication, negotiating across cultures, working with multi-cultural teams, managing cross-border conflicts,

and global perspectives to leadership, motivation and decision making. Further topics include human resource development across cultures and issues unique to global management including cross cultural entry and re-entry transitions, problems relating to expatriation and repatriation, and the challenges of managing global careers. Central to this course is the integration of theory and practice, analyses of international business case studies, role plays, interactive and experiential learning activities, and the critical evaluation of relevant readings and journal articles.

MGMT1701
Industrial Relations
School of Organisation and Management
UOC6 HPW3

Provides a multi-disciplinary introduction to a range of important concepts and issues in Australian industrial relations. Topics include: political, social, economic, legal, historical and psychological aspects of the evolution and operation of modern industrial relations; the nature and implications of strikes, lockouts and other forms of industrial conflict and alienation; the structure and policies of State and Federal trade unions, the State labor councils and such peak organisations as the Australian Council of Trade Unions; the employer industrial relations function, management strategies and the structure and policies of employer associations; processes of work rule determination, such as collective bargaining, mediation, conciliation and compulsory arbitration; labour movements; and the role of the various arbitration tribunals and government instrumentalities with respect to industrial relations.

MGMT1702
Labour Organisation
School of Organisation and Management
UOC6 HPW3
Prerequisite: IROB1701

Covers the formation and development of Australian unions; analysis of economic, legal, political and social framework within which unions operate; the role of unions; the structure and government of unions; union democracy and politics; union strategies; and unions and the balance of power. The course will discuss the policies and operation of unions generally, and of State labor councils and the Australian Council of Trade Unions.

MGMT1712
Management of Organisations
School of Organisation and Management
UOC6 HPW3

Provides an interdisciplinary approach to the field of organisational behaviour and management. It introduces students to a range of perspectives on organisational structures and processes, and considers how they help us understand various management theories and practices. On this basis, issues of power, control, conflict and culture are explored. Other topics include: changing approaches and attitudes to work; social and political influences on group behaviour; teamwork and other managerial interventions; leadership and motivation; gender, EEO and human resource management.

MGMT2001
Managing Innovation and Organisational Change
School of Organisation and Management
UOC6 HPW3
Prerequisite: MGMT1001, MGMT1002

This course examines the role of the innovation process in the management of organisations and change managing change. It explores the role of creativity in innovation and the nature and processes of organisational change. It focuses on technological, administrative and process innovation as well as contemporary techniques and procedures used to understand, initiate, plan and implement change. The course is shaped by contemporary concerns over the need to combine consistent structures for predictable and efficient operations and personnel employment. with flexibility and timely adaptability to respond to the environment. It adopts a critical perspective and uses a multi-disciplinary framework drawing on several disciplinary areas as they contribute to the theory and practice of innovation and change. Topics encompassed include: features of organisation design; types and phases of change; nonlinear dynamics; managerial and organisational cognition; interpretative systems and sense-making; culture and intervention for change; organisation development; techniques for process change, (eg. TQM, business processes); the role of enterpreneurship, creativity, leadership and managerialism; and change agency. Case studies and exercises are used to explore central issues.

MGMT2002
Managing Business Communication
School of Organisation and Management
UOC6 HPW3
Prerequisite: MGMT1001

Effective communication management, at both individual and organisational levels, is essential in business and professional contexts. This course facilitates understanding of how people manage their communication processes, considers 'best practice' for successful organisational communication, and provides opportunities for communication skills development and enhancement. Topics include the theories and principles of communication management; the dynamics of interpersonal communication; the significance of intercultural and international business communication; the use of language and non-verbal communication; managing communication in small groups and teams; communication in negotiations; creating communication networks; managing ethical issues in business communication; conducting communication audits and developing benchmarks; and strategies for improving organisational communication. The course also includes practical components for improving individual and small group communication.

MGMT2101
International Business and Multinational Operations
School of Organisation and Management
UOC6 HPW3
Prerequisite or corequisite: IBUS1101 or IBUS1107 Excluded: IBUS2107

The focus of this course is on the multinational enterprise and the management of cross-border operations. Major topics include: multinational enterprises and the internationalisation process; motives for foreign investment; strategy of international business; organisation of international business; foreign market selection and entry strategy; exporting, importing and countertrade; the management of international business operations including an introduction to international human resource management, learning and knowledge management, manufacturing and materials management, marketing management, and accounting and financial management.

MGMT2105
Chinese Business Enterprise
School of Organisation and Management
UOC6 HPW3
Prerequisite: 48UOC in Arts or Law or Commerce & Economics; Exclusion: CHIN2501

An introduction to business and management in the People's Republic of China. The nature of Chinese business enterprise and the macroeconomic, legal, cultural and operational environment. Chinese business and management practices including 'guangxi' and business negotiations. Enterprise reform, enterprise finance and stock markets, accounting and taxation, foreign trade and internationalisation, and the management of foreign investment enterprises. Australian-Chinese business relations including trade and investment links.

MGMT2106
Comparative Management Systems in East Asia
School of Organisation and Management
UOC6 HPW3
Prerequisite: IBUS1101 or MGMT1101

An introduction to the comparative management systems in Northeast Asia including Japan, Korea, and China. Topics include: recent business performance in East Asia; comparative analysis of business systems, including Japanese Keiretsu, Korean Chaebol and Chinese family business; State enterprises and government-business relations in China; comparative analysis of organisational structures, corporate strategy and human resource management practices; impact of culture on management style and decision making; sub-contracting and buyer-supplier networks; and the globalisation of business.

MGMT2702
Industrial Law
School of Organisation and Management
UOC6 HPW3
Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Looks at the nature and purposes of the legal system and industrial law; the law concerning the contract of employment; trade unions; industrial

law; powers of Government; and the Commonwealth Conciliation and Arbitration System, awards, penal sanctions for industrial law, industrial torts, topics and issues of importance in the industrial law field.

MGMT2704
Social Organisation of Work
School of Organisation and Management
UOC6 HPW3
Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Covers the conceptual foundations of industrial sociology, and their application to work practices and institutions. The course will look at the rise of industrial capitalism and trade unionism, work and non-work (including the question of domestic labour), the labour process and work organisation, conflict and control, occupations and the division of labour, divisions in the workforce, technology, skill formation, productivity and flexibility, and the changing nature of work in the late 20th century.

MGMT2715
Labour History
School of Organisation and Management
UOC6 HPW3
Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Exclusion: Aust2017. Focuses on the transformation of working life in nineteenth and twentieth century Australia and changes in management. Considers the origins and development of the Australian labour movement and laborism. Themes covered include the nature and purpose of historical inquiry and research methods; the origins and development of labour markets and trade unions; the emergence of working class culture and consciousness; the influence of gender, race, ethnicity and locality on worker outlook and agency; worker political mobilisation and the rise of party politics; the role of the state in industrial relations; and the impact of radical ideologies; immigrant and Aboriginal workers and the role of women in paid employment.(NB: This course is only offered once every two years. Please consult the School's timetable for availability).

MGMT2718
Human Resource Management
School of Organisation and Management
UOC6 HPW3
Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Looks at management of paid employment in Australia. It covers contemporary management thinking; issues in managing people - problem solving, leadership, power, communications and managing in an organisation - group dynamics and supervision, setting goals and performance appraisal, developing individual and organisational resources, career planning.

MGMT2721
Managing People
School of Organisation and Management
UOC6 HPW3

This course can not be undertaken by students majoring in HRM or students in the Faculty of Commerce.

It focuses on managing in a rapidly changing environment. Topics include: leadership, decision-making and innovation; power, legitimacy, and the socialisation process; the structure and design of organisations, organisation and domination, the evolution of ethical awareness; intergroup conflict and conflict resolution; skills of managing - communication, negotiation, coaching and objectives setting; organisational culture and transformation.

MGMT2724
Health and Safety at Work
School of Organisation and Management
UOC6 HPW3
Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Examines the incidence, origins and management of occupational health and safety problems. It assesses the contribution of technical and social science disciplines to understanding and addressing occupational injury and disease. The role of management, government and trade unions in addressing health and safety will also be critically assessed. Topics covered include the incidence and nature of occupational illness; theories of injury causation; explaining occupational disease; occupation stress; shiftwork; repetition strain injury; the regulation of occupational illness; workers compensation and rehabilitation; management and union approaches; safety engineering; noise; hazardous substances; and case study.

MGMT3101
International Business Strategy
School of Organisation and Management
UOC6 HPW3
Prerequisite: IBUS2101 or MGMT2101

This course covers the fundamentals of strategic management from the perspective of both large and small organisations operating internationally. It thus builds directly on prior studies in international business and focuses on corporate and business level strategies, rather than functional strategies. Particular emphasis is given to the dynamics of the competitive environment and emerging issues. Major topics include: theoretical perspectives on strategic management in the international business arena; the interface between the firm's internal and external environments; country selection; mergers and acquisitions; management of strategic alliances; the role of government in international strategy; emerging technologies and intellectual property; strategic use of international standards; and international entrepreneurship.

MGMT3102
Asia-Pacific Business
School of Organisation and Management
UOC6 HPW3
Prerequisite: IBUS2101 or MGMT2101

What explains the success of Asian enterprises? This course provides an insight into the dynamics of Asian business systems in Japan, Korea, China, India, Taiwan, Hong Kong and Singapore. Topics include: the institutional and policy context of dynamic learning and innovation in Asian business; strategy and structure of multinational companies from Asia; paradigms of industrial development; state guided capitalism; the role of networks, markets, and non-market institiutions; role of foreign direct investment and export promotion in the Asia Pacific. Attention is directed to the dynamic institutional context of Asian business, the nature and source of competitive advantage of domestic enterprises, and the comparative aspects of developing and managing multinational and domestic enterprises across the region.

MGMT3702
International Human Resource Management Practice
School of Organisation and Management
UOC6 HPW3
Prerequisite: IROB2718 or MGMT2718

Examines from both applied and theoretical perspectives the effect of national culture on the processes and systems associated with managing human resources across cultural boundaries, as in the case of multinational corporations. The opening topics look at the conceptual and methodological difficulties and challenges facing the practice and research of International HRM. Other topics include: the role of culture in configuring the perceptions and actions of managers and subordinates; HRM systems as cultural artefacts; the clash between culturally diverse indigenous HRM frameworks; and the problems associated with transferring HR management systems across cultural boundaries. Also examines practical issues such as: the selection, preparation, training and management of expatriates, host-country nationals and third-country nationals for international assignments, developing intercultural competence, managing cultural adaptation at the individual and system levels, and the HR processes involved in staffing joint venture partnerships. Case study material used throughout the course is drawn from both Asia-Pacific and European regions.

MGMT3705
Management and Employment Relations
School of Organisation and Management
UOC6 HPW3
Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Covers: organisations of employers; employer organisation structure and strategy; employer associations relations with firms; multi-employer and single employer bargaining; corporate strategy; the structure of private and public sector organisations in relation to their environments; management values and ideology regarding employee motivation and regulation; management strategy and practice regarding employees and unions; the personnel and industrial relations function; line management and employee relations; management effectiveness in employee relations.

MGMT3708
Research Methods in Employment and Management
School of Organisation and Management
UOC6 HPW3

This course is designed as an advanced level course for students intending to undertake the fourth year Honours program in the areas of Employment and Management. It examines the philosophical foundations of the various approaches and the contributions of basic social science disciplines to the study of employment and management studies. The course will provide students with research philosophy, strategy, design, and execution skills. Topics include disciplinary perspectives on employment and management, the foundations of social science and competing paradigms used in research, identifying research topic, strategy, design and a variety of research methods - case-study and field research, comparative method, historical analysis, interviewing, focus groups, survey design and analysis.

MGMT3721
Negotiation Skills
School of Organisation and Management
UOC6 HPW3

This course provides a set of generic concepts and skills for negotiation and resolving interpersonal and inter-group conflicts. Students gain the opportunity to work with theory, skills and processes of negotiation relevant to a wide range of contexts: commercial; organisational; community; political and public policy; legal; and industrial relations. This course will provide an analytical understanding of negotiations, including negotiation planning, strategy and tactics, as well as the development of the practical skills necessary for implementation of this knowledge. Students will gain these practical skills through participation in negotiation seminars. The seminar programme is made up of negotiation role play exercises which develop in complexity as the course progresses.

MGMT3724
Strategic Human Resource Management
School of Organisation and Management
UOC6 HPW3
Prerequisite: IROB2718 or MGMT2718

This course deals with the ways in which strategic thinking can be applied to Human Resource Management. It aims to provide students with opportunities to synthesise managerial strategy issues with HRM processes, in a considered and reflective manner. The course focuses on the way strategies can be formed and enacted in organisations, and on the internal and external environmental contexts from which human resource strategies emerge. It also deals with a range of contemporary issues in human resource management against a backdrop of new and changing people management practices. In this course how can people manage and enhance organisational performance? How can we integrate stakeholder concerns into organisational decisions and strategies? How can strategic thinking underpin HRM activities? What are the barriers to strategic thinking in organisations? What does it mean to be a HR professional? Students are given the opportunity to enhance their skills in teamwork, organisational analysis, problem solving and strategic thinking - through fieldwork, case studies and seminars.

MGMT3728
Managing Pay and Performance
School of Organisation and Management
UOC6 HPW3
Prerequisite: IROB1701 or IROB1702 or IROB1712 or MGMT1701 or MGMT1702 or MGMT1712

Examines contemporary remuneration and performance management from both applied and theoretical perspectives, emphasising theories, practices and forces associated with the current trend away from traditional fixed, job-based pay to variable, person-based and performance-based remuneration. Topics covered include: HRM and the New Pay, motivation theory, fair pay, job evaluation, pay for skill and competencies, merit pay, recognition awards, performance appraisal vs performance management, broadbanding, team-based pay, gainsharing, employee share ownership, and executive pay. Also examines strategies for achieving an efficient and equitable mix of pay methods appropriate to particular levels of the workforce, from senior executives to non-managerial workers. Case study material is used throughout.

MGMT3729
Managing Workplace Training
School of Organisation and Management
UOC6 HPW3
Prerequisite: IROB2718 or MGMT2718

Skill formation and training have become central features of public policy and human resource management. This course introduces students to the theory and practice of workplace training, and to the public policies and regulations that shape such training. It is designed to build on and complement the content of nationally recognised training qualifications in Assessment and Workplace Training. Issues covered include - the context of training; learning in theory and practice; the nature of skill; training needs analysis, delivery and evaluation; competency-based training; the National Training Framework; training and employment policies; management education and development.

MGMT4731
Theory in Organisation & Management Studies
School of Organisation and Management
UOC6 HPW3

This course introduces students to the theoretical literature, debates, controversies and empirical studies in the disciplinary areas of strategic management, employment relations, human resource management, organisational behaviour and international business. The course emphasises the multi-disciplinary nature and evolution of management and organisational research.

MGMT4732
Methodology in Organisation and Management Studies
School of Organisation and Management
UOC6 HPW3

This course introduces students to the variety of social science research methods applicable to employment and management. Particular focus is given to the major qualitative and quantitative methodologies adopted by scholars in their studies of strategic management, employment relations, human resource management, organisational behaviour and international business. These are explored through seminars and project-based applications.

MGMT4738
Thesis (Human Resource Management)
School of Organisation and Management
UOC12 HPW3
Prerequisite: IROB3708 or MGMT3708, admission to Honours in Human Resource Management.

MICR2011
Microbiology 1
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: MICR2201; Corequisite: BIOC2201, BIOS2021 or BIOS2621.

This course is for students majoring in microbiology and who wish to enlarge their knowledge and skills in microbiology beyond those obtained in Fundamentals of Microbiology & Immunology or equivalent courses at other institutions. The biology, diversity and function of bacteria. Modern approaches to bacterial diversity through the use of bioinformatics. Comparative aspects of microbial growth. Bacterial nutrition and biosynthetic pathways. Microbial survival and global responses to environmental stimuli. Theory and practice of sterilization. Action of antimicrobial agents. Introduction to microbial ecology, medical and industrial microbiology.

MICR2201
Fundamentals of Microbiology and Immunology
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOS1201 (Except for Postgraduate Students).

This course is designed to give undergraduate and post graduate students a solid background in fundamentals of microbiology and immunology. The course introduces the student to the fascinating world of microorganisms: their ubiquity, peculiarities and the three domains of life i.e. Bacteria, Archaea and Eucarya. Most of the course will consider bacteria, fungi, yeasts and viruses in our every day life and how their activities impinge on our well being.

Metabolism and growth, microbial death & microbial genetics will be introduced to the students. Practical aspects of microbiology will be considered such as food intoxication, infection, spoilage and food fermentation. The immune system & the study of immunology will also be introduced in this course. This introduction will encourage the student to question controversial areas of microbiology and immunology such as AIDS. Immunization, environmental pollution, food hygiene, food spoilage causes and prevention etc.

Note: BIOS1101 is recommended. No prerequisites/corequisites are required for Postgraduate students.

MICR3021
Microbial Genetics
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: 12 Units of Credit from MICR2011 or MICR2611 or BIOS2021 or BIOS2621 or BIOC2201; Excluded: MICR3621.

This course provides a broad coverage of material describing the fundamentals of microbial genetics. The course differs from MICR3621 Microbial Genetics (Advanced) by requiring less contact time in terms of laboratory practicals and tutorials, and laboratory and lecture assessment. The course in intended for students interested in gaining a background in molecular biology/ genetics and those considering Molecular Biology, Microbiolgy, Medical Microbiology and Immunology and Genetics majors.

Main topics include genetics of bacteriophage, bacteria and yeasts, mutation and repair, plasmids, gene transfer, transposable genetic elements, gene cloning (genetic engineering) and two component regulatory systems. The practical component includes a range of contemporary microbial genetics experiments that complement lecture material. They may include experiments involving bacteria, archaea, or yeast involving transpon mutagenesis, gene library construction, gene complementation using recombinant plasmids, gene expression and regulation studies, UV mutagenesis and DNA repair, restriction/ modification systems, promoter rescue experiments, and a variety of gene exchange techniques. The socioeconomic impact of microbial genetics is also discussed.

Note: Replaces BIOT3031

MICR3031
Eukaryotic Microbiology (UTS)
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: MICR2011

This course provides an opportunity for students interested in a broad education in medical microbiology to undertake studies in the areas of parasitology and mycology. The unit is offered by agreement with the University of Technology, Sydney, and is taught at the Gore Hill Campus of UTS. The course offers students training in the principals and practices of medical laboratory parasitology and mycology. The parasitology component covers the identification of parasitic worms, insects and protozoa. Mechanisms of disease is also covered. The mycology component examines pathogenic yeasts and fungi, their identification and mechanisms of disease. The course is supported by a comprehensive laboratory program.

Note: Enrolment limited to 20 students. If oversubscribed, placements awarded according to achievements in Level 1, 2 and 3 courses. To avoid complications with HECS/ fees payments, students should enrol in this course through UTS, not UNSW, and have the units of credit transferred towards the UNSW degree.

MICR3041
Immunology 1
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOC2101 or (BIOC2181and MICR2201); Excluded: MICR3641, MICR3042.

This course provides a broad coverage of material describing the principles of immunology. There is a significant component of self-directed learning, including internet-based tutorials and assignments. The course is intended for students majoring in any area of Life Science or Medical Science interested in gaining a background in Immunology, and for those undertaking Microbiology or Medical Microbiology and Immunology majors. Topics addressed include the multiple components of the immune response and how they interact; an introduction to the concepts behind the regulation of the immune response; and introduction to the applied and clinical aspects of immunology, including allergy, transplantation and immunodeficiency. An element of choice in assessment tasks enables students to pursue in some depth an area of immunology which particularly interests them.

MICR3051
Immunology 2
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: MICR3041 or MICR3641

This course takes students to the frontiers of immunological knowledge, exploring conflicting theories of immunological function and regulation, and highlighting new therapeutic strategies that build upon a knowledge of immunology. Students are also introduced to research techniques ranging from the use of knockout and transgenic animals to mathematical modelling. In addition, major topics of study include the immunogenetics of the molecules of recognition, cytokines and their regulation and lymphocyte biology. Issues arising from the public debate surrounding vaccination are an additional major focus of this course.

MICR3061
Viruses and Disease
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: MICR2011

The course explores the biology of viruses and their unique strategic properties that enable their persistance. We will examine virus structure, classification and replication strategies, epidemiology, molecular virology, laboratory diagnosis, and applications of viruses in biotechnology, including gene therapy. The pathogenesis of a number of human, animal and plant diseases is discussed in the context of virus-host interactions, as well as the persistance, transfer and control of virus infections in the community. A WebCT component of the course allows students to engage in on-line computer activities including virtual experiments, electron micrograph identification, group discussions and research for the final consultancy brief project.The final "consultancy brief" project provides students with an opportunity to gain experience in working in consultancy teams, utilise the WebCT platform for discussions to facilitate research on a current topic in virology for a "client", and produce a professional report and a short seminar.

Note: Highly recommended: BIOC2201

MICR3071
Environmental Microbiology
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: MICR2201

The field of Environmental Microbiology offers great potential for the development of new and innovative strategies and products for the management and protection of the environment. In this course, students learn of the vital role of microbes in marine, freshwater and terrestrial ecosystems by exploring the dynamic interactions that take place between microbial communities, the surroundings and higher organisms.

A series of lectures and practical sessions cover key themes in contemporary environmental microbiolgy including sensing and adaptive responses of bacteria, biogeochemical cycling and microbial communities and interactions. Laboratory sessions allow students to gain experience in the experimental design and practical skills of research in the context of mini-research projects into modern environmental issues. Students will gain theoretical and practical experience in modern molecular techniques for the detection, phylogeny and tracking of microbial communities. A WebCT component of the course is used to support laboratory activities and to help students track their own progress and understanding of the course content. This course emphasises how the principles and techniques of Environmental Microbiology can be applied to a range of environmental problems and lead to the development of sustainable resources and commercial applications, as expanded in Environmental Biotechnology (BIOT3081).

Note: Highly recommended: MICR2011, BIOC2201, BIOS2021 or BIOS2621.

MICR3081
Bacteria and Disease
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: MICR2011

Bacteria and Disease aims to develop a high level understanding of bacterial pathogenesis, disease control and prevention. We examine in depth a select number of pathogens that portray the diverse characteristics seen in different pathogenic bacterial species. In conjunction with the lecture program, contemporary medical laboratory training is given through a simulated diagnostic unit. Development of communication skills constitutes part of this course.

Note: Highly recommended: MICR3041 or MICR3641.

Half of the compulsory practical component of this course consists of seven practical classes run over four days during the mid-session break. In-session time, 6 practical classes will be run in weeks 10 through 14.

MICR3611
Microbial Physiology: A Molecular Approach
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite/s: MICR3021 or MICR3621 Excluded: MICR3011

The goal of this course is to combine theory introduced in previous courses with an understanding of how modern research endeavours are approached. This goal will be achieved by linking lectures and laboratories to contemporary research in molecular aspects of microbial physiology. Lectures will address molecular mechanisms involved in: determining microbial cell shape, cell division, sensing and responding to environmental signals, strategies for survival in extreme and stressful environments, and regulation of the synthesis of gene products. The lecture series also contains a module outlining the commercialisation of scientific discoveries. The practical program involves planning and implementing a research project in consultation with the course supervisor. Students will be challenged to identify relevant research problems, to generate feasible solutions to these problems, and to carry out critical peer review. The research training through lectures and practicals provides a solid basis for undertaking research in the Honours year.

MICR3621
Microbial Genetics (Advanced)
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite(s): 12 Units of Credit from MICR2011 or MICR2611 or BIOS2021 or BIOS2621 or BIOC2201; Excluded: BIOT3031, MICR3021.

Course available to Advanced Science students, or as an advanced option to non-Advanced Science students. This advanced course differs from MICR3021 Microbial Genetics by providing additional laboratory practicals, laboratory tutorials and laboratory assessment, a number of advanced level lectures (presently two), and different questions (both in content and number) in lecture based assessment. The course aims to extend fundamental concepts and principles of microbial genetics to an advanced level. The course is intended to be particularly useful for students interested in molecular biology/ genetics and those considering Molecular Biology and Microbiology majors.

Main topics include genetics of bacteriophage, bacteria and yeasts, mutation and repair, plasmids, gene transfer, transposable genetic elements, gene cloning (genetic engineering) and two component regulatory systems. The practical component includes a range of contemporary microbial genetics experiments that complement lecture material. They may include experiments involving bacteria, archaea or yeast, involving transpon mutagenesis, gene library construction, gene complementation using recombinant plasmids, gene expression and regulation studies, UV mutagenesis and DNA repair, restriction/ modification systems, promoter rescue experiments, and a variety of gene exchange techniques. The socioeconomic impact of microbial genetics is also discussed.

Note: Replaces BIOT3031

MICR3641
Immunology 1 (Advanced)
School of Biotechnology and Biomolecular Science
UOC6 HPW6
Prerequisite: BIOC2101 or (BIOC2181 and MICR2201); Excluded: MICR3041, MICR3042.

This advanced course differs from MICR3041 Immunology 1 by providing advanced level laboratory practicals incorporating design and performance of experiments, advanced level problem-solving tutorials, and different questions (both in content and number) in examinations. There is also a significant component of self-directed learning, including internet-based tutorials and assignments. The course aims to extend fundamental concepts and principles of immunology to an advanced level, and to promote both theoretical and practical problem solving skills. The course will be particularly useful for students considering Immunology and Microbiology majors.

Topics addressed include the multiple components of the immune response and how they interact; an introduction to the concepts behind the regulation of the immune response; and introduction to the applied and clinical aspects of immunology. There will be an emphasis on experimental design and performance as applied to solving immunological problems, and students will be expected to apply their basic knowledge to various research and “real-life” scenarios. An element of choice in assessment tasks enables students to pursue, in some depth, an area of immunology which particularly interests them.

This course is available to Advanced Science and Medical Science students, and to students form other degree programs with a particular interest in Immunology and a Credit average in relevant courses.

Note: Maximum enrolment limited to 25 students.

MICR4013
Microbiology Honours Full-Time
School of Biotechnology and Biomolecular Science
UOC24

Advanced training in selected areas of Microbiology and Immunology: a formal component consisting of seminars, tutorials, use of information science in biology and written assignments, plus a supervised research program in a specific area of microbiology or immunology. Choice of research projects in laboratories that provide extensive training in one or more of the following: biotechnology, bioinformatics, molecular biology, cell biology, cell culture, immunogenetics, clinical microbiology, medical microbiology, microbial genetics, diagnostics, bioremediation, environmental microbiology, flow cytometry and confocal laser microscopy.

MINE1010
Introduction to Mining Engineering
School of Mining Engineering
UOC6 HPW4

This course provides the basic introduction to the profession of mining engineering for all new students. Bearing this in mind, at the completion of this course a student should: appreciate the range of roles and responsibilities a mining engineer encounters in the workplace, and the broad range of career paths available; have a basic understanding of underground and open cut mining methods and an introductory appreciation of the importance and relevance of the science and other engineering disciplines to mining; be familiar with basic mine ventilation, explosives and blasting; understand and appreciate the importance of safety and risk management in the workplace; be confident in appreciating the history and current status of mining in Australia with a particular understanding of economic, social and environmental issues; be prepared for what you may encounter in your first industrial training period.

Note: Site visits and industry lectures are a requirement of this course and may involve additional personal expense.

MINE1020
Mining Industry Practice
School of Mining Engineering
UOC6 HPW4

The course aims to build on the students earlier introduction by developing their understanding in areas associated with processes and practices in the minerals industry. The course covers:mineral economics and markets; environmental responsibilities, management and rehabilitation. communication needs within the industry and society and common techniques used to convey information. These include computer packages, web pages, internet, email, role plays, presentation skills, technical drawing and graphical presentation, report writing, resume preparation, research methodologies.an overview of engineering drawing fundamentals.risk management - MISHC Component 1: Introduction to risk management.**Note:**Site visits and industry lectures are a requirement of this course and may involve additional personal expense.

Assumed Knowledge: MINE1010

MINE1300
Applied Mechanics
School of Mining Engineering
UOC6 HPW4

To provide students with an understanding of the basic engineering principles governing the statics, kinematics and dynamics of rigid bodies as applied to mechanical components.Statics: definition of force and moment, static equilibrium of rigid bodies, statical equivalence of systems of forces, centre of mass, centroid, centre of pressure, frictional forces. Kinematics: linear and angular motion, motion in a plane, relative displacement, velocity and acceleration. Dynamics: equations of motion for rigid body, work and energy, impulse and momentum, strain energy.

Upon successful completion of the course, the student will be able to apply the principles of statics and dynamics outlined above to the analysis of systems of forces, the motion of mechanisms and the relation between forces applied to an object and the resulting motion.

MINE2010
Mining Project Development
School of Mining Engineering
UOC6 HPW4

The course covers the interaction between the core processes of the mining system. Exploration. Planning and the development of mines, infrastructure requirements; environmental assessment. Ore body parameters for surface and underground mines; stratified and non-stratified deposits; mine layout for surface and underground operations; underground access; introduction of techniques of rock breakage and support for coal and metal mines; processing of minerals; disposal of overburden and rejects rehabilitation.

The course also includes an introduction to the principles of project management.

On completion of the course the student should have an understanding of the different processes involved in a mining project providing the context for the various specialist courses offered in subsequent years of the mining engineering program.

Note: Visits to mines and related undertakings are a requirement of this course.

Assumed Knowledge: 1020

MINE2310
Structural Mechanics
School of Mining Engineering
UOC6 HPW4

To provide students with an understanding of the principles of analysis and design of structures and the concepts of stress and strain.Basic definition of force, displacement, stress, strain and elastic material properties. Forces and stresses in pin jointed frames; bending moment, shear force in beams; stress due to bending of beams; deflection of beams; buckling of struts; stress due to torsion of shafts; combined axial and bending stress; stress in thin walled pressure vessels. Shear stresses in beams. Continuous beams: Slope-deflection equations, stiffness matrix and nodal force vector, computer analysis. Definition of stress in three dimensions. Stress transformation in two dimensions; principal stresses in two dimensions. Mohr's circle of stress. Definition of strain and strain-displacement relations in two dimensions; strain transformation and principal strains in two dimensions; isotropic elasticity.

Upon successful completion of the course, the student will be able to calculate stresses and displacements of simple skeletal structures according to the theory generally applied in engineering practice, and will be aware of the circumstances in which that theory may not yield results of adequate accuracy. The student will also be able to carry out some analysis of the states of stress and strain in a material, for the cases of plane strain and plane stress.

Assumed Knowledge: 1300

MINE2320
Mining Stress Analysis
School of Mining Engineering
UOC3 HPW3

To provide an understanding of stress analysis that can be applied to geotechnical engineering.Stress transformation and principal stresses in three dimensions; strain-displacement relations in three dimensions; strain transformation and principal strains in three dimensions; equations of equilibrium, boundary conditions; strain compatibility and the Airy stress function; stress in thick walled tubes under pressure; stresses around circular tunnel; anisotropic elasticity; the equivalent continuum; elastoplasticity.

Upon successful completion of the course, the student will be able to analyse the states of stress and strain in a material for the general three dimensional case, solve simple boundary value problems of plane strain for an elastic material, and idealise a mass of rock or soil as an anisotropic or elastoplastic material as required in the application of computational methods of stress analysis.

Assumed Knowledge: MINE2310

MINE2500
Fluids & Thermodynamics
School of Mining Engineering
UOC6 HPW4

To give students the underpinning knowledge that is applied to the physical environments encountered in mines and the behaviour of liquids and gases in mine services and mineral processing.Fluid mechanics: properties, fluid statics, steady and unsteady flow, laminar and turbulent flow, Reynold's number, acceleration of a fluid particle, continuity equation, steady flow for stream-tube, momentum equation, Bernoulli's equation, measurement of flow, laminar flow between parallel plates, flow in pipelines, open channels, head losses at enlargements, contractions, bends.Thermodynamics: states, ideal gas, definition of temperature scale, real gases, equilibrium diagram, p-v diagram, steam tables. Systems, processes and cycles, first law of thermodynamics, internal energy, mechanical work, polytropic processes, steady flow systems, enthalpy, the Rankine cycle, heat engines, heat pumps, entropy, gaseous mixtures, psychrometry.

Assumed Knowledge: MINE1300

MINE2700
Mining Data Analysis
School of Mining Engineering
UOC3 HPW2

Mining and minerals processing involves materials which are variable in composition and physical characteristics. Mining Engineers are required to make decisions and projections on the basis of incomplete information and experimentation. They need to manage a range of risks on the basis of probability and levels of confidence. These activities require the use of statistical tools developed to provide quantitative information from variable data with known levels of confidence. This subject provides the basis for designing investigations, presenting data, and forming statistically valid engineering conclusions. Precision, accuracy, approximation, bias. Samples and sampling. Averages (mean, median, mode). Graphical data analysis. Arithmetic, logarithmic and exponential relationships. Correlation coefficients (r). Index numbers and time series. Review of probability, random variables and their properties. Quartiles and percentiles. The normal and binomial distribution. Applications to statistical quality control. Theory of statistical inference including confidence intervals and hypothesis testing with applications to one and two sample problems based on the t- and F- tests. Simple and multiple linear regression. Design and analysis of investigations, analysis of variance and introduction to factorial designs. Applications will be drawn primarily from the fields of mining and minerals engineering.

Assumed Knowledge: MATH1231.

MINE3210
Resource Mining Control Systems
School of Mining Engineering
UOC3 HPW2

Resource mining control systems exist in order to ensure optimum exploitation of the in situ economic resource. This course covers the various elements necessary in designing appropriate control systems including estimation of the distribution and grade of economic minerals, and of the tonnes and grade of ore/coal as mined; alternate feedback

mechanisms used in forecasting; grade control; sampling theory, calculation of fundamental sampling error, design of sampling protocols; the use of univariate and bivariate statistics in evaluating the quality of sample analytical data; geostatistical modelling including spatial statistics, continuity and variography; grade interpolation and block modelling; and, reconciliation and other feedback mechanisms.

On completion of this course the student should be able to design or review the effectiveness of resource control systems used in a mining operation.

MINE3300
Mining Geomechanics
School of Mining Engineering
UOC6 HPW4

This course provides an understanding of the principles of soil and rock mechanics and the impacts of these disciplines in mining engineering practice. Soil Mechanics: nature of soil, groundwater flow, stability of slopes, tailings storage facilities, earth retaining structures, shallow foundations, consolidation, compaction, liquefaction. Rock Mechanics: principles applied to mining; stress, strain, deformational behaviour and stiffness; time dependency and stress in rock; rock properties, rock failure criteria, discontinuities in rock, rock mass classification, stresses around excavations, laboratory techniques and experiments.

Assumed Knowledge: MINE2320

MINE3410
Coal Mining Systems
School of Mining Engineering
UOC6 HPW4

This course provides a comprehensive understanding of mining systems that are used in the underground and surface coal mining sector. History, significance and characteristics of the global and the Australian mining

industry. Detailed descriptions and selection criteria for various coal mining methods including surface and underground techniques.

Introductory mine planning and scheduling. Focus will be on the examination of the core risk of each mining method including safety, environmental and economic. Case studies are a feature of the course.

On completion of this course the student should be able to demonstrate a sound working knowledge of mining techniques used in the Australian coal mining industry and be able to apply that knowledge to enable the safe, economic and responsible recovery of ores from any type of coal deposit.

NB: Site visits and industry lectures are a requirement of the course and may involve additional expense.

MINE3420
Metal Mining Systems
School of Mining Engineering
UOC6 HPW4

This course provides a comprehensive understanding of mining systems that are used in metal mines and extractive industries. History, significance and characteristics of the global and the Australian mining industry. Detailed descriptions and selection criteria for various metalliferous mining methods including surface and underground techniques. Introductory mine planning and scheduling. Focus will be on the examination of the core risk of each mining method including safety, environmental and economic. Case studies are a feature of the course.

On completion of this course the student should be able to demonstrate a sound working knowledge of mining techniques used in the Australian mining industry and be able to apply that knowledge to enable the safe, economic and responsible recovery of ores from any type of orebody.

NB: Site visits and industry lectures are a requirement of the course and may involve additional expense.

MINE3500
Mine Workplace Environment
School of Mining Engineering
UOC6 HPW5

This course provides knowledge underpinning: the supply and control of air for underground mines and the removal of contaminants; the supply, control and removal of water in mining operationsother potential high consequence hazards in a mine including outbursts, explosions, fires, spontaneous combustion, inrush hazards, radiation, windblasts, noise, miners' diseases and illumination in mines. Mine ventilation: practice in mines, airflow, resistance of workings and distribution of mine air, network analysis, fans and their operation, auxiliary ventilation, economic size of airways; ventilation surveys. Mine gases and dust: hazards, occurrence, detection, monitoring and control, physiological effects. Mine climate: physiological effects, air cooling power and control. Ventilation planning: airflow requirements based on pollutant gas, airborne dust, heat and humidity. Outbursts in coal mines. Mine explosions. Mine fires. Spontaneous combustion. Inrush hazards in mines. radiation hazards in mines. Noise, Miners' diseases, illumination, windblasts and ventilation risk management. Mining engineering hydrology, sources of mine water, forecasting water inflows, water balance and reticulation; pump types, pumping and drainage. Hydrology risk analysis.

Note: Site visits and industry lectures are a requirement of this course and may involve additional personal expense.

Assumed Knowledge: MINE2500

MINE3610
Excavation Engineering
School of Mining Engineering
UOC6 HPW5

The course provides an understanding of the various rock breakage technologies used in mining and tunnelling excavations and the various systems for access, development and operations. The course covers: Rock drilling techniques (percussive, rotary and hydraulic), drilling equipment & drill pattern design for headings, stopes and benches in surface and underground mining operations; Types of explosives and their properties; Theories of rock fragmentation by blasting; Various initiation systems; Blasting accessories and their applications; Blast design in underground and surface operations; Blasting hazards and precautionary methods; Design to control blast-induced ground vibrations and airblasts; Special blasting techniques including presplitting, smooth wall blasting, trenching, cast blasting and paddock blasting; Environmental considerations, handling and storage of explosives; Principles of rock cutting; Performance of picks and free rolling cutters; Cutter tool interaction; Design of cutting arrays for machine mining and tunnelling; Cutting tool materials and effect of tool metallurgy on wear and fracture resistance; Methods of assessing rock cuttability; Site investigation and site preparation; Tunnelling methods; Conventional and mechanical excavation systems including drilling and blasting, roadheader, tunnel boring machines, pipe-jacking; Excavation in difficult ground; Shaft sinking methods (both vertical and inclined shafts), conventional and mechanical boring.

On completion of the course the student should have an understanding of the various methods, issues and design principles associated with the main forms of rock breakage (drill & blast and machine mining) and the application of these processes to mining and tunnelling.

Note: Site visits and industry lectures are a requirement of this course and may involve additional personal expense.

MINE3620
Mine Infrastructure and Services
School of Mining Engineering
UOC3 HPW3

The course provides an understanding of material handling systems used in mining and the various infrastructure needs to support mining operations including power reticulation and control systems. The course covers: Transport systems for minerals, waste rock, people and materials; Design of conveyor systems; Trackless methods of haulage - shovels, loaders and trucks; Track mounted methods; Mechanics of hoisting and design of winding systems; Winding cycle diagrams and power requirements for hoisting; Winding ropes; Safety aspects, maintenance of haulage and winding systems; Mine power requirements and reticulation; Electrical power distribution in surface and underground operations; Mine cables and switch gear; Explosion-protected electrical devices; Fault protection and risk analysis; Design and operational characteristics of electric, diesel, hydraulic and pneumatic motors and drive systems; Speed and torque control; Fluid characteristics; Mine control systems; Signalling and communications; Types and designs of control systems.

On completion of the course the student should have an understanding of the design principles related to principles methods of bulk materials haulage used in and about mine sites and the services required to support a mining operation.

Note: Site visits and industry lectures are a requirement of this course and may involve additional personal expense.

MINE3710
Mine Economics and Business Systems
School of Mining Engineering
UOC6 HPW4

The course provides an understanding of management principles and perspectives that can be applied in mining. The Mine Economics component of this course reflects the fact that mining is an economic activity. It will cover the principles and techniques of project evaluation and the construction of fully integrated and internally consistent technical/financial computer models of mining projects. The Business Systems component will cover issues vital to a mine manager's successful running of a mining enterprise.

On completion of the course the student should be able to demonstrate a sound working knowledge of: the time value of money; discounted cash flow evaluation techniques; technical/financial model examples and assignments; commodity markets, revenue estimation, risk analysis and project financing; company financial statements and underlying accounting principles; the feasibility study process; determination of economic cut-off grades and resources and reserves estimation; legal aspects of managing a mine; and, theory and processes of management including human behaviour, industrial relations, contracts & contractors, financial statements & financial ratios, and management in an international context.

MINE3800
Mineral Processing
School of Mining Engineering
UOC3 HPW3

Minerals Engineering is the link between mining and the utilisation of mineral resources, and is a key operation in the minerals industry. By a combination of breakage, sizing, separation, and dewatering processes, valuable components in mined material are concentrated into products suitable for subsequent hydrometallurgical or pyrometallurgical processing or direct utilisation. Minerals engineering processes are applied in the treatment of precious metal and gemstone deposits, base

metal ores, heavy mineral beach sands, coal, and industrial minerals such as clays and aggregates. This introductory course provides a description of the principal unit processes and their applicability, and of the mineral properties and characteristics of mined materials on which they are based. On completion, you will be able to carry out calculations relating to the characterisation of mined materials, carry out materials balance calculations for simple mineral processing circuits, and nominate appropriate processes for their beneficiation. For many of those processes you will also be able to determine equipment sizes for specified duties. Topics include: Rocks, minerals and ores. Grades, recoveries. Materials balances. Liberation. Comminution (crushing and grinding). Screening. Size classification. Dry and water-based separation processes. Dense media separation. Surface properties of liquids and solids. Froth flotation. Leaching processes. Screens and centrifuges. Flocculation and thickening. Filtration. Tailings disposal. A series of laboratory investigations forms part of the course.

Assumed Knowledge: PHYS1169, CHEM1817, MINE2500 (or equivalents)

MINE4210
Mine Planning
School of Mining Engineering
UOC6 HPW5

The course provides an understanding of the fundamentals of the mine planning process including design, scheduling and evaluation, and the tools available to assist in the planning process. The course covers: the mine planning process; strategic planning and tactical planning; mine design, economic cut-off grade and optimisation; resource estimation; scheduling; feasibility studies; economic modelling; equipment selection; mine systems selection; performance benchmarks for operations; project risks; environment and mine site rehabilitation planning; government regulations; and an introduction to computer tools to assist in mine planning.

On completion of the course a student should have an understanding of the process to derive an optimum mine plan including an appreciation the various factors and constraints to be considered in the mine planning process; an ability to design a pit shell; construction of a production schedule and creation of an economic model to analyse a mining scenario.

Assumed Knowledge: MINE3710, MINE3400

MINE4220
Coal Mine Design and Evaluation Project
School of Mining Engineering
UOC9 HPW7

The course provides the means of integrating the technical, economic and management knowledge as presented within the mining engineering program whilst conforming to industry and community expectations. Technical design and project evaluation of a coal deposit is a core focus of the subject. The work draws on the subject content from previous courses and is undertaken in teams. The teams are required to prepare and present a feasibility study of a mining project.Teamwork, project management and presentations skills are assessed in addition to the technical analysis and content of the final feasibility study.

Those students who successfully complete the course should achieve: a well rounded understanding of both the theoretical principles and practical methodologies associated with mine planning and feasibility study projects; an ability to recognise and be capable of managing the inter-relationships and dependencies of the previously taught coursework subjects within the Mining Engineering undergraduate degree course; a demonstrated capability to work on a project within a self-managed team environment and to provide quality communication (written and oral) of progress and final outcomes; a basic working knowledge and ability to use state-of-the-art mine planning software (proficiency in the use of this specialised software is not expected - the software is a tool to assist you in your project).

A minimum of 80 days of approved industrial training is required for successful completion of this course.

Assumed Knowledge: MINE4210

MINE4230
Metal Mine Design and Evaluation Project
School of Mining Engineering
UOC9 HPW7

This course provides the means of integrating the technical, economic and management knowledge as presented within the mining engineering program whilst conforming to industry and community expectations. Technical design and project evaluation of a metalliferous deposit is a core focus of the course. The work draws on the course content from previous courses and is undertaken in teams. The teams are required to prepare and present a feasibility study of a metal mining project. Teamwork, project management and presentations skills are assessed in addition to the technical analysis and content of the final feasibility study.

Those students who successfully complete the course should achieve: a well rounded understanding of both the theoretical principles and practical methodologies associated with mine planning and feasibility study projects; an ability to recognise and be capable of managing the inter-relationships and dependencies of the previously taught coursework subjects within the Mining Engineering undergraduate degree course; a demonstrated capability to work on a project within a self-managed team environment and to provide quality communication (written and oral) of progress and final outcomes; a basic working knowledge and ability to use state-of-the-art mine planning software (proficiency in the use of this specialised software is not expected - the software is a tool to assist you in your project).

A minimum of 80 days of approved industrial training is required for successful completion of this course.

Assumed Knowledge: MINE4210

MINE4240
Mine Design and Evaluation Project
School of Mining Engineering
UOC9 HPW7

The course provides the means of integrating the technical, economic and management knowledge as presented within the mining engineering program whilst conforming to industry and community expectations. Technical design and project evaluation of a mineral/coal deposit is a core focus of the course. The work draws on the subject content from previous courses and is undertaken in teams. The teams are required to prepare and present a feasibility study of a mining project. Teamwork, project management and presentations skills are assessed in addition to the technical analysis and content of the final feasibility study.

Those students who successfully complete the course should achieve: a well rounded understanding of both the theoretical principles and practical methodologies associated with mine planning and feasibility study projects; an ability to recognise and be capable of managing the inter-relationships and dependencies of the previously taught coursework subjects within the Mining Engineering undergraduate degree course; a demonstrated capability to work on a project within a self-managed team environment and to provide quality communication (written and oral) of progress and final outcomes; a basic working knowledge and ability to use state-of-the-art mine planning software (proficiency in the use of this specialised software is not expected - the software is a tool to assist you in your project).

A minimum of 80 days of approved industrial training is required for successful completion of this course.

Assumed Knowledge: MINE4210

MINE4300
Geotechnical Engineering
School of Mining Engineering
UOC6 HPW4

Course content includes the following components across the range of coal and metalliferous mining systems: core geotechnical risks inherent in major mining methods and risk management criteria; hazard recognition, mapping and ground control management plans; underground mining excavation design; rock mass classification; surface mining geomechanics; application of numerical stress analysis modelling; geotechnical instrumentation; pillar and roadway design; principles and practice in ground control; geotechnical role of mine fill systems; rock reinforcement principles and systems; subsidence engineering; roadway and pillar design; caving mechanics, outbursts, rockbursts, wind/airblasts. Case studies, group work and problem-based learning projects will form a major component of this course.

Successful completion of this course will equip the student with the ability to recognise the major geotechnical applications and their significance within the mainstream mining systems and conditions. Students will also have a sound working knowledge of fundamental mechanisms and mining geotechnical principles within the context of practical mining applications.

Note: Site visits and Industry lectures are a requirement of this course and may involve additional personal expense.

Assumed Knowledge: MINE3300

MINE4410
Industry Applications
School of Mining Engineering
UOC6 HPW4

The course provides the student with an awareness of current issues facing the mining industry. A series of seminars are presented by invited speakers from within the university, other research establishments and selected industrial operations covering topics of special interest.

The course also covers the processes associated with initiating a research project. Candidates are select a research topic related to mining, minerals engineering or other approved topic approved by the Head of School. It is strongly suggested that candidates evaluate various topic options in the period prior to commencement of the course, preferably during the period of Industrial Training. The research project may take the form of an engineering analysis, experimental investigation, theoretical study or design project. Candidates are required to carry out a literature review of the chosen research topic and submit a project plan.

On completion of the course a student should be capable of preparing a report which critically evaluates social and technical issues. In addition, students will develop the knowledge and skills to assimilate current understanding and knowledge on a topic and synthesise this into a written document in support of a major investigation that also includes a formal project plan and risk management plan.

MINE4420
Thesis A
School of Mining Engineering
UOC6 HPW4

The course provides the opportunity for the student to undertake a research project on a mining, minerals engineering or other topic approved by the Course Authority. Candidates are required to submit a dissertation or thesis, a conference paper and make a presentation. The work may take the form of an engineering analysis, experimental investigation, theoretical study or design project.

On completion of the course a student will be capable of carrying out and report on a research project and prepare a draft document for submission to technical conference.

Assumed Knowledge: MINE4410

MINE4430
Thesis B
School of Mining Engineering
UOC6 HPW4

The course provides the opportunity for the student to undertake a research project on a mining, minerals engineering or other topic approved by the Course Authority. Candidates are required to submit a dissertation or thesis, a conference paper and make a presentation. The work may take the form of an engineering analysis, experimental investigation, theoretical study or design project.

On completion of the course a student will be capable of carrying out and report on a research project and prepare a draft document for submission to technical conference.

This course is restricted to students who are eligible and enrolled in either the BE(Mining)/MCom or the BE/MEM combined program.

MINE4500
Sustainable Mining Practices
School of Mining Engineering
UOC3 HPW2

This course provides a comprehensive understanding of the impacts both positive and negative that mining may have on society. International perspective and treaties; sustainable development; corporate responsibility; legislative and regulatory framework; environmental impact assessment; environmental management systems, ISO 14001; corporate reporting; code for environmental management; environmental auditing; risk management; best practice environmental management techniques - exploration; waste disposal; tailings; quarries; water management; air pollution; rehabilitation and mine closure; social impact.

On completion of this course the student should be able to demonstrate a sound working knowledge of the legal and political context; company-based initiatives in environmental management; and state of the art techniques in environmental management on mine sites. They should also be able to describe the major issues associated with the social/community impacts of mining in Australia and internationally.

MINE4700
Mining Law
School of Mining Engineering
UOC6 HPW5

The course provides an understanding of certain critical management issues of fundamental importance to the mining industry. The course is divided into two main parts. The first is concerned with advanced applications in risk management, in particular the human behavioural side of risk taking, making errors, accident occurrence, ergonomics, as well as application of risk management to some of the major hazards in the coal and metalliferous mining industry. The analysis of mining disasters is covered in the course. The second part of the course covers modern mining law including safety, environment and exploitation of mineral deposits.

On completion of the course the student should be able to demonstrate a sound working knowledge of: the latest concepts in mining law; the fundamentals of risk management; the adoption of risk management tools in the regulatory environment; risk management in specific mining-related processes; environmental risk management; mining and other disasters and the application of risk management techniques; emergency preparedness in the mining industry.

MINE4800
Mine Simulation and Modelling
School of Mining Engineering
UOC3 HPW3

The course aims to equip students with knowledge and skills in two dimensional (2D) and three dimensional (3D) computer simulation software used in the mining industry. Students undertake a critical analysis of simulation software and technology and discuss their findings through an online discussion group with the aim of identifying when, where and how to apply either 2D or 3D computer simulation technology to mine planning or mine operations. A model of a mining system is then designed, built and evaluated using simulation techniques. An informed report is written and presented that discusses the model developed in the course and the conclusions drawn on the application of 2D and 3D simulation to mining operations.

On successful completion of the course students should be able to; identify and select appropriate computer simulation software tools that are available to the mining industry; design, develop and evaluate an interactive computer model of a mining system using 2D and 3D simulation software; visualise disparate mine data within a 3D model and appraise their role in ore deposit modelling; make an informed assessment of when it is appropriate to apply 2D and 3D modelling techniques to mining operations.

MINE4805
Mineral Process Technology
School of Mining Engineering
UOC3 HPW3

Descriptions of principal unit processes are given in MINE3800. This course extends that work by a closer examination of the underlying basis of those unit processes; and aspects of circuit design, equipment selection and process optimisation. On completion, you will be able to carry out advanced calculations relating to the characterisation of mined materials and process performance, and will be able to use such information for process simulation. You will also be familiar with basic flowsheet and plant design considerations, and of the instrumentation and control systems incorporated in mineral processing and coal preparation plants.Topics include: Ore characterisation. Gaudin-Schuhmann plots. Separation and blending equations. Release analysis. Grade-recovery and grade-gradient plots for mineral ores. Process instrumentation and control. Radiation based on-line instrumentation. Review of coal washability. Rosin-Rammler plots. The Mayer curve. Flotation: the Tree procedure. Materials handling: stockpiles and blending. Sampling theory and practice. Process efficiency (partition curves). Processes in parallel and series. Instantaneous grade theory of process optimisation and its application. Physics and chemistry of surfaces. Double layer theory. Rheology of suspensions. Process simulation: comminution, screening, classification, flotation, dense medium cyclones. Simulation software packages. Flow sheet design. Equipment selection and plant layout. Rejects and tailings disposal. Leaching processes and environmental considerations.

Assumed Knowledge: MINE3800

MINE4810
Computational Methods in Geomechanics
School of Mining Engineering
UOC3 HPW3

To provide students with an understanding of the theory and practice of finite difference, finite element and boundary element methods applied to problems of geomechanics.Boundary value problems, solution of Poisson's equation by finite differences, variational principle for Poisson's equation, stiffness matrix and equivalent nodal force vector, finite elements and matrix assembly, variational statement and finite elements for elasticity, isoparametric elements, modelling techniques, elastoplastic finite element analysis. Indirect and direct boundary element methods for Poisson's equation, isoparametric boundary elements, direct method for elasticity.

Upon successful completion of the course, the student will be able to carry out elastic and elastoplastic analyses of stress in rock, soil and other materials. The student will know for any given problem what input data including material properties are required, which is the most suitable method of analysis, and how to obtain the best possible accuracy with available computing resources.

Assumed Knowledge: MINE2320

MODL2000
Intercultural Communication
School of Modern Language Studies
UOC6 HPW3
Prerequisite: 36 Level 1 units of credit in Arts, including at least 12 units of credit in a language course or equivalent

Examines the factors which determine our use of verbal and non-verbal language in social interaction across different cultures. Aims to identity and compare the factors which lead to communication breakdown; the expressions of formality, politeness and emotion in a variety of languages. Also considers the issues involved in intercultural adaptation and the impact on one's identity. Designed to complement courses offered in the School of Modern Language Studies by developing learners' intercultural communications skills.

Note: Lectures will be in English with language specific work offered in tutorials.

MODL2002
Introduction to Professional Interpreting
School of Modern Language Studies
UOC6 HPW3
Prerequisite: 36 Level 1 units of credit in Arts, including at least 12 units of credit in a language course or equivalent

Aims at providing students with foundations of professional interpreting. Essentially a practical course, it deals with subject areas most common in Australia and international contexts. Involves tasks such as dialogue and consecutive interpreting and deals with thematic areas such as welfare, social security, medical and legal. Addresses crucial interpreting and linguistic problems relevant to interpreting: problems of vocabulary, equivalents, syntax, grammar and speech register. Includes the acquisition of interpreter's practical skills and looks at socio cultural aspects of interpreting and professional ethics.

Note: High level of skills in English and a language other than English is a prerequisite. This course is available to students who have completed at least 12 units of credit or equivalent in French, German, Indonesian, Russian or Spanish and students who have completed JAPN3001 or KORE3001 or equivalent.

MSCI2001
Introductory Marine Science
School of Biological, Earth and Environmental Sciences
UOC6 HPW4

This course introduces students to a cross-section of the theory and application of marine science and includes an opportunity to experience field research. Spanning the disciplines of geology, chemistry, physics, and biology, it provides a fundamental understanding of how oceans work. Topics covered are: the chemistry of seawater; air-sea interactions; ocean circulation; waves, tides, and coastlines; biological productivity and biological diversity.

Note: Compulsory field camp, duration of 4 days. Personal costs will be incurred.

MSCI2051
Coral Reef: Environment and Ecology
School of Biological, Earth and Environmental Sciences
UOC3

Basic oceanographic processes and how these apply in the Great Barrier Reef, the characteristics of the waters of the Great Barrier Reef; the types and development of reefs, corals and reef communities, environmental damage to corals and exploitation of the reef, management by Great Barrier Reef Marine Park Authority. Laboratory classes include a study of the reef flat, its inhabitants, their distributions and interactions, the reef environment and its measurement.

Note: Available February and July. Personal expenses will be incurred.

MSCI3001
Physical Oceanography
School of Mathematics
UOC6 HPW4

An introduction to the physical properties and circulation of the oceans. The geography of the sea and properties of seawater. Understanding what controls coastal ocean currents, water-mass formation, upwelling, storm surges and large-scale ocean flow. The dynamics of a range of ocean processes, including waves, tides, beach currents and the El-Nino/ Southern Oscillation. Oceanographic instrumentation and the design of ocean measuring programs.

Note: Laboratory and field work.

Assumed knowledge: Any 6 Units of Credit of Level I Mathematics.

MSCI4003
Marine Science 4 Honours Full-Time
School of Biological, Earth and Environmental Sciences
UOC24 HPW30

MSCI6200
Coastal Monitoring Techniques
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

General principles of surveying. Optical and electronic methods of distance and elevation measuring. Coastal position fixing. Coordinate systems and their application to coastal mapping. Map projections. Long and short term monitoring of coastal changes. Tides, their measurement.

Note: Field work of up to 4 days is a compulsory part of this course. Students will incur personal costs.

MSCI6300
Coastal Environmental Assessment
School of Biological, Earth and Environmental Sciences
UOC6 HPW5

The interaction of water masses, bottom sediments and benthic organisms. Sampling techniques, analytical methodology and statistical data evaluation. Environmental assessment of Australia and overseas areas. An important aspect of this course is its practical approach: from data gathering, data evaluation and environmental assessment report writing. Practical work in the course involves each student as an active member of a project team.

Note: Field work of up to 3 days is a compulsory part of this course. Students will incur personal costs. Details will be provided in the first week of the course.

MTRN3201
Digital Logic for Mechatronics
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Excluded: MECH4201, MECH9201, MTRN9201

Introduction. Review of number theory. Symbolic logic. An introduction to TTL compatible devices. Formulation and implementation of problems in logic. Microprocessor architecture. Components of a microprocessor based system. Memory maps. Input/Output devices. Dedicated and special purpose computers. Principal features of a microprocessor based system. Laboratory complement to lectures.

MTRN3202
Microprocessor Control
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: ELEC0807 Excluded: MECH3202, MECH9202, MTRN9202

Microprocessor architecture; introduction to microprocessor programming in assembler and high level languages and specific aspects of programming of a single board (chip) microcomputer; programming concepts. Instruction sets and addressing modes; instruction timing; interrupts. Laboratory complement to lectures based on the use of single board computers.

MTRN3212
Principles of Control of Mechanical Systems
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MECH3211

Introduction to modern systems analysis. Review of modelling, simulation and non-linear systems. Stability criteria; use of Root Locus and Bode for system analysis and modification. The matrix exponential and state space notation. The transfer matrix. Pole and state feedback, controllability and observability. Use of MATLAB as a simulation environment.

MTRN3530
Computing Applications in Mechanical Systems
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MECH1500 Excluded: MECH3510

Development of programming skills in the C++ language for applications in Mechanical Engineering. Object Oriented Programming for developing software models of mechanical systems such as open kinematic chains. Development of user machine interfaces for instrumentation, interfacing and measurement. Interrupt service routines and introduction to real -time programming. Development of C++ routines for integration with MATLAB for data acquisition.

MTRN4221
Industrial Robotics
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MECH3200 or MECH3204, MECH3212 or MTRN3212, MECH3530 or MTRN3530

Automation types; introduction to industrial robots; end effectors. Robotic history, populations and main use; laboratory and PC environments. Kinematics of multidegree of freedom systems; simulation with open systems software. Safety standards; design of installations. Anatomy of an industrial robot as an intelligent machine; robot languages; work cell design. Projects.

MTRN9211
Modelling and Control of Mechatronic Systems 1
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Excluded: MECH9211

Development of modelling technique and design of controllers using digital computers, with special emphasis on digital control systems for motion control. Typical examples of mechatronic systems.

MTRN9222
Artificially Intelligent Machines
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Excluded: MECH4222, MECH9222

The principles of operation of machines into which limited powers of decision making have been delegated. The grouping of intelligent machines. Cognition; sensor technology; parsing; information representation; convolutions; software and hardware environments.

MTRN9223
Machine Condition Monitoring
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Excluded: MECH4223, MTRN8223

Sensors and transducer interfacing to computers. Vibration signatures of faults in rotating and reciprocating machines; detection and diagnosis of faults; characterisation of signatures; prediction of service life and maintenance procedures. Project on measuring a parameter indicating possible failure.

MTRN9224
Robot Design
School of Mechanical and Manufacturing Engineering
UOC6 HPW3
Prerequisite: MTRN3212

The course is aimed at developing skills on how to design and build a robot from scratch. The course primarily contains the following contents: Introduction to robot design. Mechanisms and dynamics of animals. Mechanical design of wheeled, legged and manipulator robots. Calculation of torques and selection of motors. Environment and selection of sensors. Integration of mechatronic systems. Motion planning and control. Design of a robot using CAD. Simulation of a robot using MATLAB/C/C++.

MUSC1001
Music Fundamentals
School of Music and Music Education
UOC6 HPW3
Excluded: MUSI1103, MUSI1301, MUSI1141, MUSI1142

Provides an opportunity for students to develop musicianship through the study of Western music literature, participation in an approved ensemble and attendance at workshops and concerts. Enables students to develop skills such as music literacy, analysis and aural awareness.

MUSC1101
Music Reinvented
School of Music and Music Education
UOC6 HPW3
Excluded: MUSC1001, MUSI1141, MUSI1241, MUSI1003

Designed as an introduction to a wide range of musical styles, techniques and circumstances as well as methods of study in music. Enables students to acquire insight into compositional processes and the place music occupies in different societies. Includes study of early 20th century music and ethnomusicology.

Assumed knowledge: A satisfactory standard in HSC music or in AMEB 7th grade practical (pass) plus 5th grade theory or musicianship.

MUSC1302
Musicianship A
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC1101; Excluded: MUSI1241

Examines the structures and processes of music, focussing on analysis of diatonic harmony in various styles and periods, the observation of harmonic and melodic practices in musical composition and the acquisition of aural and keyboard skills, covering basic musical structures and sight-reading. Requires the successful completion of music literature tests.

Assumed knowledge: A satisfactory standard in HSC music or in AMEB 7th grade practical (pass) plus 5th grade theory or musicianship.

MUSC1312
BA Musicianship A
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC1001 or MUSC1101; Excluded: MUSI1241

Examines the structures and processes of music, focussing on analysis of diatonic harmony in various styles and periods, the observation of harmonic and melodic practices in musical composition and the acquisition of aural skills covering basic musical structures and sight-reading. Requires the successful completion of music literature tests and participation in a performance ensemble.

MUSC1401
Professional Practices A
School of Music and Music Education
UOC6 HPW5
Prerequisite: Enrolment in Program 3425 or 3427; Excluded: MUSI1401

Includes private tuition and examination on major instrument, participation in university ensembles, plus classes in performance studies and electives in composing, jazz studies or musicology.

MUSC1402
Professional Practices B
School of Music and Music Education
UOC6 HPW5
Prerequisite: MUSC1401; Excluded: MUSI1402

Continuation of MUSC1401.

MUSC1501
Music Performance 1A
School of Music and Music Education
UOC6 HPW5
Prerequisite: Enrolment in Program 3426; Excluded: MUSI1501

Includes private tuition on major instrument and participation in university ensembles, plus tutorials on minor studies instruments (guitar and percussion).

MUSC1502
Music Performance 1B
School of Music and Music Education
UOC6 HPW5
Prerequisite: MUSC1501 or MUSI1501; Excluded: MUSI1502

Continuation of MUSC1501.

MUSC1601
Introduction to Music Education
School of Music and Music Education
UOC6 HPW3
Prerequisite: Enrolment in Program 3426; Excluded: MUSI1801

Covers basic issues in music education, theory and practice and develops a range of skills, knowledge and understandings associated with classroom teaching at the K-6 level. Also introduces basic teaching skills with opportunities to observe, critically evaluate and practise a variety of music lessons in varying formats. Deals with issues related to the responsibility of a music teacher in relation to the expectations of pupils, parents and employers.

Note: Includes three weeks of practice teaching in primary schools.

MUSC2101
Music of the Baroque
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC1302 or MUSC1312 or MUSC2111; Excluded: MUSI1142

A detailed study of 17th and 18th century baroque music. Includes an historical introduction to the issues of performance practice.

MUSC2111
Introduction to Musicology
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC1001, MUSC1312; Excluded: MUSI1141, MUSI2311

Designed as an introduction to a wide range of musical styles, techniques and circumstances as well as methods of study in music. Enables students to acquire insight into compositional processes and the place music occupies in different societies. Includes study of early 20th music and ethnomusicology.

MUSC2112
Music of the 18th and 19th Centuries
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC1101 and MUSC1302 or MUSC2111 or MUSI1142; Excluded: MUSI2141

A study of Classical and Romantic music in their historical, social and cultural contexts. Includes a seminar in musicological research techniques.

MUSC2132
Music of the late Middle Ages and Renaissance
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC1302 or MUSC1312 or MUSC2111 or MUSI1142; Excluded: MUSI3141

An introduction to Medieval and Renaissance music in its social, historical and cultural contexts.

MUSC2201
Music of Aboriginal Australians
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC1302 or MUSC1312 or MUSC2111 or MUSI1142; Excluded: MUSI2141, AUST2026

A study of traditional and contemporary Aboriginal music in its social, historical and cultural contexts.

MUSC2301
Musicianship B
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC1302 or MUSC1242; Excluded: MUSI2241

Extends MUSC1302 by furthering students' knowledge of harmonic vocabulary through the analysis of both diatonic and chromatic harmony and the observation of harmonic and melodic practices in musical composition. Also includes further development of aural skills and a keyboard tutorial which covers score reading and figured bass and completion of music literature tests.

MUSC2302
Musicianship C
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC2301 or MUSI2241; Excluded: MUSI2242

Extends MUSC2301 by furthering students' knowledge of chromatic harmony, analysis and counterpoint. Includes further development of aural, sight-reading and keyboard skills such as improvising an accompaniment and realising figured bass, plus the completion of music literature tests.

MUSC2311
BA Musicianship B
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC1312 or MUSI1242

Extends MUSC1312 by furthering students' knowledge of harmonic vocabulary through the analysis of both diatonic and chromatic harmony and the observation of harmonic and melodic practices in musical composition. Also includes further development of aural skills, completion of music literature tests and one hour participation in a performance ensemble.

MUSC2312
BA Musicianship C
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC2311 or MUSI2241; Excluded: MUSI2242, MUSI3312

Extends MUSC2311 by furthering students' knowledge of chromatic harmony, analysis and counterpoint. Includes further development of aural, sight-reading and keyboard skills such as improvising an accompaniment and realising figured bass, plus the completion of music literature tests.

Note: Includes one hour of performance ensemble participation.

MUSC2332
Electronic Music
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC2301 or MUSC2311 or MUSI2242; Excluded: MUSC3311, MUSI2141, MUSI2142

Examines psychoacoustics and historical foundations of electronic music with practical experiences on a range of software and hardware. Includes use of internet resources.

MUSC2401
Professional Practices C
School of Music and Music Education
UOC6 HPW5
Prerequisite: MUSC1101, MUSC1302, MUSC1402 or MUSI1142, MUSI1242, MUSI1402; Excluded: MUSI2401

Includes private tuition and examination on major instrument, participation in university ensembles, plus classes in performance studies and electives in composing, jazz studies or musicology.

MUSC2402
Professional Practices D
School of Music and Music Education
UOC6 HPW5
Prerequisite: MUSC2401 or MUSI2401; Excluded: MUSI2402

Continuation of MUSC2401.

MUSC2501
Music Performance 2A
School of Music and Music Education
UOC6 HPW5
Prerequisite: (MUSC1502, MUSC1101, MUSC1302) or (MUSI1502, MUSI1142, MUSI1242); Excluded: MUSI2501

Includes private tuition on major instrument and participation in university ensembles, plus tutorials on minor studies instruments (brass or woodwind).

MUSC2502
Music Performance 2B
School of Music and Music Education
UOC6 HPW5
Prerequisite: MUSC2501

Continuation of MUSC2501.

MUSC2601
Introduction to Secondary Music Education
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC1601 or MUSI1802; Excluded: MUSI1801, MUSI2801, MUSI2802

Emphasises high school general classroom music methods for years 7 and 8, by developing strategies for listening, aural and literacy development, music appreciation, performance and creativity (improvisation and composition). Special attention is given to the new curriculum guide and includes techniques for introducing popular music, jazz, and music from other cultures, and evaluating selected documents concerned with professional ethics, and the theory and practice of classroom management. Includes three week practice teaching in a secondary school.

MUSC3101
Professional and Ethical Practices in Music
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC2302 or MUSC2312 or MUSI2242; Excluded: MUSI3111

Requires active participation in a seminar devoted to developing an understanding of research methodologies in music across a range of topics. Individually chosen topics provide the subject areas for the class and these lead to detailed discussions of professional and ethical issues.

MUSC3112
Seminar in Musicology
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC3101; Excluded: MUSI3112

Continuation of MUSC3101, a seminar devoted to exploring the processes in research on music through discussion, and the development of individually chosed research projects on a wide range of topics in musicology and ethnomusicology. The seminar culminates in the preparation and submission of a formal research project on an approved topic.

MUSC3131
Jazz and Popular Music
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC2302 or MUSC2312

Study of the elements that have shaped and enriched 20th century jazz and popular musics through a chronological study of musical trends within the broad category of jazz. Applies methods drawn from ethnomusicology and cultural studies in order to develop an understanding of the social ecology of each genre studied.

MUSC3162
Twentieth Century Music
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC1101 and MUSC1302 or MUSC2111 or MUSI1142; Excluded: MUSI3142

Focuses on the major trends and developments in 20th century concert music through a study of technical processes in a wide range of listening examples. Includes recent Australian music.

MUSC3212
Music of India
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC1302 or MUSC1312 or MUSC2111 or MUSI1142; Excluded: MUSI3141

Introduces the musical traditions of India in their socio-cultural contexts. Students apply and refine their understanding of aspects of ethnomusicological theory, methods and issues.

MUSC3301
Music Analysis
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC2302 or MUSI2312; Excluded: MUSI2241, MUSI2242

Examines the structure and processes of music, focussing on the study of a range of analytical techniques and their application in various styles and periods.

MUSC3302
Orchestration and Arrangement
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC2302 or MUSC2312; Excluded: MUSI2121, MUSI2122

Develops skills in arranging, orchestration and preparation of music scores through the study of instrumental techniques, a historically wide range of orchestral scores, listening and practical exercises.

MUSC3331
Advanced Electronic Music
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC3311 or MUSC2332; Excluded: MUSI3141, MUSI3142

Continuation of MUSC3311/MUSC2332 with a specialisation in selected techniques, sound recording, studio work, software and hardware, plus methods of using technology in music composition.

MUSC3401
Advanced Professional Practices A
School of Music and Music Education
UOC6 HPW5
Prerequisite: MUSC2402 or MUSI2402; Excluded: MUSI3401

Includes private tuition and examination on major instrument, participation in university ensembles, plus classes in performance studies and electives in composing, jazz studies or musicology.

MUSC3402
Advanced Professional Practices B
School of Music and Music Education
UOC6 HPW5
Prerequisite: (MUSC2302, MUSC3401) or (MUSI2242, MUSI3401); Excluded: MUSI3402

Continuation of MUSC3401, but also includes preparation for public recital, and opportunities for further specialisation.

MUSC3501
Advanced Music Performance 3A
School of Music and Music Education
UOC6 HPW5
Prerequisite: MUSC2502 or MUSI2502; Excluded: MUSI3501

Includes private tuition on major instrument and participation in university ensembles, plus lectures and masterclasses on performance practice, pedagogy and conducting, to refine individual performance skills, and to develop competencies for teaching performance at all levels of the school curriculum.

MUSC3502
Advanced Music Performance 3B
School of Music and Music Education
UOC6 HPW5
Prerequisite: MUSC2302 and MUSC3501 or MUSI3501

Continuation of MUSC3501, plus masterclasses on performance practice and preparation for recital at end of semester.

MUSC3601
Specialist Studies in Music Education
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC2601 or MUSI2802; Excluded: MUSI2801, MUSI3801

Focuses on the elective secondary curriculum and teaching strategies involved in effectively meeting syllabus requirements. Content includes performance, aural perception, literacy development, creativity (improvisation and composition), listening, and a critical evaluation of selected documents concerned with educational policy and practice. Extends previous work by developing effective strategies for classroom management and learning how to cater for the needs of individual learners. Includes three weeks of practice teaching in a secondary school.

MUSC3602
Creativity and Special Topics in Music Education
School of Music and Music Education
UOC6 HPW4
Prerequisite: MUSC3601; Excluded: MUSI3801, MUSI3802

Extends work covered by providing specialist study in one or more of the following areas: HSC preparation, creativity (improvisation and composition), aesthetics, philosophy of music education, music technology, curriculum development and planning for the needs of special learners.

MUSC3612
Principles and Processes of Music Education
School of Music and Music Education
UOC6 HPW3
Corequisite: MUSC4602

Examines the scope of recent research in music education and surveys the field of music psychology and sociology, and the methodological approaches to and sources for further investigation specifically related to music teaching and learning. Focuses on the application of these areas in the Australian environment, and examines theories and current research concerned with creativity, musical ability and current issues in studies of music perception and cognition. Aims to expose students to a variety of ideas and trends which confirm or contradict established norms and attitudes on effective music teaching.

Note: At the discretion of the Program Co-ordinator, this course can be used to replace one Education elective.

MUSC4000
Bachelor of Music Honours Full-Time
School of Music and Music Education
UOC24 HPW5
Prerequisite: Completion of the requirements for the Pass degree with an average of at least Credit

Appropriate seminars in musicology, further development of performance skills and musical leadership, together with a thesis of 15,000 - 20,000 words on a musicological topic, an extended recital or other approved special project.

Note: For BMus and BMusBA students only.

MUSC4001
Music Honours (BA)
School of Music and Music Education
UOC24 HPW5
Prerequisite: 54 units of credit in Music courses, including MUSC3101 and MUSC3112, with an average of at least Credit

Appropriate seminars in musicology, further development of performance skills and musical leadership, music literature study, together with a thesis of 15,000 - 20,000 words on a musicological topic.

MUSC4002
Music Education Honours
School of Music and Music Education
UOC24 HPW5
Prerequisite: Completion of the requirements for the Pass degree with an average of at least Credit

Seminars on research methods in music education culminating in a thesis of 15,000-20,000 words on a topic in music education or other approved special project and further study of music.

MUSC4601
Advanced Studies in Music Education
School of Music and Music Education
UOC6 HPW3
Prerequisite: MUSC2302 and either MUSI3802 or MUSC3602; Excluded: MUSI4801

Develops competencies for teaching music in years 11 and 12 and covers requirements for the Higher School Certificate examinations in music. Lesson styles are examined and methods for designing programs are also considered. An additional component deals with current developments in educational policy and practice plus issues concerned with the professional responsibilities of teachers. Administrative arrangements for the practicum in Session 2, professional ethics, legal responsibilities of teachers, and programming address Objective 5 of the General Education program.

MUSC4602
Music Teaching Experience
School of Music and Music Education
UOC6 HPW3
Corequisite: MUSC3612

Consists of 35 days experience in a secondary school which allows the observation of lessons conducted by experienced teachers and the planning and delivery of lessons under the direction of supervising teachers, plus the knowledge concerned with the organisational aspects of a high school and activities other than those related to subject delivery, especially school policies and general supervision of school students.

MUSC4650
Conducting
School of Music and Music Education
UOC6 HPW4
Prerequisite: MUSC3402 or MUSC3502; Corequisite: MUSC4602; Excluded: MUSI4501

Develops proficient skills and confidence in conducting and managing a variety of school ensemble situations including small vocal groups and the larger instrumental ensembles.

NANO1001
Nanotechnology 1
School of Materials Science and Engineering
UOC3 HPW3

This course will provide students with an overall view of nanotechnology. The course is composed of self-learning modules and a weekly seminar. The seminars will primarily be given by outside speakers discussing different aspects of Nanotechnology including device manufacture, the Nanotech industry, intellectual property and establishing start-up companies. The major component of the topic will be two projects to study the connection between the underlying nanoscience of various nanotechnology devices. Students, in small groups, will undertake studies chosen from each of the major themes of biodevices and nanostructures. Examples from major nanotechnology initiatives will include quantum computing, DNA chips, nanogears, quantum dots, DNA sequencing, nanoparticles, ion-channel biosensors and other examples. Students will prepare written reports and oral presentations of their material.

Note: Available only to students enrolled in program 3617

NANO2002
Nanotechnology 2
School of Materials Science and Engineering
UOC3 HPW3

This course will concentrate on specific issues relating to the production of nanostructures, nanostructured materials and nanoscale devices. The production of nanostructures will deal with methods for synthesizing and assembling nanostructures, the concept of self-assembly and methods of characterizing their composition and structure. The second and third themes will use contemporary examples to illustrate the unique mechanical and electronic properties of nanoscale materials and devices and their application to, for example, quantum computing.

Note: Available only to students enrolled in program 3617

NANO3003
Nanotechnology 3
School of Materials Science and Engineering
UOC3 HPW3

This course will concentrate on the evolution of nanodevices from concept to commercialisation. Specific issues dealt with will include approaches to fabrication, engineering or bioengineering aspects, putting the whole device together, commercialization aspects, protection of intellectual property and the raising venture capital.

NANO3410
Chemistry of Surfaces
School of Chemistry
UOC3 HPW3
Prerequisite: NANO2002. or approval from the course authority

Vacuum, surface analysis techniques (XPS etc), STM, AFM, surface spectroscopy and solution surface chemistry (micelles, self-assembly, colloids and nanoparticles etc).

NANO3420
Fabrication of Nanostructured Devices
School of Materials Science and Engineering
UOC3 HPW2

Material processes used in the fabrication of electronic devices such as single crystal growth, implantation, lithography, etching and thin film growth. Methods of device packaging. Sources of failure and methods of fault diagnosis in devices.

NANO3440
Biosensors and Biodevices for Nanotechnology
School of Chemistry
UOC3 HPW3
Prerequisite: NANO2002. or approval from the course authority

Principles of transduction, immobilisation of biomolecules, affinity sensors, catalytic sensors, practical realities of their construction, electrochemical sensors, evanscent wave and other optical sensors.

NANO4004
Nanotechnology Project
School of Materials Science and Engineering
UOC18 HPW18

This course requires a major piece of research to be undertaken by students in Stage 4 of the Nanotechnology program 3617.

A range of interdisciplinary projects is offered by contributing schools - Chemistry, Physics, Materials Science and Biochemistry - enabling students to carry out experimental investigations in an area of nanotechnology.

This course is 36 UOC in total: 18 UOC per semester over two semesters.

Note: To be eligible for entry to this course students must be enrolled in program 3617 Nanotechnology, and have successfully completed Stages 1-3.

NAVL3100
Principles of Ship Design
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: NAVL3601 or NAVL3603

Development of ships and shipbuilding. The trading environment. The ocean environment. Ship types. Freeboard and load lines. Tonnage. Methods and mathematics of ship design. Estimation of a ship?s dimensions, weights, capacity, freeboard, stability, powering and engine selection. Computer-aided representation of hull shape and drawings.

NAVL3110
Ship Practice
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Corequisite: NAVL3601 or NAVL3603

Ship terminology. Project visits to dockyard, classification society, survey authority, naval architecture consultancy, propeller foundry, container terminal, bulk-cargo facility, naval vessel, cargo vessel, harbour ferry, harbour tug, Australian National Maritime Museum and Sydney Heritage Fleet. Inclining experiment and practical aspects of ship stability and stability criteria. Report writing.

NAVL3400
Ship Structures 1
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: MATH2009 or MATH2029, MATS9520, MECH2412, MECH3400

Introduction to rationally-based structural design and optimisation. Loading and responses in ship and offshore structures. Bending of the hull girder - linear deterministic approach. Statistical predictions of wave loads and hull girder response. Fatigue strength and minimum required section modulus. Frame analysis and applications in ship structures. Laterally loaded grillages and stiffened panels - elastic analysis. Applications of extended beam theory - hull girder analysis. Properties of different materials such as steel and aluminium in terms of weldability and other methods of joining. Influence of classification rules and other regulations on construction details.

NAVL3603
Ship Hydromechanics A
School of Mechanical and Manufacturing Engineering
UOC6 HPW6
Prerequisite: MATH2029, MECH2300, MECH2612

Basic concepts and techniques. Hydrostatic particulars and integration techniques. Coefficients of form. Intact stability. Stability at a small angle. Cross curves of stability. Righting-arm curve. Effect of a free surface. Wall-sided formula. Effect on stability of suspended weights. Watertight subdivision. Flooding. Determination of floodable length. Launching and docking. Computer methods in hydrostatics and stability.

Dimensional analysis applied to problems in Naval Architecture. Conservation of mass, Bernoulli equation, momentum principle. Stream function and potential function. Body generation with a distribution of sources and thin-body approximation. Complex potential, velocity and pressure. Airfoils and hydrofoils.

NAVL3604
Ship Hydromechanics B
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: NAVL3603 Corequisite: MECH3330

Plane progressive waves in both deep water and water of finite depth. Rolling and heaving of a ship in calm water. Small angles of roll and nonlinear rolling. Rolling in waves. Heave motion of a spar buoy in waves. Coupled pitching and heaving of a ship in forward motion. Ocean waves and their properties.

NAVL3700
Ship Propulsion
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: NAVL3601 or NAVL3603

Propeller and waterjet terminology, theories of action, interaction with the hull, cavitation, propeller, waterjet and engine data, practical details and drawing, strength, estimation of polar moment of inertia and entrained water.

NAVL4101
Design of High Speed Craft
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: NAVL3100, NAVL3602 or NAVL3604 Corequisite: NAVL4401

Practical design and layout of modern high-speed vessels. Principal characteristics of monohulls and catamarans in terms of, passenger accommodation, vehicles, and cargo handling. Impact of safety considerations and classification society rules. Hydrodynamics, resistance, propulsion and motions specific to monohulls, catamarans, hydrofoils and hovercraft.

NAVL4102
Design of Yachts
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: NAVL3100, NAVL3604 Corequisite: NAVL4402

General arrangement of yachts. Selection of principal dimensions and form coefficients, materials. Influence of rating rules, wind conditions, sea conditions and use of a velocity-prediction program. Hydrodynamics of canoe body, keel and rudder. Aerodynamics of sails and rigging. Scantlings of hull structure, mast and rigging.

NAVL4111
Ship Design Project A
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: NAVL3700 Corequisite: NAVL4101, NAVL4710

Each student is required to perform the following design tasks for a vessel of their choice and submit the results: 1. Rationale, specification, weights, inboard profile. 2. Power, capacities, freeboard, trim, stability, stern gear. 3. Sectional area curve, lines plan, preliminary midship section.

NAVL4112
Ship Design Project B
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: NAVL4111 Corequisite: NAVL4102, NAVL4720

Each student is required to perform the following design tasks for a vessel of their choice and submit the results: 4. Hydrostatics, stability and subdivision analysis. 5. Powering, propeller, systems - schematic drawing, detailed capacities. 6. Section modulus calculation, bulkhead, midship section, module concept. 7. Final weights, capacity drawing, operational data and evaluation. 8. Specification.

NAVL4401
Ship Structures 2A
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: NAVL3400, MECH3400 Excluded: AERO4401, AERO9415, MECH9410

Application of MSC/PATRAN and MSC/NASTRAN to structural analysis. Structural modelling, mesh generation, resources required for solution, evaluation of results. Applications to analysis of practical structures including structural vibrations and prediction of stiffness and ultimate strength.

NAVL4402
Ship Structures 2B
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: NAVL4401

Composite materials - laminate theory, failure modes, design criteria, durability and manufacturing practices for composite structures. Fatigue - fatigue of welded structures including S-N approach and fracture mechanics. Prediction of life, crack growth and inspection and maintenance requirements.

NAVL4710
Ship Standards
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: NAVL3602 or NAVL3604

Documentation, tendering and contract administration. Aspects of special craft. Construction materials and their advantages and disadvantages. Use of the USL Code. Resistance components including frictional, residuary, appendage and air, and methods of prediction.

NAVL4720
Marine Engineering
School of Mechanical and Manufacturing Engineering
UOC3 HPW3
Prerequisite: NAVL3602 or NAVL3604

Steam, diesel, gas turbine, electric and nuclear propulsion. Systems for power transmission, fuel supply, electricity generation, pumping and piping, compressors, purifiers, automation and life-saving. Ship manoeuvring and control. Design of rudders and steering gear.

OBST5001
Obstetrics and Gynaecology
School of Women's and Children's Health
UOC10
Prerequisite: MDSG4001

Objectives: To be able to take a history and perform a physical examination relevant to the female reproductive system; to recognise common disorders of the female reproductive system; to manage common medical gynaecological disorders likely to be encountered in primary care practice; to provide antenatal and postnatal care for normal women and to recognise deviations from normal; to be able to provide emergency care when indicated and to know the indications for referral. The program consists of tutorials in core subjects, clinical, physiological and pathological conferences and simulated patient management problem exercises. Students are taught in small tutorial groups. Supervised clinical experience is gained in outpatient clinics, inpatient services and the labour wards of The Royal Hospital for Women, St George, Bankstown, and Liverpool hospitals. Some undergraduates currently spend six months in the hospitals in Wagga Wagga and Albury in a combined Paediatric/ Obstetrics & Gynaecology term. From 2004, hospitals in Coffs Harbour & Port Macquarie will provide teaching for students who will spend the whole nine week term at the School of Rural Health sites. Neonatal paediatric experience is integrated with the teaching of Obstetrics and Gynaecology. Full details are described in a booklet published by the School. Assessment: Continuing evaluation of clinical work, a multiple choice examination and an objective, structured clinical examination in the last week of term.

OPTM1105
Optics and the Eye 1
School of Optometry and Vision Science
UOC8 HPW8

Objectives: Understanding of physical and geometrical optics, the eye and ametropia, the measurment of optical radiation preliminary to ocular hazard assessment, colour measurement and specification and lighting design.

Brief Curriculum: Geometrical optics; rectilinear propagation of light, reflection and refraction at plane and spherical surfaces, prisms, thin lenses, simple magnifiers, compound magnifiers, stops, pupils and windows.

Physical optics: Wave nature of light, superposition of waves, interference, diffraction, polarisation. The eye and ametropia: Models of the eye, spherical refractive errors of the eye and their correction with lenses. Measurment of light and colour: Sources of optical radiation, sunlight and daylight, detectors, the eye as a detector, principles and practise of photometry, principles and practise of colour measurment and specification, uniform colour scales, colour rendering, metamerism, colour atlases and order systems.

OPTM1201
Ocular and Visual Science 1
School of Optometry and Vision Science
UOC4 HPW4
Prerequisite: OPTM1105, BIOS1401

Objectives: An understanding of the anatomy and physiology of the eye (particularly the anterior eye), the adnexa and visual system, and detailed information on some aspects of vision that form the foundation of Clinical Optometry. These subjects are studies in greater depth in later years.

Brief Curriculum: Introduction to the gross anatomy of the eye, orbit and adnexa; the microscopic anatomy of the cornea, lens, uvea, eyelids, lacrimal apparatus and retina. The physiology of the cornea, of tear and aqueous production, along witht the physiology of the crystalline lens, are also covered.

OPTM1202
Clinical Optometry 1
School of Optometry and Vision Science
UOC6 HPW6

Objectives: Familiarity with basic clinical optometric goals, skills and techniques.

Brief Curriculum: role of the optometrist, history of optometry, verbal and written communication in optometry, practice structure and organisation, clinical measurement of visual function including vision and visual acuity, colour vision, binocular vision and visual fields, examination of the internal and external eye (including biomicroscopy), and introduction to soft and rigid contact lenses. Dispensing: introduction to frames, lenses and the fabrication of optical appliances.

OPTM1205
Optics and the Eye 2
School of Optometry and Vision Science
UOC4 HPW4
Prerequisite: OPTM1105, PHYS1199; Corequisite: OPTM1201

Objectives: Understanding of the optics of the eye and visual performance, measurement and correction of refractive errors, spectacle lenses and thier subsidiary effects.

Brief Curriculum: Optics of the measurement and correction of the errors of refraction of the eye, accommodation, retinal image analysis, visual acuity, contrast sensitivity, modulation transfer function, limits to visual resolution, higher order aberrations of the eye, astigmatisim. near correction. subjective refraction, ocular correction of ametropia (contact and implant lenses), spectacle magnification and prismatic effects, entoptic phenomena.

OPTM1207
Foundations of Hygiene & Infectious Disease in Optometric Practice
School of Optometry and Vision Science
UOC4 HPW4
Prerequisite: BIOS1401, CHEM1819 Corequisite: CHEM1829

Objectives: An understanding of basic microbiology applied to optometric practice.

Brief Curriculum: Biology, metabolism and genetics of microbes. Theory of infection and disease propagation. Antibiotics and bacteria. Immunology: Basics, T-cell types and functions, immunoglobulins, cell-mediated immunity, hypersensitivity, auto-immune disease and ocular inflammation. Outline of disease-causing bacteria. Detailed examination of common ocular pathogens. Contact lens related disease and microbiology. Eukaryotic pathogens.

OPTM2101
Ocular and Visual Science 2A
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM1201, CHEM1829 Corequisite: PHPH2121

Objectives: Understanding of the anatomical, physiological and psychophysical fundamentals of visual perception, as they underlie the practice of modern clinical optometry.

Brief Curriculum: Review of classical ideas on the nature of visual perception: light, colour, space, time and classical psychophysics. Anatomy of the skull and orbit, brain, and retina. Structure and function of retinal photoreceptors. Retinal circuits. Eye movements and their control mechanisms.

OPTM2102
Clinical Optometry 2A
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM1201, OPTM1202, OPTM1205 Corequisite: OPTM2101, OPTM2105

Objectives: An analysis of the primary care optometric consultation. The development of good communication skills. Appreciation of the breadth of presentation of normal vision and ocular status. Acquisition of technical skills to carry out an evaluation of the health of the ocular and visual system and of refractive status with a view to prescribing spectacles for the uncomplicated patient.

Brief Curriculum: Ocular health: history and symptoms, introduction to diagnostic drugs, slit lamp biomicroscopy, tonometry, direct ophthalmoscopy, external eye examination. Ametropia: aetiology and management of refractive errors, objective and subjective refraction, cycloplegic refraction and prescribing lenses, special populations.

OPTM2105
Optics and the Eye 3
School of Optometry and Vision Science
UOC3 HPW3
Prerequisite: OPTM1202, OPTM1205 Corequisite: OPTM2101.

Objectives: Understanding the optics of opthalmic instruments and clinical applications. Understanding the optics of the devices and components of refraction. Understanding the subsidiary effects and the basic design principles of opthalmic lenses. Understanding the aberrarions of the human eye.

Brief Curriculum: Opthalmic instruments and clinical applications: direct opthalmascope, indirect opthalmoscope, retinoscope, keratometry, the radiuscope, tonometry, pachometry, projectors, bio-microscopy, stereoscopy, low vision aids, devices and components of refraction: optometers (subjective/objective), Stokes lens, Scheiner disc. astigmatic decomposition, photorefraction and remote refraction. Opthalmic lenses: near astigmatism, horizontal and vertical prismatic effects, anisometropia, abberations, (oblique astigmatism, curvature error, distortion & chromatic aberration), best form lenses, and design of contact lenses. Aberrations of the eye; measurment and correction of the monochromatic wave abberations of the eye.

OPTM2111
Optometry 2A
School of Optometry and Vision Science
UOC6 HPW6
Prerequisites: VISN1211, VISN1231; Corequisites: VISN2111, VISN2131, PHPH2101

Objectives: Acquisition of the technical skills needed to refract and assess the ocular health of an uncomplicated normal patient; development of clinical synthesis and problem solving abilities.

Brief Curriculum: Ocular health: history and symptoms, introduction to diagnostic drugs; Ametropia: measurement of visual acuity, aetiology and management of refractive error, objective and subjective refraction, retinoscopy, cycloplegic refraction, prescribing and dispensing prescription lenses, clinical aspects of lens design, special populations; Clinical skills: problem based consultations, interviewing skills, clinical decision making, case analysis.

OPTM2201
Ocular and Visual Science 2B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM2101, OPTM2102 Corequisite: PHPH2221.

Objectives: To develop an understanding of the structure and function of the human visual system, in adults and during development. Brief **Curriculum:** The structure and function of the visual pathway from the optic nerve to visual areas of the cerebral cortex. Basic embryology, and the normal and abnormal development of the visual pathway, from eye to brain. The assessment of visual function using electrophysiological techniques. The assessment of visual function in non-verbal patients, using psychophysical techniques. The neural basis of binocular vision: the way in which the human visual system assesses relative depth of objects within the visual scene.

OPTM2202
Clinical Optometry 2B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM2101, OPTM2102, OPTM2105 Corequisite: OPTM2201, OPTM2206

Objectives: To build on OPTM2102 in equipping the student to be professional in manner with good communication and technical skills and able to carry out a logically sequenced primary care evaluation of the health of the ocular and visual system, refractive status and binocular coordination with a view to prescribing spectacles for the uncomplicated patient.

Brief Curriculum: Interviewing skills. Ocular health: biomicroscopy, tonometry, ophthalmoscopy. Ametropia: objective and subjective refraction. Binocular vision: sensory and motor aspects of binocular vision, introduction to binocular vision anomalies, accommodation/ convergence imbalances.

OPTM2206
Pathology for Optometry
School of Optometry and Vision Science
UOC3 HPW3
Prerequisite: OPTM1207, OPTM2102

Objectives: A basic understanding of general and systemic pathophysiology. Brief Curriculum: Cell injury and adaptation, pathogenesis of cell injury, inflammation, edema, thrombosis, embolism, arteriosclerosis, neoplasia, environmental disease, diabetes, hypertension, myocardial infarction, intracranial pathology, cerebral disease. Practical examples of ocular disease shall be discussed.

OPTM2211
Optometry 2B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisites: VISN2111, VISN2131, OPTM2111; Corequisites: VISN2211, VISN2231, PHPH2201

Objectives: To build on Optometry 2A in equipping students with the technical skills needed to assess the ocular health of an uncomplicated patient.

Brief Curriculum: the normal fundus, direct and indirect ophthalmoscopy, slit lamp biomicroscopy, fundus lenses, tonometry, gonioscopy, ophthalmic projectors, visual field assessment, colour vision assessment, external eye examination.

OPTM3102
Clinical Optometry 3A
School of Optometry and Vision Science
UOC12 HPW12
Prerequisite: OPTM2201, OPTM2202, OPTM2206; Corequisite: OPTM3108, PSYC3516.

Objectives: To produce a student with professional attitude and good communication skills who has the ability to integrate scientific and clinical aspects of optometry and make well-reasoned decisions while undertaking patient care at the UNSW Optometry Clinic under supervision of a registered optometrist. To advance student knowledge in dispensing, refraction, colour vision, ocular health assessment, paediatric vision and contact lenses. To advance student abilities in case analysis by integrating all aspects of optometry. To stimulate students' interest in optometric subspecialties such as colour vision, paediatric vision care and contact lenses.

Brief Curriculum: Lectures, tutorials and practical classes will deal with: refraction - practical aspects; contact lenses - soft and rigid contact lens design and manufacture, fitting techniques and evaluation, care and maintenance of contact lenses; paediatric optometry - child development and role of vision, behavioural optometry, visual perceptual dysfunction and learning difficulties, contact lenses and special needs children; dispensing - practical aspects; advanced ocular assessment - colour vision, visual fields and other techniques of assessing ocular and visual function.

OPTM3108
Ocular Disease
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM2202, OPTM2206

Objectives: to introduce the diagnosis and optometric management of diseases of the anterior and the posterior eye and visual system. Brief curriculum: diseases of the lids, conjunctiva, lacrimal system, sclera, cornea, vitreous body, crystalline lens, uvea, retina, optic nerve, pupils, cranial nerves and visual pathway. Glaucoma, diplopia, effects of systemic disease and ocular trauma will also be discussed.

OPTM3111
Optometry 3A
School of Optometry and Vision Science
UOC6 HPW6
Prerequisites: VISN2211, VISN2231, OPTM2211; Corequisites: VISN3111, OPTM3131

Objectives: To produce a student with a professional attitude and good communication skills who can integrate scientific and clinical aspects of optometry. To advance student knowledge and stimulate interest in dispensing, contact lenses and binocular vision.

Brief Curriculum: Dispensing: lens types, tints, ophthalmic prism, lens materials, neutralising lenses, interpreting a prescription, selecting spectacles frames, patient management, case studies; Contact lenses: terminology, lens design, contact lens biophysics, rigid lenses, soft lenses, optics of contact lenses, lens care, fitting children; Binocular vision: interviewing, ocular motility, accommodation, vergence eye movements, heterophoria measurement, the stereoscope, graphical analysis, case analysis.

OPTM3131
Ocular Disease 3A
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: VISN2231, OPTM2211, PHPH2201; Corequisites: VISN3111, OPTM3111

Objectives: To introduce students to the diagnosis and optometric management of diseases of the anterior eye.

Brief Curriculum: Diseases of the eyelids, ocular adnexa, conjunctiva, lacrimal system, cornea, vitreous body and lens; Case analysis.

OPTM3203
Clinical Optometry 3B
School of Optometry and Vision Science
UOC3 HPW3
Prerequisite: OPTM3102, OPTM3108, PSYC3516; Corequisite: OPTM3209, PHPH3302.

Objectives: To produce a student with professional attitude and good communication skills who has the ability to integrate scientific and clinical aspects of optometry and make well-reasoned decisions while undertaking patient care at the UNSW Optometry Clinic under supervision ofa registered optometrist. To advance student abilities in case analysis by integrating all aspects of optometry. Brief Curriculum: Students will examine patients in the Optometry Clinic and satellite clinics and participate in tutorials.

OPTM3204
Clinical Optometry 3C
School of Optometry and Vision Science
UOC8 HPW8
Prerequisite: OPTM3102, OPTM3108, PSYC3516; Corequisite: OPTM3203, OPTM3209, PHPH3302.

Objectives: To produce a student with professional attitude and good communication skills who has the ability to integrate scientific and clinical aspects of optometry and make well-reasoned decisions while undertaking patient care at the UNSW Optometry Clinic under supervision of a registered optometrist. To advance student knowledge in and to stimulate students' interest in optometric subspecialties such as low vision, binocular vision and contact lenses. Brief Curriculum: Lectures, tutorials, and practical classes will deal with : contact lenses - complications, clinical management, special applications and advanced topics; binocular vision - case analysis, diagnosis and management of strabismus and amblyopia, aniseikonia and related topics; low vision rehabilitation - epidemiology of visual impairment, the low vision examination, survey of current low vision aids, adaptive technology, the multidisciplinary model.

OPTM3209
Environmental Optometry
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM2202, OPTM3102.

Objectives: to understand the impact of environmental factors on the eye, and the optometrical management of environmentally produced ocular and visual problems. Brief Curriculum: optometrical aspects of occupational health and safety. Eye hazards, eye protection, ocular first-aid, ocular and visual factors in the workplace, visual ergonomics, visual standards, vision screening, lighting design, epidemiology of occupational eye disease. Handling of clinical and occupational data. Occupational health and safety law. Case studies: visual aspects of driving and aviation. The screen-based equipment user.

OPTM3211
Optometry 3B
School of Optometry and Vision Science
UOC6 HPW6

Objectives: To build on OPTM3103 and to advance student knowledge and stimulate interest in primary care optometry, contact lenses and binocular vision.

Brief Curriculum: Primary care: clinical laboratories that practice clinical skills in the assessment of normal subjects; Contact lenses: corneal physiology relating to contact lens wear, advanced contact lens fitting, management of the contact lens patient; Binocular vision: assessment of strabismus, amblyopia and anomalous correspondence, AC/A ratio, correspondence and fusion, fixation disparity, stereopsis, control systems analysis; Management of anomalies; Case analysis.

OPTM3231
Ocular Disease 3B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM3131; Corequisite: OPTM3211

Objectives: To introduce students to the diagnosis and optometric management of diseases of the posterior eye and visual system.

Brief Curriculum: Diseases of the uvea, retina, optic nerve, pupils, cranial nerves and visual pathway. Glaucoma, diplopia and the effects of systemic disease are also discussed; Case analysis.

OPTM4110
Optometry 4A
School of Optometry and Vision Science
UOC3 HPW3
Prerequisites: OPTM3211, OPTM3231, VISN3211; Corequisites: OPTM4131, OPTM4151, OPTM4170

Objectives: To build on OPTM3211 and to advance student knowledge and stimulate interest in children's vision, vision therapy, and low vision.

Brief Curriculum: Children's vision: history taking, the development of the child and vision; Vision therapy: vision and posture, behavioural optometry, learning difficulties, special needs, child abuse; Low vision: epidemiology, adaptation to loss, the low vision assessment, magnification, optical low vision aids, non-optical low vision aids, adaptive technology, multi-disciplinary models, international issues.

OPTM4114
Optometry and the Professional Environment A
School of Optometry and Vision Science
UOC3 HPW3
Corequisite: OPTM4311, OPTM4312, OPTM4313

Objectives: To make optometry students aware of the purposes and consequences of their education, to develop an awareness of professional and ethical action in optometric practice; to ensure that students are aware of their social responsibilities as optometrists. Brief Curriculum: Optometry's role in health care. Morals and ethics. The law and optometry. Accounting and taxation. Marketing. Harassment and discrimination in the consulting room. Dealing with change. Optometric business dynamics. Indigenous eye care. Co-management.

OPTM4131
Clinical Optometry 4A
School of Optometry and Vision Science
UOC6 HPW6

Objectives: To develop the clinical skills from earlier courses to competently examine patients; to appropriately recommend treatment and strategies for patients presenting for primary eye care at the UNSW Optometry Clinic and at satellite clinics.

Brief Curriculum: Clinical experience in primary eye care: diagnosis, management and treatment of these patients are emphasised; case history; communications skills; refraction; ocular health assessment; binocular vision status; synthesis of clinical data; development of a clinical management plan; record-keeping; dispensing of ophthalmic prescriptions; continuing care.

OPTM4151
Ocular Therapeutics 4A
School of Optometry and Vision Science
UOC6 HPW6
Prerequisites: PHPH3302, OPTM3231; Corequisite: OPTM4131

Objectives: To provide an in-depth understanding of the management of anterior segment eye disease and the role of the optometrist in this process.

Brief Curriculum: The scope of the course includes diseases of the lids and lacrimal system, ocular surface, anterior chamber, uvea, crystalline lens, cornea and vitreous body; refractive surgery; epidemiology and clinical trials of anterior eye disease; differential diagnosis; new diagnostic tools e.g. Corneal topography, impression cytology, PCR, confocal microscopy, ultrasound biomicroscope, tear analysis, corneal aesthesiometry; management strategies to include both current and future therapeutic approaches, influence of therapy on disease course, iatrogenic disease and ocular manifestations of systemic diseases; management of chronic disease, referral criteria and surgical management.

OPTM4170
Professional Optometry 4A
School of Optometry and Vision Science
UOC3 HPW3
Corequisite: OPTM4131

Objectives: To make optometry students aware of the purposes and consequences of their education; to develop an awareness of professional and ethical action in optometric practice; to ensure that students are aware of their social responsibilities as optometrists.

Brief Curriculum: Optometry's role in health care; morals and ethics; the law and optometry; accounting and taxation; marketing; harassment and discrimination in the consulting room; dealing with change; optometric business dynamics; Indigenous eye care; co-management of eye disease.

OPTM4210
Research Project
School of Optometry and Vision Science
UOC3 HPW3
Prerequisite: OPTM3108, OPTM3203, OPTM3204, OPTM3209, PHPH3302

Objectives: This subject seeks to develop students skills in searching the literature, critical analysis of publications, developing hypotheses, designing and running experiments, statistical data analysis and oral and written presentation of reports. Students in groups of 2 to 4 carry out a small research project under the guidance of an academic staff member. In November each group makes a presentation to a symposium.

OPTM4211
Optometry 4B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisites: OPTM4110, OPTM4131, OPTM4151, PSYC3516; Corequisites: OPTM4231, OPTM4251, OPTM4270

Objectives: To build on OPTM4110 and to advance student knowledge and stimulate interest in environmental optometry, binocular vision and contact lenses.

Brief Curriculum: Environmental optometry: safety in industry, eye hazards, ergonomics, visual fatigue, lighting design, task analysis, public health, occupational health and safety law, visual screening, case analysis; Binocular vision: amblyopia, non-concommitant strabismus, neurological palsies, myogenic palsies, alphabet palsies, aniseikonia, nystagmus, use of botulinum toxin therapy; Contact lenses: orthokeratology, the Asian eye, presbyopia, keratoconus, special applications, silicone lenses, future developments.

OPTM4214
Optometry and the Professional Environment B
School of Optometry and Vision Science
UOC3 HPW3
Prerequisite: OPTM4114 Corequisite: OPTM4311, OPTM4312, OPTM4313

Objectives: to make optometry students aware of the purposes and consequences of their education, to develop an awareness of professional and ethical action in optometric practice; to ensure that students are aware of their social responsibilities as optometrists. Brief Curriculum: History of optometry and optics. Legal aspects of optometry. Medicare. State law and how it affects optometry. Starting an optometric practice. Modes of practice. Practice information systems. Computers and optometry. Continuing education. Challenges in optometry.

OPTM4231
Clinical Optometry 4B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisites: OPTM4110, OPTM4131, OPTM4151, OPTM4170; Corequisites: OPTM4211, OPTM4251, OPTM4270, MEDM8001

Objectives: To develop the clinical skills from OPTM4131 with direct patient primary eye care consultations. More specialised optometric assessment techniques are acquired in authentic learning environments.

Brief Curriculum: Continuing clinical experience in primary eye care - diagnosis, management and treatment of patients is emphasised; use of more specialised clinical diagnostic tools in the management of patients with ocular disease; referral criteria; inter-professional referral and co-management.

OPTM4251
Ocular Therapeutics 4B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM4151; Corequisite: OPTM4231

Objectives: To provide an in-depth understanding of the management of posterior eye disease and the role of the optometrist in this process.

Brief Curriculum: The scope of the course includes diseases of the vitreous body, uvea, retina, optic nerve and visual pathway - Glaucoma, macular degeneration and diabetic retinopathy will be discussed in detail; new diagnostic tools and interpretation of results, including scanning laser topography, scanning laser polarimetry, angiography, optical coherence tonography, reflectometry, retinal blood flow analysis; management therapies to include both current and future therapeutic approaches, influence of therapy on disease course, iatrogenic disease and ocular manifestations of systemic diseases; management of chronic disease, referral criteria and surgical management; script writing, record keeping, liaising with other health care professionals; Legal framework and obligations, ethics, co-management.

OPTM4270
Professional Optometry 4B
School of Optometry and Vision Science
UOC3 HPW3
Prerequisite: OPTM4170; Corequisite: OPTM4231

Objectives: To make optometry students aware of the purposes and consequences of their education; to develop an awareness of professional

and ethical action in optometric practice; to ensure that students are aware of their social responsibilities as optometrists.

Brief Curriculum: History of optometry and optics; legal aspects of optometry; Medicare; state law and how it affects optometry; starting an optometric practice; modes of practice; practice information systems; computers and optometry; continuing education; new challenges in optometry.

OPTM4311
Clinical Optometry 4A
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM3108, OPTM3203, OPTM3204, OPTM3209, PSYC3516, PHPH3302; Corequisite: MDCN8001

Objectives: further development of the clinical skill to examine competently patients in optometric practice and recommend appropriate treatment and strategies for patients presenting for primary eye care. Brief Curriculum: Clinical experience in primary eye care. Diagnosis, management and treatment of these patients will be emphasised.

OPTM4312
Clinical Optometry 4B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM3108, OPTM3203, OPTM3204, OPTM3209, PSYC3516, PHPH3302; Corequisite: MDCN8001

Objectives: further development of the clinical skill to examine competently patients in optometric practice and recommend appropriate treatment and strategies for patients presenting for primary eye care. **Brief Curriculum:** Clinical experience in the following areas; colour vision, low vision, ocular disease and participation in patient review clinics. Diagnosis, management and treatment of these patients will be emphasised.

OPTM4313
Clinical Optometry 4C
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM3108, OPTM3203, OPTM3204, OPTM3209, PSYC3516, PHPH3302; Corequisite: MDCN8001

Objectives: further development of the clinical skill to examine competently patients in optometric practice and recommend appropriate treatment and strategies for patients presenting for primary eye care. Brief Curriculum: clinical experience in the following areas; contact lenses, dispensing, vision training, sports vision and paediatric clinics. Diagnosis, management and treatment of these patients will be emphasised.

OPTM5111
Clinical Optometry 5A
School of Optometry and Vision Science
UOC6 HPW6
Prerequisites: OPTM4211, OPTM4231, OPTM4251, OPTM4270; Corequisites: PSYC3516, PHPH3302

Objectives: Further development of the clinical skills needed to competently examine patients in optometric practice, and recommend appropriate treatment and strategies for patients presenting for primary eye care.

Brief Curriculum: A minimum of 100 hours of clinical experience in primary eye care. Emphasis is on diagnosis, management and treatment of these patients.

OPTM5131
Specialist Clinical Optometry 5A
School of Optometry and Vision Science
UOC6 HPW6
Prerequisites: OPTM4211, OPTM4231, OPTM4251

Objectives: Further development of the clinical skills needed to competently examine patients in optometric practice, and recommend appropriate treatment and strategies for patients presenting for eyecare.

Brief Curriculum: A minimum of 100 hours of supervised clinical experience in the following advanced areas: contact lenses, vision training, dispensing, paediatric clinics, low vision and colour vision.

OPTM5151
Clinical Ocular Therapeutics 5A
School of Optometry and Vision Science
UOC6 HPW6
Prerequisites: OPTM4231, OPTM4251, VISN2231, PHPH3302

Objectives: Further development of the clinical skills needed to competently examine patients with ocular disease, and recommend appropriate treatment and strategies for patients presenting with ocular disease.

Brief Curriculum: A minimum of 72 hours of clinical work related to ocular disease management - students are rostered to attend speciality clinics at the Optometry Clinic at UNSW and at external clinics; detailed clinical and therapeutic management of ocular disease conditions, observation and supervised management of clinical cases, co-management of patients with ophthalmology and general practice.

OPTM5171
Research Project 5A
School of Optometry and Vision Science
UOC6 HPW6

Objectives: Modern optometrists need to be able to understand clinical research. This course introduces students to research and the scientific method.

Brief Curriculum: The literature review, critical analysis of literature, developing a hypothesis, experimental design, ethical considerations, the research process. Seminars from current researchers demonstrate the research process and current research directions in optometry and vision science. Students work in small groups to develop a realistic research proposal.

OPTM5211
Clinical Optometry 5B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM5111

Objectives: Further development of the clinical skills needed to competently examine patients in optometric practice, and recommend appropriate treatment and strategies for patients presenting for primary eye care.

Brief Curriculum: A minimum of 100 hours clinical experience in primary eye care. Emphasis is on diagnosis, management and treatment of these patients.

OPTM5231
Specialist Clinical Optometry 5B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM5131

Objectives: Further development of the clinical skills needed to competently examine patients in optometric practice and recommend appropriate treatment and strategies for patients presenting for eyecare.

Brief Curriculum: A minimum of 100 hours of supervised clinical experience in the following advanced areas: contact lenses, vision training, dispensing, paediatric clinics, low vision and colour vision.

OPTM5251
Clinical Ocular Therapeutics 5B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM5151

Objectives: Further development of the clinical skills needed to competently examine patients with ocular disease, and recommend appropriate treatment and strategies for patients presenting with ocular disease.

Brief Curriculum: A minimum of 72 hours of clinical work related to ocular disease management - students are rostered to attend speciality clinics at the Optometry Clinic at UNSW and at external clinics; detailed clinical and therapeutic management of ocular disease conditions, observation and supervised management of clinical cases, co-management of patients with ophthalmology and general practice.

OPTM5271
Research Project 5B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: OPTM5171

Objectives: This course continues to develop the skills learnt in OPTM5171. Students assemble the required materials, subjects and equipment and conduct the experiment they proposed in OPTM5171. The data is analysed using the appropriate statistical methods, and a publication-quality written report submitted. Each group is also required

to present the results of their research at the annual student research symposium.

PAED5101
Paediatrics
School of Women's and Children's Health
UOC10
Prerequisite: MDSG4001

Objectives: To understand the physical, intellectual, and emotional development of children; to recognise important interactions between the child, the family and the community; to take a reliable medical history from children and parents/guardians; to perform a reliable physical examination; to communicate with children and parents/guardians; to recognise acutely ill children and initiate management; to recognise and initiate management of common paediatric disorders; to recognise the role of preventative care in child health; to recognise the roles of allied health care professionals. General Paediatrics and Paediatric Surgery are taught at the Sydney Children s Hospital (5 weeks) and Associated Hospitals including rural locations (4 weeks). Clinical clerking and practical involvement in care of inpatients are emphasised. Seminars and lectures on core material, case conferences, and instruction in clinical skills are provided. Students are expected to spend one night in four and one or two weekends per term in residence. Neonatal medicine is integrated with teaching of obstetrics and gynaecology. Assessment: Progressive assessment from clinical supervisors through the term, multiple choice, objective structured clinical assessments and clinical examinations in the last week of term.

PATH0005
Pathology Honours Full-time
School of Medical Sciences
UOC24

Research component of thesis: basic mechanisms of human disease processes, including inflammation, rheumatoid arthritis, asthma, uvetis, infection, bone and biomaterials, tumour biology, vascular biology, atherosclerosis and genetics. Projects can include techniques such as tissue culture and cell biology, microbiology and genetics, protein chemistry, histology and microscopy, immunology and enzymology. Projects may be undertaken within the School of Pathology or at a laboratory of an affiliated institute or hospital department associated with the school.

PATH0006
Pathology Honours Part-time
School of Medical Sciences
UOC12

Research component of thesis: basic mechanisms of human disease processes, including inflammation, rheumatoid arthritis, asthma, uvetis, infection, bone and biomaterials, tumour biology, vascular biology, atherosclerosis and genetics. Projects can include techniques such as tissue culture and cell biology, microbiology and genetics, protein chemistry, histology and microscopy, immunology and enzymology. Projects may be undertaken within the School of Pathology or at a laboratory of an affiliated institute or hospital department associated with the school.

PATH2201
Processes in Disease
School of Medical Sciences
UOC6 HPW4
Prerequisite: ANAT2241 or ANAT1510, plus any one of ANAT2111, PHPH2101, BIOC2101/BIOC2181.

Lectures, tutorials and museum study sessions aimed at increasing understanding of important disease processes. Comparisons between normal and abnormal cell, tisssue and organ function will be made. Includes processess of cell and tissue degeneration, acute and chronic inflammation, regeneration and repair, infection, atherosclerosis, thrombosis, embolism and infarction. Particular examples include diseases of practical importance such as pneumonia, tuberculosis, pulmonary embolism and myocardial infarction. Aberrations of cell growth introduces neoplasia with examples of common tumours.

PATH3205
Molecular Basis of Disease A
School of Medical Sciences
UOC6 HPW4
Prerequisite: PATH2201

Recent advances in understanding molecular mechanisms of acute and chronic inflammation, allergy, autoimmune diseases, atherosclerosis and thrombosis. Detailed discussion of mediators of these processes, including cytokines and growth factors. Systemic pathology of the cardiovascular and respiratory systems, with an emphasis on ischaemic heart disease and asthma. Laboratory classes introduce modern research and diagnostic techniques.

Note: Students are advised that previous and concurrent study of Anatomy, Physiology, Biochemistry or Immunology would be an advantage.

PATH3206
Molecular Basis of Disease B
School of Medical Sciences
UOC6 HPW4
Prerequisite: PATH3205

Recent advances in understanding the pathogenetic mechanisms underlying congenital disorders and neoplasia. Detailed discussion of molecular carcinogenesis, the metastatic process and techniques for diagnosing congenital diseases. Common tumours, with an emphasis on colorectal, breast, prostate and cervical carcinoma. Systemic pathology of the gastrointestinal, genitourinary and central nervous systems including peptic ulcer disease, liver disorders, glomerulonephritis, and Alzheimer disease.

Note: Advantage in having undertaken previous study in ANAT3231 Cell Biology.

PATH3207
Musculoskeletal Diseases
School of Medical Sciences
UOC6 HPW4
Prerequisite: PATH2201, ANAT2111 or ANAT2511

Current scientific concepts of musculoskeletal diseases including arthritis, metabolic bone disease, primary and secondary bone neoplasms and neuromuscular disease. Detailed coverage of fracture healing and its complications and of biomaterials and prosthetic devices relevant to orthopaedic applications.

PECO1000
Introduction to Political Economy
School of Social Science and Policy
UOC6 HPW3

Introduces the main schools of thought in political economy. Covers the development of economic ideas since Adam Smith and the key debates that have engaged the study of political economy.

PECO1001
Australia in the Global Economy
School of Social Science and Policy
UOC6 HPW3
Excluded: ECOH1301, ECON1301

Looks at the international economy at the end of the 19th century (trade, factor flows, and payments arrangements); problems of the international economy between the wars; the impact of World War II and the international economy in the post-war era; and Australian economic development and its relationship with the international economy in terms of economic fluctuations, problems of the inter-war period, growth of manufacturing, government policy and action, the importance of the mining industry, economic development and the distribution of income and wealth.

PECO2000
Political Economy and the State
School of Social Science and Policy
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SLSP2000

An interdisciplinary overview of the making of economic policy and the institutional structure in which it occurs. Considers how theory informs and legitimates policy choices and how policies are dependent on historical, social and economic contexts. Major current policy case studies are used to evaluate policy implementation in Australia and internationally.

PECO3000
Political Economy
School of Social Science and Policy
UOC6 HPW3
Prerequisite: PECO2000 or SLSP2000; Excluded: ECON3119

Examines alternative paradigms in economics and may include schools of thought such as the Post Keynesians, New Institutionalists, Marxians or Austrians. Particular non-traditional approaches to the theory of the firm and such topics as experimental economics, Cambridge distribution and growth theory, economic sociology, economics of politics and the debate over economic rationalism may be covered. Specific topics will depend on student preferences.

PHIL1007
Knowledge and Reality
School of Philosophy
UOC6 HPW3

An introduction to some classical and contemporary philosophical questions, puzzles, and ideas about knowledge and reality. This is a course in two central areas of philosophy - epistemology and metaphysics. Philosophers could include Plato, Descartes, Berkeley, and Hume, along with many contemporary philosophers. Topics may include: (1) Metaphysics: personal identity, free will, good and evil, universals, essences, meaning of life, death; (2) Epistemology: fallibility, truth, evidence, knowledge, empiricism, causation, rationalism, knowledge of other minds, knowledge of the external world, idealism, moral knowledge.

PHIL1008
Ethics and Society
School of Philosophy
UOC6 HPW3

This is political philosophy and moral philosophy at the intersection of the political with the personal. When we make decisions in important areas such as euthanasia, reproductive freedom and reproductive technology, the allocation of health resources or the environment, we must balance the rights and duties of the individual with the demands and obligations of society. This team-taught course considers the moral issues raised by such decisions, along with some of the political, philosophical principles which inform our public debate. Also examines the nature and justification of rights, as well as contemporary concepts of justice and equality.

PHIL1010
Thinking About Reasoning
School of Philosophy
UOC6 HPW3
Excluded: GENT0604

Thinking clearly, reasoning productively, arguing well. These are skills essential in life in general and at University in particular. Philosophy has a lot to say about these practices, and also about the whole nature of human reason. Involves practical work on reasoning and argumentative strategies, and an introductory investigation into what good reasoning actually is. There is a great deal of modern philosophical investigation into these matters.

PHIL1014
Introduction to European Philosophy
School of Philosophy
UOC6 HPW3

Provides a broad introduction to themes in European Philosophy, such as: the character of human subjectivity, rationality (and its limits), alienation, progress, history, freedom and how to understand meaning and morality with the waning of religious authority. Focuses on the legacy of the Enlightenment (Rousseau, Kant), the principal critics of this tradition (Hegel, Marx and Nietzsche), the emergence of existential and phenomenological themes in the work of thinkers such as Heidegger; some of the influential sources of contemporary theory such as the Frankfurt School and Hannah Arendt, and mostmodern thinkers such as Foucault.

PHIL2001
Logic
School of Philosophy
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: MATH3400, PHIL2106

This course is about deductive logic (in particular, propositional logic and predicate logic). Aims to construct - and to understand - a precise, unambiguous, formal language. Many important parts of English are translatable into it, hence many arguments of English are translated into it too. It is a language with which we can better understand the concept of deductive proof.

PHIL2002
Ways of Reasoning
School of Philosophy
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: PHIL2108

Examines what reasoning and argument really are and how best to engage in them. Material for this course is drawn from everyday sources, such as newspapers, books and advertisements, including television, as well as some of the brilliant pieces of reasoning in the philosophical tradition. From studying the structure of arguments, the purpose of reasoning, and a number of strong and weak argumentative moves, and from a guided re-evaluation of their own writing, students will be able to improve their critical skills and the presentation of their own arguments.

PHIL2005
20th Century European Philosophy
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall; Excluded: PHIL2407

Examines the main themes and thinkers of 20th Century French and German philosophy that have influenced the way we think about the world, our place in the world, and our relations with each other. Explores and compares important French and German approaches to issues such as language and meaning; existence and being; knowledge and interpretation; time and death; intersubjectivity and difference. Issues will be explored through an examination of the writings of major figures in French philosophy such as Merleau-Ponty, Foucault, Irigaray, Deleuze, and Derrida, and in German philosophy such as Arendt, Gadamer, Habermas and Heidegger.

PHIL2008
Issues in Applied Ethics
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Introduces various problems in the field of Applied Ethics within bioethics, environmental, business, political and public ethics. Provides an introduction to the key theories used in applied ethics, and considers how such theories help in making ethical judgments about the problems encountered in various areas of contemporary life. Issues to be discussed include: genetic technology, euthanasia, terrorism, political corruption and dirty hands, corporate responsibility and our responsibilities to animals and the environment.

PHIL2020
Philosophy of Language
School of Philosophy
UOC6 HPW3
Prerequisite: 36 units of credit

An introduction to central ideas in understanding what language is and how it works. Questions addressed include: What abilities are required of language users? How can language be used to refer to the world? What is the relation between language and thought? What is meaning? How are language and community related? What are speech acts?

PHIL2109
Contemporary Metaphysics
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Examines several classic metaphysical questions some of which are as follows: Is there a real world? What is social reality? What is the nature of possibility? Is this the only possible world? Is there a God? Are there people? Is there free will?

PHIL2206
Philosophy of Mind
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

An introduction to some central concerns and major debates about the nature of mind. Addresses questions such as can our conscious mental life be an object of scientific study? What is the relation between mind

and brain? Can we explain how consciousness evolved? What is the basis and nature of our personal identity?

PHIL2207
Philosophy of Psychology
School of Philosophy
UOC6 HPW3
Prerequisite: 6 level 1 units of credit in Philosophy or PSYC1001 or PSYC1011 and 36 units of credit overall

Philosophical issues in theoretical psychology, drawn from philosophical and psychological writings on mind, brain and behaviour; consciousness, memory and self; perception; and psychology and brain science.

PHIL2208
Contemporary Epistemology
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall. Excluded: PHIL2209

What is knowledge? What knowledge are people capable of having? Might people have no knowledge at all? Might people at least have much less knowledge than they take themselves to have? We will discuss sceptical, as well as non-sceptical, philosophical theories of knowledge, covering such topics as these: truth, fallibility, evidence, certainty, knowledge of the world, knowledge of the unobserved, knowledge of one's mind, knowledge of meaning.

PHIL2218
Philosophical Foundations of Artificial Intelligence
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Artificial intelligence: an examination of its assumptions, history, goals achievements and prospects.

PHIL2309
Recognition and Reconciliation: Introduction to Hegel
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Introduces Hegel's general philosophical approach through a close examination of Hegel's Phenomenology of Spirit, his most famous work. Examines Hegel's ethical, social and political philosophy in the Philosophy of Right. Some attention will be given to Hegel's heritage in European philosophy, as well as contemporary Analytic philosophy. Issues examined include self-consciousness, normativity, civil society and freedom.

PHIL2310
Heidegger
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Heidegger's attempt to raise the question of the meaning of Being continues to have an important impact. This course begins with some of Heidegger's critical works such as: Being and Time, What is Metaphysics? Early Greek Thinking, What is Called Thinking?, The Concept of Time, On the Way to Language, Identity and Difference, The Question Concerning Technology. It then proceeds to look back to Heidegger's "destruction of metaphysics" and forward to the influence he continues to exercise on thinkers today.

PHIL2316
Philosophy of Religion
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Aims to study the phenomenon of religion, its relation to ways of life, and its construction of stories and myths. Drawing from a variety of religious sources, it analyses the different categories and forms in and through which religious ideals are expressed and justified. Topics covered include arguments for the existence of God, the concept of evil, faith and mysticism, human relation to the natural world, religion and morality, religion and gender, and free will and determinism.

PHIL2416
Nietzsche and Philosophy
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall; Excluded: EURO2400

As author of provocative and puzzling statements such as "God is dead", "truth is metaphor", "life is will-to-power", "soul is a word about the body" and the "social contract was written in blood", Nietzsche was arguably one of the most controversial thinkers of modern times. His more enduring and controversial ideas will be examined, including those about language, truth, morality, power, subjectivity and the body, history and time. The impact of his philosophy on twentieth century thought will be explored by examining interpretations of his work by figures such as Deleuze, Derrida, Foucault, Heidegger, Irigaray and Nancy.

PHIL2420
Environmental Ethics
School of Philosophy
UOC6 HPW3
Prerequisite: 36 units of credit

Aims to familiarise students with both the content and the processes involved in ethical decision-making in issues concerning the natural environment. Begins with an enquiry into basic concepts operative in discussions in environmental ethics such as 'value', 'nature', 'natural' and 'environment'. There is also an examination of various approaches to environmental debates including applied ethics, deep ecology, holism and ecofeminism. Students are encouraged to consider arguments arising from different value commitments and to understand the importance of, and the procedures associated with, the justification of a particular position.

PHIL2421
Philosophy, Education and Society
School of Philosophy
UOC6 HPW3
Prerequisite: 6 level 1 units of credit in Philosophy or Level 1 Education and 36 units of credit overall

An introduction to the theory and practice of philosophical communities of inquiry. Explores the ways in which philosophy may be reconstructed for educational and other social purposes. Examines the relations between community and inquiry, self and society, and democracy and education. Addresses the social utility of philosophy and its educational potential. Authors whose works are discussed include Aristotle, Jerome Bruner, John Dewey, Immanuel Kant, Matthew Lipman, G.H. Mead, Jean-Paul Sartre and Lev Vygotsky.

PHIL2424
Human Nature and Technology
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Examines theories of the fundamental nature of humans, with particular emphasis on the role that a conception of the human plays in moral and political theories. Also examines the idea that current technological developments are transforming human nature, and considers the ethical implications. Focuses on modern Western philosophy and includes texts by figures such as Rousseau, Kant, Hume and Nietzsche as well as more recent philosophers such as Habermas, Jonas, Foucault, Derrida.

PHIL2510
Political Philosophy: Equality, Freedom and Justice
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Examines concepts such as equality, freedom, rights, justice and community in the light of fundamental moral principles proposed by the main contemporary schools of political thought such as: the equal moral worth of individuals, justice as fairness and the value of cultural belonging. The principal approach considered will be political liberalism but others discussed will include anarchism, utilitarianism, libertarianism, communitarianism, socialism, feminism and poststructuralism.

PHIL2517
Representation and Sexual Difference
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall; Excluded: WOMS2500

Considers the nature of sexuality and ideas about the role of sexual difference in the constitution of the bodily subject. The social significance of the connection between gender and such distinctions as culture/nature, reason/passion and public/private is examined in the light of feminist critiques. Also raises questions about philosophy and feminism with respect to issues of argument, advocacy and style.

PHIL2519
Introduction to Chinese Philosophy
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall; Excluded: PHIL2520

Confucianism and Taoism are the two most influential philosophies originating from China. Examines the two traditions, set against a backdrop of other schools of thought such as Mohism, Legalism and Chinese Buddhism. This course involves close readings of the relevant primary texts. Students will be taught to read these texts. No previous knowledge of Chinese culture or language is assumed.

PHIL2520
Aspects of Chinese Thought
School of Philosophy
UOC6 HPW3
Prerequisite: 36 units of credit in Arts and Social Science courses; Excluded: PHIL2519

There are many significant concepts underlying contemporary Chinese thought which have their origin in the classical Chinese schools of thought from pre-Confucian times. This course critically examines some of these concepts, such as the Confucian jen (humanity) and li (rules of propriety); and the Taoist tao and wu-wei (non-action).

PHIL2708
Reading Option
School of Philosophy
UOC6 HPW3
Prerequisite: 6 units of credit in level 1 Philosophy and 36 units of credit overall

Students wishing to do work in an area not covered by an existing course or seminar may apply to the School to take a reading option. Not more than one such course may be counted towards a degree. Approval of a program for a reading option depends on its suitability and on the availability of a member of staff to undertake supervision.

PHIL2709
Ethics and Accountability
School of Philosophy
UOC6 HPW3
Prerequisite: 36 units of credit

Deals with the probity requirements of private and public sector organisations. Covers ethical failure in areas such as corporate crime, professional malpractice, and public accountability. Also considers measures to regulate conduct and prevent corruption: codes of conduct, ethics committees, ethics education, watchdogs and regulators, and whistleblower protection.

PHIL3910
Advanced Philosophy Seminar
School of Philosophy
UOC6 HPW3
Prerequisite: 30 units of credit in Philosophy; Excluded: PHIL3106

An in-depth treatment of selected philosophical problems or traditions. Involves particular focus on the skills required for independent philosophical research.

PHIL4000
Philosophy Honours (Research) Full-Time
School of Philosophy
UOC24 HPW5
Prerequisite: 54 units of credit in PHIL including PHIL3910 with an average of 70% and at least 6 units of credit in PHIL at 75% or higher

The Honours year consists of a year-length thesis workshop, three session-length seminars and the writing of a research thesis under supervision.

PHIL4050
Philosophy Honours (Research) Part-Time
School of Philosophy
UOC12 HPW3
Prerequisite: 54 units of credit in PHIL including PHIL3910 with an average of 70% and at least 6 units of credit in PHIL at 75% or higher

The Honours year consists of a thesis workshop, three session-length seminars and the writing of a research thesis under supervision usually over a period of two years.

PHIL4500
Combined Philosophy Honours (Research) F/T
School of Philosophy
UOC12 HPW2
Prerequisite: 48 units of credit in PHIL including PHIL3910 with an average of 70% and at least 6 units of credit in PHIL at 75% or higher

For Combined Honours, candidates are required to take one course each in Philosophy and in the combined discipline as well as a thesis as approved by the Heads of the two participating Schools.

Note: Students contemplating Combined Honours are urged to seek advice from the Schools early in the program.

PHIL4550
Combined Philosophy Honours (Research) P/T
School of Philosophy
UOC6 HPW2
Prerequisite: 48 units of credit in PHIL including PHIL3910 with an average of 70% and at least 6 units of credit in PHIL at 75% or higher

For Combined Honours, candidates are required to take one course each in Philosophy and in the combined discipline as well as a thesis as approved by the Heads of the two participating Schools.

Note: Students contemplating Combined Honours are urged to seek advice from the Schools early in the program.

PHPH2011
Introductory Pharmacology and Toxicology
School of Physiology & Pharmacology
UOC6 HPW6
Prerequisite: 6 units of credit from level 1 Biology (BIOS1201 pref); and 12UOC of Level 1 CHEM; and 6 UOC Level 1 MATH(not including MATH1041). Excluded PHPH3151

This course will cover the basic principles of pharmacology with an emphasis on drug action from the molecular and cellular levels to tissue, organ and whole animal levels. The course will provide an understanding of the principles of drug action (pharmacodynamics) in terms of drug chemistry, drug-receptor interaction, receptor theory and dose-response relationships. An introduction to receptor-mediated signal transduction, membrane receptors and autonomic pharmacology will be covered. The handling of drugs by the body through the processes of absorption, distribution, metabolism and excretion (Pharmacokinetics) will be covered in some detail along with drug analysis and the adverse effects of drugs. Aspects of clinical trials, legal aspects of drug registration and the principles of toxicology will be introduced. The laboratory classes will involve basic pharmacological and toxicological methods.

PHPH2101
Physiology 1A
School of Medical Sciences
UOC6 HPW6
Prerequisite: 6 uoc from level 1 Biology(BIOS1101 pref); and 6UOC of Level 1 CHEM; and 6 UOC Level 1 MATH(not including MATH1041). Recommended : BIOC2101 or BIOC2181.

Introduces fundamental physiological principles, from basic cellular function in terms of chemical and physical principles to the operation and interaction of body systems. The ares of physiology covered in this unit are excitable tissues, the cardiovascular system, blood and neuroscience. The unit includes a substantial series of practical class experiments on these different areas of physiology. This subject is taken by students enrolled in any of the Physiology programs.

Note: Students intending to major in Physiology or Pharmacology should note that prerequisites can only be waived at the discretion of the Head of Department of Physiology and Pharmacology. Biiochemistry is highly recommended for a major in Physiology and essential for a major in Pharmacology.

PHPH2121
Principles of Physiology A
School of Medical Sciences
UOC6 HPW6

Provides an introduction to fundamental physiological principles for students in BOptom. degree and the Biomedical Engineering double degree programs. The areas of physiology covered in this unit are

excitable tissues, the cardiovascular system, blood and neuroscience, and includes a series of practical class experiments on these different areas of physiology.

Note: Restricted to students enrolled in BOptom degree course and the Biomedical Engineering double degree programs.

PHPH2201
Physiology 1B
School of Medical Sciences
UOC6 HPW6
Prerequisite PHPH2101.

The Areas of Physiology covered in this unit build on the fundamental physiological principles introduced in PHPH2101 Physiology 1A. The topics covered include reproduction, the respiratory system, the gastrointestinal system, kidney and body fluids and the endocrine system. This unit includes a substantial series of practical class experiments on these different areas of physiology. This subject is taken by students enrolled in any of the Physiology programs.

PHPH2221
Principles of Physiology B
School of Medical Sciences
UOC6 HPW6
Prerequisite: PHPH2121

The area of physiology covered in this unit builds on the fundamental physiological principles introduced in PHPH2121 Principles of Physiology A. The topics covered include reproduction, the respiratory system, the gastronintestinal system, kidney and body fluids and the endocrine system. This unit includes a series of practical class experiments on these different areas of physiology.

Note: Restricted to students enrolled in BOptom degree course and the Biomedical Engineering double degree programs.

PHPH2121 is highly recommended.

PHPH2501
Human Physiology A
School of Medical Sciences
UOC6 HPW6

Introduces fundamental physiological principles, from basic cellular function in terms of chemical and physical principles to the operation and interaction of body systems. The areas of physiology covered in this unit are excitable tissues, the cardiovascular system, blood and neuroscience. The unit includes a substantial number of practical class experiments on these different areas of physiology.

Note/s: Restricted to students enrolled in Program 3870 Bachelor of Science in Health and Exercise Science.

PHPH2502
Human Physiology B
School of Medical Sciences
UOC6 HPW6

The areas of physiology covered in this unit build on the fundamental physiological principles introduced in PHPH2501. The topics covered include reproduction, the respiratory system, the gastrointestinal system, kidney and body fluid balance, and the endocrine system. Again this unit includes a substantial series of practical class experiments on these different areas of physiology.

Note/s: Restricted to students enrolled in program 3870 Bachelor of Science in Health and Exercise Science.

PHPH2503
Exercise Physiology
School of Medical Sciences
UOC6 HPW6
Prerequisite: ANAT2111, PHPH2501

This courses focuses on how human structure and function is influenced by work and physical activity. Areas to be studied include energy metabolism and liberation, applied muscle physiology, and applied cardiopulmonary physiology. The unit includes a number of laboratories on these different areas of exercise physiology.

Note/s: restricted to students enrolled in program 3850 Bachelor of Science in Health and Sports Science.

PHPH3121
Membrane and Cellular Physiology
School of Medical Sciences
UOC6 HPW6
Prerequisite: PHPH2101 and PHPH2201

This subject deals with the properties and physiology of excitable cells, building on the concepts introduced in PHPH2101. Topic areas include: how electrical signals are generated across cell membranes; the function, properties and structure of ion channels and transporters; how individual nerve, muscle and epithelial cells function; how cells communicate with each other in the brain, including synaptic transmission and receptor-medicated signaling; how alterations in functioning of transporters and channels can lead to disease states; modern experimental techniques in cellular physiology; and recent advances in this field. The course provides an ideal introduction for further detailed studies in single cell physiology and pharmacology, and provides a foundation for the understanding of higher physiological systems.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective.

PHPH3131
Neurophysiology
School of Medical Sciences
UOC6 HPW6
Prerequisite: PHPH2101 and PHPH2201

Brain mechanisms in sensation and perception are analyzed in detail for vision, hearing and touch, and for the position sense arising from muscles, joints and the vestibular apparatus. The sensorimotor mechanisms responsible for the control of fine movement and postural regulation are also studied at different levels of the nervous system, from the sensory and motor nerves within muscles through to the highest levels of cerebral cortical function. Segments are also included on nerve transmitters and neuromodulators; neural mechanisms in certain higher functions, eg language and memory; and nervous system plasticity. Experimental work introduces the student to electrophysiological and other neuroscience research techniques, and in seminar-discussion groups to a critical evaluation of neuroscience research literature.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective.

PHPH3211
Cardiovascular Physiology and Pathophysiology
School of Medical Sciences
UOC6 HPW6
Prerequisite: PHPH2101,PHPH2201

An advanced course focusing on the physiology and pathophysiology of the cardiovascular system. The course is divided into three units. Unit One covers molecular and cellular aspects of cardiovascular tissues; the vascular endothelium, cardiac and smooth muscle and cell communication. Unit Two addresses systemic cardiovascular physiology, from capillary exchange, the microcirculation, the ECG, control of regional blood flow and hemodynamics, up to regulation of cardiac output and blood pressure and the function of the cardiovascular system in exercise. Unit Three focuses on the pathophysiology of the cardiovascular system, with lectures delivered by leading researchers in the fields of atherosclerosis, heart failure, hypertension and gene-targeted approaches to combating cardiovascular disease. Lecture-based material is complemented by practical classes and problem-based learning.

PHPH3221
Endocrine, Reproductive and Developmental Physiology
School of Medical Sciences
UOC6 HPW6
Prerequisite: PHPH2101, PHPH2201

There are two major components to this subject, which consists of lectures, practical classes, tutorials and case studies. The first component of the course uses problem based learning sessions and expert lecturers to cover a range of key topics in endocrinology and reproductive physiology. The second component of the subject details the physiology of pregnancy, and that of the fetus and the newborn.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective.

PHPH3251
Clinical and Experimental Pharmacology
School of Medical Sciences
UOC6 HPW6
Prerequisite: PHPH2101,PHPH2201,PHPH3151,BIOC 2101 or BIOC2181, BIOC2201 or BIOC2291

This subject deals with the pharmacology of different drug classes, with an emphasis on the mode of drug action. Effects of drugs on the major

organ systems will be covered, including the cardiovascular, renal, endocrine, respiratory gastrointestinal and central nervous systems. Students will be introduced to emerging therapeutic strategies based on advances in understanding cellular physiology and drug action. The practicals will cover basic pharmacological methods from both clinical and experimental standpoints.

Note: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective.

PHPH3302
Pharmacology for Optometry
School of Medical Sciences
UOC4 HPW4
Prerequisite: OPTM2101, PHPH2121, PHPH2221

Objectives: To introduce optometry students to the mechanisms of drug action and interaction, with an emphasis on the pharmacology of the eye. Pharmacodymamics, pharmacokinetics and toxicology of drugs used in the diagnosis and treatment of eye conditions; side effects of drugs used to treat systemic disease.

PHPH3501
Brain Mechanisms in Sensory-Motor Integration
School of Medical Sciences
UOC6
Prerequisite: PHPH2501, PHPH2502, BIOC2181 or BIOC2101

Brain mechanisms in sensation and perception are analysed in detail for vision, hearing and touch, and for the position sense arising from muscles, joints and the vestibular apparatus. The sensorimotor mechanisms responsible for the control of fine movement and postural regulation are also studied at different levels of the nervous system, from the sensory and motor nerves within muscles through to the highest levels of cortical function.

PHPH3502
Skeletal Muscle in Health and Exercise
School of Medical Sciences
UOC6 HPW3
Prerequisite: PHPH2501, PHPH2502, BIOC2181 or BIOC2101

This subject takes a scientific look at the concepts of skeletal muscle fatigue, training skeletal muscle for power and endurance and the effects of anabolic steroids and muscle stimulants like caffeine on skeletal muscle. It will also examine some of the common ways skeletal muscle can be damaged during sporting activities and the resultant mechanisms of muscle repair. There will be a detailed coverage of skeletal muscle development and the degenerative processes that occur as a result of aging. A series of advanced practical classes will examine the properties of isolated slow- and fast- twitch mammalian muscle. Students will design their own experiments to examine the effects of a range of drugs on their isolated muscle preparation. In the final practical session students will use themselves as subjects in order to examine the fatigability of their skeletal muscles in situ. The first part of the subject will examine the structure of skeletal muscle, the mechanism of force production, muscle fibre types, techniques for taking and analysing muscle biopsies and the innervation and central control of muscle activity. The second part of the course will look at the training for power, adaptations for endurance exercise, causes of skeletal muscle fatigue, muscle damage and repair and muscle pain. In addition there will be an examination of the pharmalogical action of compounds such as clenbuterol, creatine and caffeine which affect skeletal muscle function and growth.

Note/s: restricted to students enrolled in program 3870 Bachelor of Health and Exercise Science.

PHPH3506
Principles of Exercise Prescription
School of Medical Sciences
UOC3 HPW3
Prerequisite: ANAT2111, PHPH2501, PHPH2503

This course will serve to integrate knowledge acquired in previous stages of the program. A course that is focused strongly on practical application of theory. Exercise prescription principles will be revised and then further developed with the extension into a variety of population groups from the apparently healthy through to clinical and athletic groups.

PHPH4218
Physiology 4 Honours Full-Time
School of Medical Sciences
UOC24

The Honours Year provides an introduction to research. Students undertake a research project with supervision which is written up as a report and presented as a seminar. Students are also required to participate in departmental seminars, and to submit a literature review. For further information see the Honours coordinator.

PHPH4224
Physiology 4 Honours Part-Time
School of Medical Sciences
UOC12

The Honours Year provides an introduction to research. Students undertake a research project with supervision which is written up as a report and presented as a seminar. Students are also required to participate in departmental seminars and to submit a literature review. For further information see the Honours coordinator.

PHPH4258
Pharmacology Honours Full-Time
School of Medical Sciences
UOC24

The Honours Year provides an introduction to research. Students undertake a research project with supervision which is written up as a report and presented as a seminar. Students are also required to participate in departmental seminars, and to submit a literature review. For further information see the Honours coordinator.

PHPH4264
Pharmacology Honours Part-Time
School of Medical Sciences
UOC12

The Honours Year provides an introduction to research. Students undertake a research project with supervision which is written up as a report and presented as a seminar. Students are also required to participate in departmental seminars and to submit a literature review. For further information see the Honours coordinator.

PHPH4508
Brain Mechanisms and Sensory-Motor Integration
School of Medical Sciences
UOC3 HPW3
Prerequisite: PHPH2501, PHPH2502, BIOC2181 or BIOC2101

Brain mechanisms in sensation and perception are analysed in detail for vision, hearing and touch, and for the position sense arising from muscles, joints and the vestibular apparatus. The sensorimotor mechanisms resonsible for the control of fine movement and postural regulation are also studied at different levels of the nervous system, from the sensory and motor nerves within muscles through to the highest levels of cortical function.

Note/s: Enrolment in this course may be subject to quota restrictions. Such restrictions will only apply to students taking this course as an elective.

PHTN4310
Optical Signal Processing
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: TELE4313 and ELEC3004

Optical analogue signal processing; optical filters, bragg gratings; optical switches and memories, holograms; optical sensing elements.

PHYS1000
Physics Thinking
School of Physics
UOC3 HPW3

Techniques in scientific thinking and experimentation: seeing similarities, using diverse knowledge and techniques, having good ideas. Estimation in theory and experiment. The subject will mainly be taught in small groups organised to solve experimental and theoretical problems, some of them quite difficult. The problems may have fundamental as well as applied character, but the emphasis of the course is on universal principles, including conservation, symmetries, scaling and dimensional analysis, behaviour near equilibrium.

PHYS1111
Fundamentals of Physics
School of Physics
UOC6 HPW6

The methods of physics, describing motion, the dynamics of a particle, conservation of energy, kinetic theory of gases, properties of liquids, vibrations and waves, electricity and conduction in solids, magnetism and electromagnetic induction, alternating current, atomic nature of matter, X-rays, the nucleus and radioactivity, geometrical optics, optical instruments, wave optics.

Note: Introductory level course for students of all disciplines. Recommended courses: MATH1011 or MATH1131 or MATH1031.

PHYS1121
Physics 1A
School of Physics
UOC6 HPW6

Motion in a line and a plane. Oscillations. Motion of particles under the influence of mechanical, electrical, magnetic and gravitational forces. Rotational motion. Force, inertial mass, energy, momentum. Charge, potential, electric and magnetic fields. Capacitors, dielectrics. Electric current and circuits. Conservation principles applied to problems involving charge, energy and momentum.

PHYS1131
Higher Physics 1A
School of Physics
UOC6 HPW6

Vectors, kinematics, particle dynamics, work and energy, the conservation of energy, conservation of linear momentum, rotational kinematics and dynamics, simple harmonic motion, gravitation. Electrostatics, magnetostatics in vacuum, ferromagnetism, electromagnetic induction.

PHYS1149
Physics 1A (Aviation)
School of Physics
UOC6 HPW6
Corequisite: MATH1011 or MATH1079 or MATH1131 or MATH1031

The methods of Physics, describing motion, the dynamics of particle, conservation of energy, kinetic theory of gases, properties of liquids, vibrations and waves, electricity and conduction in solids, ions and ionic conduction, magnetism and electro magnetic induction, alternating current.

PHYS1199
Physics 1 (Optometry)
School of Physics
UOC6 HPW6

Vectors, linear mechanics, Newton's law of motion, rotational mechanics, electric forces, fields and potential. Magnetic forces and fields. Ampere's Law, Faraday's Law, electric circuit theory, AC, DC and transient circuits. Fluid mechanics; Bernoulli's equation; viscosity; Stoke's Law. Nuclear Physics; radioactivity, half-life, nuclear forces, binding energies, fission and fusion.

Note: Restricted to program 3950.

PHYS1211
Energy and Environmental Physics
School of Physics
UOC6 HPW6

Energy its uses and environmental impacts, thermodynamics, heat engines, heat transfer, solar radiation and its uses, properties of fluids, alternative energy sources, photons and atoms, photovoltaic energy, nuclear science and technology, environmental effects of natural and technological radiation sources, energy management.

PHYS1221
Physics 1B
School of Physics
UOC6 HPW6
Prerequisite: PHYS1121; Corequisite: MATH1231 or MATH1241

Waves in elastic media: application of wave theories to optical and acoustical phenomena such as interference, diffraction and polarisation. Properties of matter: solids, liquids, gases. Fluids and thermal physics. Inductance and electric circuit transients. Alternating current circuit theory.

PHYS1231
Higher Physics 1B
School of Physics
UOC6 HPW6
Prerequisite: PHYS1131; Corequisite: MATH1231 or MATH1241

Temperature, heat and the first law of thermodynamics, kinetic theory of gases. Waves in elastic media, sound waves, interference, diffraction, gratings and spectra, polarisation. Relativity, quantum physics, wave nature of matter.

PHYS1241
Higher Physics 1B (Special)
School of Physics
UOC6 HPW6
Prerequisite: PHYS1131; Corequisite: MATH1231 or MATH1241

This course is designed for Physics majors and all students taking an Advanced Science program that includes Physics. Physics1241 is the 'companion' course to PHYS1231 Higher Physics 1A, available in S1. The four topics covered in PHYS1241 are: 1. Quantum and laser physics, 2. A.C. circuit theory, 3. Solar system astrophysics, 4. Special relativity. Students taking PHYS1241 can choose the standard Higher Physics 1B laboratory program (HPW2) or, alternatively, may select a research project, supervised by a member of Physics' academic staff, totalling approxiamately 20 hours for the session. A list of projects offered will be circulated at the commencement of Session 2.

PHYS1249
Environmental Physics (Aviation)
School of Physics
UOC3 HPW6

Energy, its uses and environmental impacts, thermodynamics, heat engines, heat transfer, solar radiation and its uses, properties of fluids, alternative energy sources.

PHYS1601
Computer Applications in Experimental Science 1
School of Physics
UOC6 HPW6

An introduction to the internal structure, operating and interfacing of computers. Binary and digital electronic logic; logic control devices; bus communication structures; instruction execution in a processor; machine language code and instruction sets; interfaces and interaction schemes between processor and the outside world.

PHYS2010
Mechanics
School of Physics
UOC3 HPW2
Prerequisite: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241 and MATH1231 or MATH1241; Corequisite: MATH2011 or MATH2110 or MATH2100; Excluded: PHYS2001.

Damped and forced harmonic oscilltions and resonance phenomena. Central force problems and celestial orbits. Variational principles; the Lagrangian and Hamiltonian formulations of mechanics; coupled oscillators, normal modes, continuous systems and fields. Many-particle systems.

PHYS2020
Computational Physics
School of Physics
UOC3 HPW2
Prerequisite: PHYS1002 or PHYS1022 or PHYS1221 or PHYS1231 or PHYS1241 and MATH1021 or MATH1231 or MATH1241 or MATH1031; Excluded: PHYS2001.

Use of computers to solve problems in Physics. Topics will be chosen from, but not limited to , random number generators, Monte Carlo techniques, sorting, numerical intergration, gravitational, cellular automata, classical mechanics, and data analysis. Software used will include C and Maple.

PHYS2030
Laboratory A
School of Physics
UOC3 HPW3
Prerequisite: PHYS1002 or PHYS1022 or PHYS1111 or PHYS1221 or PHYS1231 or PHYS1241 and MATH1021 or MATH1131 or MATH1141 or MATH1031; Excluded: PHYS2031.

Experimental investigations in a range of areas: x-ray diffraction, work function, semiconductor bandgap, Hall effect, carrier lifetimes, nuclear magnetic resonance, magnetic properties.

PHYS2040
Quantum Physics
School of Physics
UOC3 HPW2
Prerequisite: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241 and MATH1231 or MATH1241; Excluded: PHYS2021.

Postulates of quantum mechanics, operators. Applications: potential wells, steps, barriers and tunneling, harmonic oscillator. H atom. Orbital and spin angular momentum, magnetic moment. Spin-orbit coupling.

PHYS2050
Electromagnetism
School of Physics
UOC3 HPW2
Prerequisite: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241, MATH1231 or MATH1241; Corequisite: MATH2011 or MATH2110 or MATH2100; Excluded: PHYS2011.

Static and time-dependent electric and magnetic fields. Electric and magnetic potentials. Electromagnetic waves. Materials in electric and magnetic fields.

PHYS2060
Thermal Physics
School of Physics
UOC3 HPW2
Prerequisite: PHYS1002 or PHYS1022 or PHYS1111 or PHYS1221 or PHYS1231 or PHYS1241, MATH1021 or MATH1131 or MATH1141 or MATH1031; Excluded: PHYS2011.

Laws of thermodynamics, kinetic theory, microscopic processes, entropy, solid-state defects, Helmholtz and Gibbs' functions, Maxwell's relations, phase diagrams, chemical and electrochemical potentials.

PHYS2160
Astronomy
School of Physics
UOC3 HPW2
Prerequisite: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241 or PHYS1022

Galaxies, the distance scale, large scale structure of the universe, galaxy evolution, the very early universe.

PHYS2170
The Search for Life Elsewhere in the Universe
School of Physics
UOC3 HPW2
Excluded: GENS4014

A scientific examination of the question 'Are we alone'. The material will include discussions on the origin and survival of life, current hi-tech searches for radio signals from extra-terrestrials, discoveries of new planetary systems, possible types of life-forms, Einstein's relativity, space-travel, and much more. A team of researchers will present the lectures, which will be supported by special tutorials which will look in detail at quantitative aspects of the subject.

Note: This course is not available to Advanced Science students.

PHYS2410
Biophysics 1
School of Physics
UOC3 HPW2
Prerequisite: PHYS1002 or PHYS1022 or PHYS1111 or PHYS1201 or PHYS1221 or PHYS1231 or PHYS1241

Biomechanics. Scaling theory. Fluid physiology and dynamics. Electrochemical potential. Membrane impedance, origin of membrane potentials. Generation and propagation of the nerve impulse. Physics of vision and hearing.

PHYS2601
Computer Applications in Experimental Science 2
School of Physics
UOC6 HPW5
Prerequisite: PHYS1601

Technical aspects of computer hardware, peripherals and systems. Bus logic devices; simple interface design; use of a general purpose interface for communication, data collection and control. Speed and capacity limitations of conventional peripherals; techniques to improve performance.

PHYS2630
Electronics
School of Physics
UOC3 HPW3
Prerequisite: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241 or PHYS1022; Excluded: PHYS2920, PHYS2031.

Electronic bench experiments and tutorials on diodes, transistors, operational amplifiers, power supplies and digital electronics.

PHYS2801
Atmospheric Science
School of Physics
UOC6 HPW4
Prerequisite: PHYS1002 or PHYS1022 or PHYS1149 or PHYS1111 or PHYS1221 or PHYS1231 or PHYS1241 or PHYS1889 or GEOG1701 or GEOS1701 and MATH1021 or MATH1231 or MATH1079 or MATH1031 Excluded: PHYS2810

Atmospheric composition, thermodynamics of dry and moist air, stability, atmospheric motion and weather systems, energy transport, cloud processes, radiation laws, solar and terrestrial radiation, ozone formation and loss, 1D and 3D climate models and climate analysis, global warming. Laboratory exercises including chart analysis and computer simulations.

PHYS2810
Atmospheric Physics
School of Physics
UOC3 HPW2
Prerequisite: PHYS1002 or PHYS1022 or PHYS1149 or PHYS1111 or PHYS1221 or PHYS1231 or PHYS1241 or PHYS1889 or GEOG1701 or GEOS1701 and MATH1021 or MATH1231 or MATH1079 or MATH1031; Excluded: PHYS2801.

Atmospheric composition, thermodynamics of dry and moist air, stability, cloud physics, atmospheric electricity, radiation laws, solar and terrestrial radiation, applications, ozone hole, atmospheric energy transport, 1D and 3D climate models, applications, global warming.

PHYS3010
Quantum Mechanics (Advanced)
School of Physics
UOC3 HPW2
Prerequisite: PHYS2021 or PHYS2040; Corequisite: MATH2120; Excluded: PHYS3210.

Fundamental principles; the Hydrogen atom; angular momentum; stationary and time-dependent perturbations; semi-classical radiation theory; variational methods; systems of particles; the Helium atom; matrix formulation.

Note: Not available without a mark of 65 or greater in PHYS2040.

PHYS3020
Statistical Physics
School of Physics
UOC3 HPW2
Prerequisite: PHYS2060 or PHYS2011; Excluded: PHYS3021.

Thermodynamic probability, entropy, paramagnetism, canonical distribution, Boltzmann distributions. Open systems, grand canonical ensemble, chemical potential. Fermi-Dirac and Bose-Einstein distributions, Bose condensation. Radiation in a cavity (blackbody radiation). Chemical reactions, phase equilibria. Fluctuations, noise, Nyquist's theorem.

PHYS3030
Electromagnetism (Advanced)
School of Physics
UOC3 HPW2
Prerequisite: PHYS2011 or PHYS2939 or PHYS2050 and MATH2011 or MATH2111 and MATH2120 or MATH2130 and MATH2520 or MATH2620; Excluded: PHYS3230.

Electromagnetic fields; Maxwell's equations, Poynting theorem, potential formulation. Plane waves, reflection and transmission. Emission of radiation from accelerating charges, scattering and propagation of radiation in material media. Extended review of special relativity and its relations to electromagnetism.

Note: Not available without a mark of 65 or greater in PHYS2050.

PHYS3040
Experimental Physics A1
School of Physics
UOC3 HPW4

A selection of experimental investigations in areas including: chaotic motion, high temperature superconductivity, semiconductors, electron and tunneling microscopy, X-ray and electron diffraction, laser physics and holography, optical fibre technology, Fourier optics and transform spectroscopy, magnetic measurement techniques and resonance imaging, electromagnetic waves and waveguides, nuclear counting techniques and neutron activation, vacuum techniques. Formal scientific report writing.

Note: Some experiments assume knowledge of PHYS2030, PHYS2040 or PHYS2050.

PHYS3050
Nuclear Physics
School of Physics
UOC3 HPW2
Prerequisite: PHYS3010 or PHYS3210 at a credit average or above.

Nuclear shell model; theory of beta decay; the deuteron, nucleon-nucleon scattering; theories of nuclear reactions, resonances; mesons and strange particles, elementary particle properties and interactions; symmetries and quark models; strong and weak interactions.

PHYS3060
Advanced Optics
School of Physics
UOC3 HPW2
Prerequisite: PHYS1002 or PHYS1221 or PHYS1231 or PHYS1241; Corequisite: MATH2120 or MATH2130

Review of geometrical optics, including ray tracing, aberrations and optical instruments: physical optics, including Fresnel and Fraunhofer diffraction, transfer functions, coherence, auto and cross correlation: applications of optics, including fibre optics, lasers and holography.

Note: This course may also be studied via distance education.

PHYS3070
Experimental Physics A2
School of Physics
UOC3 HPW4

As for PHYS3040 Experimental Physics A1.

Note: Some experiments assume knowledge of PHYS2030, PHYS2040 or PHYS2050.

PHYS3080
Solid State Physics
School of Physics
UOC3 HPW2
Prerequisite: PHYS2021 or PHYS2040; Corequisite: PHYS3010 or PHYS3210, PHYS3020; Excluded: PHYS3021.

Free electron model of metals, Bloch states and energy bands, reciprocal space and the Fermi surface, electron dynamics, Landau levels. Crystal structure, Brillouin zones, elementary diffraction theory, bonding, cohesive processes, impurity states, impurity conductivity. Lattice vibration, monatomic and diatomic chain, acoustic and optic phonons, Einstein and Debye models, dielectric effects. Recommended corequisites PHYS3010 or PHYS3210 and PHYS3020.

PHYS3110
Experimental Physics B1
School of Physics
UOC3 HPW4

A selection of experimental investigations in areas including: chaotic motion, high temperature superconductivity, semiconductors, electron and tunnelling microscopy, X-ray and electron diffraction, laser physics and holography, optical fibre technology, Fourier optics and transform spectrometry, magnetic measurement techniques and resonance imaging, electromagnetic waves and waveguides, nuclear counting techniques and neutron activation, vacuum techniques.

PHYS3120
Experimental Physics B2
School of Physics
UOC3 HPW4

As for PHYS3110 Experimental Physics B1.

PHYS3160
Astrophysics
School of Physics
UOC3 HPW2
Prerequisite: PHYS2021 or PHYS2040

Stellar radiation, spectra classification. Hertzsprung Russell diagrams, determination of stellar masses and radii. Equations of stellar structure, energy sources in stars, nuclear reaction cycles energy transport, equations of state, degeneracy, opacity. Properties of main sequence stars, stellar evolution, structure of red giants and white dwarfs. The solar atmosphere.

PHYS3210
Quantum Mechanics
School of Physics
UOC3 HPW2
Prerequisite: PHYS2021 or PHYS2040; Corequisite: MATH2120 or MATH2130; Excluded: PHYS3010.

As for PHYS3010 Quantum Mechanics (Advanced), but treated in less depth and excluding matrix formulation.

PHYS3230
Electromagnetism
School of Physics
UOC3 HPW2
Prerequisite: PHYS2011 or PHYS2050 PHYS2939 and MATH2011 or MATH2111 and MATH2120 or MATH2130; Excluded: PHYS3030

As for PHYS3030 Electromagnetism (Advanced), but treated in less depth.

PHYS3310
Physics of Solid State Devices
School of Physics
UOC3 HPW2
Prerequisite: PHYS3080 or PHYS3021

Review of electronic structure in semiconductors; p-n junctions; bipolar and field effect transistors inclluding formation, characteristics and electrical breakdown. Optical devices including light emitting diodes and junction lasers. Integrated circuit structures.

PHYS3410
Biophysics 2
School of Physics
UOC3 HPW2
Prerequisite: PHYS2011 or PHYS2060 and PHYS2410

Physics of self-assembling systems, cellular ultrastructure. Thermodynamics of irreversible processes, application to life processes. Thermodynamical description of ecological associations. Structure of proteins and other macro-molecules. Physics of nerve and muscle.

PHYS3510
Advanced Mechanics, Fields and Chaos
School of Physics
UOC3 HPW2
Prerequisite: (PHYS2001 or PHYS2010) and MATH2011 or MATH2111

Lagrange's equations and applications, variational principles, dissipative systems, Hamiltonian formulation, canonical transformations, Poisson brackets, Hamilton-Jacobi equation, continuous systems and fields, stability and chaos.

PHYS3550
General Relativity
School of Physics
UOC3 HPW2
Prerequisite: PHYS1002 or PHYS1231 or PHYS1241 or PHYS1221 and MATH2011 or MATH2111; Excluded: PHYS2520

Relativistic kinematics and dynamics, tensors and tensor operations, Christoffel symbols, formulation of general relativity, curvature of space, geodesics, gravitational field equations, Schwarzschild solution, tests of the theory, astrophysical and cosmological implications.

PHYS3630
Electronics
School of Physics
UOC3 HPW3
Prerequisite: PHYS2031 or PHYS2630

Noise and drift. Instrumentation, amplifiers, precision amplifier techniques. Digital electronics. Oscillators. Modulation and demodulation, phase locked loops. RF techniques. Conversion between analogue and digital. Transducers. Bandwidth narrowing techniques. Power supplies.

PHYS3710
Lasers and Applications
School of Physics
UOC3 HPW2

Interaction between light and matter, fundamental properties of laser amplifiers and oscillators, giant pulse generation, mode locking and Q switching, specific laser systems including gas lasers and semiconductor lasers, applications of lasers.

Note: This course may also be studied via distance education.

PHYS3720
Optoelectronics
School of Physics
UOC3 HPW2

Introduction to non-linear optics, fibre optics, second harmonic generation, parametric amplification, phase matching, modulation of light, types of optical detectors including thermal detectors, photomultipliers and semiconductor detectors.

Note: This course may also be studied via distance education.

PHYS3770
Laser and Spectroscopy Laboratory
School of Physics
UOC3 HPW4

A selection of experiments using techniques and instruments connected to laser and optical spectroscopy, including laser safety, properties of lasers, design and construction of a Nd:YAG laser, acousto-optics, fourier optics, holography, absorption spectroscopy, photoluminescence spectroscopy of semiconductors, etc.

PHYS3780
Photonics Laboratory
School of Physics
UOC3 HPW4

A selection of experiments using techniques and instruments connected to fibre optics and photonics in general, including basic properties of optical fibres, optical fibre gratings, optical fibre sensors, optical communictions, wavelength division multiplexing, Er droped fibre amplifiers, optical domain reflectometery, etc.

PHYS4103
Physics 4 Honours Full Time
School of Physics
UOC24

Honours programs consist of advanced lecture subjects and project work. Students normally undertake two separate projects during the year, in different research areas. All students take subjects in quantum mechanics, statistical mechanics, solid state physics and electromagnetism and the standard model. Additional subjects are chosen from topics such as astronomy, molecular physics, condensed matter physics and quantum field theory.

Note: For the combined Physics/Geology honours see entry under course code BSSM4103. Admission to the honours program is at the invitation of the Head of School and normally requires at least a credit average in Year 3.

PHYS4949
Advanced Topics in Physics
School of Physics
UOC6 HPW4
Pre-requisites: PHYS3010 or PHYS3080 This course is restricted to students enroled in program 3644

Typically this course would be a combination of one of the Physics Honours courses plus additional laboratory work from PHYS3040, PHYS3070, PHYS3110 or PHYS3120.

This course is restricted to student enroled in program 3644

PHYS4979
Photonic Devices
School of Physics
UOC6 HPW4
Co-requiste/s: TELE4313 Exclusion/s: PHYS3720, PHYS3780 This course is restricted to students enrolled in program 3644

Introduction to non-linear optics, modulation of light, types of optical detectors, optical light sources. A selection of experiments using techniques and instruments conndcted to fibre optics and photonics.

PLAN0081
Work Experience
Planning and Urban Development
UOC24 HPW0

As a key part of their planning degree, students must undertake 48 weeks of approved employment related to the professional objectives of the Planning and Urban Development Program: for example, in private development companies, planning consultancies, state government departments and agencies, or with local councils. This is normally undertaken in the twelve months following the end of Session 1 of Year 3. The Program Head must approve the type of employment proposed. The requirements of courses PLAN0081 and PLAN0082 Work Experience must be successfully completed before a student will be permitted to graduate. Assessment components include documentation and submission of a work experience diary, a reflective report and participation in a compulsory seminar.

PLAN0082
Work Experience
Planning and Urban Development
UOC24

As a key part of their planning degree, students must undertake 48 weeks of approved employment related to the professional objectives of the Planning and Urban Development Program: for example, in private development companies, planning consultancies, state government departments and agencies, or with local councils. This is normally undertaken in the twelve months following the end of Session 1 of Year 3. The Program Head must approve the type of employment proposed. The requirements of courses PLAN0081 and PLAN0082 Work Experience must be successfully completed before a student will be permitted to graduate. Assessment components include documentation and submission of a work experience diary, a reflective report and participation in a compulsory seminar.

PLAN1011
Urban Society
Planning and Urban Development
UOC6 HPW3

The primary objective of this course is to encourage students to critically consider their understanding of the society in which they live. Students are introduced to different sociological perspectives that have been used to describe and analyse aspects of contemporary urban society and the way in which the sociological imagination can inform an understanding of urban life. Of central concern are the origins, theoretical traditions and contemporary debates of sociology. Issues of social equity, social class, technological change, ideal and imagined communities are canvassed underpinned by an interest in the role of planning in managing change and community development. The course is structured around a combination of lectures, weekly readings, and occasional audio and visual materials, with a variety of assessment tasks.

PLAN1042
Local Planning
Planning and Urban Development
UOC6 HPW6

This course is an introduction to local planning processes. It focuses on theoretical understandings and practical knowledge needed by planners working on local issues. The course is set in the broad context of the notion of the 'local' and its importance for communities and individuals. The identification of local planning issues, competing stakeholders, and strategies that planners can use to deal with conflicting local demands are considered. Students are exposed to these issues through lectures, class exercises, readings and field trips. Critical observation skills are developed during field trips. Basic planning research is undertaken in a group setting. Key readings in locality studies, communication, conflict resolution, and stakeholder identification/interests, help students to bring theoretical understandings into current practice. Assessment is based on different tasks usually including class participation, reading set texts, group projects on field excursions and a final examination.

PLAN1052
Quantitative Methods
Planning and Urban Development
UOC6 HPW6

An appreciation of the range, utility and meaning of quantitative research techniques is a fundamental part of the planner's methodological training. This course provides an introduction to basic techniques of data collection and analysis, introductory statistics and survey research. The course is structured around a series of lectures, supplemented by readings, exercises on questionnaire design, and computer exercises to familiarise students with Statistical Package for Social Sciences (SPSS) for Windows. Most of the SPSS exercises make use of real, planning-related data sets. Instruction is through lectures and computer laboratory sessions.

PLAN1101
Understanding Design
Planning and Urban Development
UOC6 HPW6

The course is an introduction to urban design principles and basic design skills which are need by all planners. It involves an introduction to the basic vocabulary of planning and design terminology, exploration of the general principles of urban design, understanding the meaning of places and spaces, evaluation of good and bad urban design, development of basic skills of reading and interpreting maps and plans, and the creative communication of design ideas including drawing, mapping and presentation. Teaching involves lectures, workshops, discussions, and fieldtrips. Assessment is primarily via individual projects, group work and class participation.

PLAN1122
Development Processes
Planning and Urban Development
UOC6 HPW6

An introduction to the processes involved in property development in market economies in the context of government supervision of regulatory and approval processes. Emphasis is on the various roles of private property developers and the ways in which they operate to achieve project outcomes. Topics include the nature and purposes of property development, real property law, development economics, the regulatory context, and taxation issues. Learning relies on lectures supplemented by student seminars focusing on individual projects. Assessment is based on tasks including individual assignments structured as consultant reports, seminar participation and an examination.

PLAN1241
Planning Theory and Practice
Planning and Urban Development
UOC6 HPW6

This course aims to introduce students commencing their planning studies to the principles which underlie planning as a profession, the explicit and implicit meanings of planning and its activities, some of the basic methods planners use to achieve their goals, and the interrelationships between planning, society and governments. The course familiarizes students with the social context of planning, the roles of various organizations involved in planning processes, and the relationships between planning and related development and environmental activity. It does this by way of lectures, student-presented seminars, directed exercises and field investigations.

PLAN2032
Urban Design
Planning and Urban Development
UOC6 HPW6

The role of urban design is to reunite the partnership between planning and design to help improve the quality and sustainability of the built environment. This course provides an introduction to, and basic understanding of, urban design methodologies in relation to current planning practice. Starting from an appreciation of the fundamentals of design, topics include site investigations, defining urban structure, enhancing the public realm, understanding building typologies, and controlling built form. The course is structured around lectures, methodological instruction, discussions, case studies, site visits, and design projects. Assessments are based on individual and group projects. Students submit projects in written reports and oral presentations, supported by drawings, sketches and images.

PLAN2041
Integrated Planning 1 - Communication in Planning
Planning and Urban Development
UOC6 HPW6

The course targets a range of communication skills required of planners in practice and is designed to enhance student expertise in the oral, written, graphic and digital presentation of planning information. Students are introduced to theories of communication as a foundation for their work. The course canvasses issues of professional writing, seminar presentation techniques, effective graphic displays, and communication of information through different media. The course is designed to encourage independent research skills as well as the team-based planning and cooperation necessary for major presentations. The major outcome is a series of multi-faceted student presentations on topics of contemporary planning interest. The course builds on acquired knowledge as the first in a series of three major courses in integrated learning and skills development.

PLAN2111
Economics of Planning and Development
Planning and Urban Development
UOC6 HPW6

Micro-economic and macro-economic processes underpin urban and regional land-use patterns, property values, activity systems and social welfare. The processes of economic growth and decline are a perennial consideration of planning at different scales. The course focuses on development and planning across large urbanized and non-metropolitan regions. Students gain an understanding of how planning objectives are influenced by the aggregate impacts of uneven economic growth processes and economic behaviour. They gain familiarity with the potentialities and limitations of public policy in influencing spatial outcomes through studying economic issues and problems. Practical techniques for analysing spatial structure and development projects are introduced. Instruction is through lectures and tutorials.

PLAN2122
History, Heritage and the Built Environment
Planning and Urban Development
UOC6 HPW6

This course injects an explicitly historical dimension into planning studies. It has four main interrelated foci: the historical development of urban systems and places, the development of modern planning theory and practice, methods of historical research, and assessment of heritage values in the built environment. The emphases are on Sydney and the 20th century Australian experience in international perspective. Topics include city typologies, historical planning paradigms, models of ideal metropolitan form, Sydney's planning history, planned capitals, and heritage procedures under the NSW planning system. Teaching involves lectures, videos, and fieldtrips, engaging students through discussion and workshops. Assessment is primarily via written research reports and class participation.

PLAN2152
Resources, Planning and the Natural Environment
Planning and Urban Development
UOC6 HPW6

This course examines the interrelationships between urbanization, planning and the sustainable management of environmental systems. It situates the potential of land use planning in resource management relative to scientific bodies of knowledge and the roles of cognate professionals. The role of environmental factors in complex planning issues is considered. The assessment of environmental factors is considered at both the strategic and development application scale. The course reviews principles of ecologically sustainable development and how these may be interpreted in an urban context. Models for reporting on the 'state of the environment' are considered. Analytical and procedural tools for use in strategic and tactical management of the urban environment and non-metropolitan regions impacted by urbanization are introduced. Instruction is via lectures, tutorials and fieldwork.

PLAN3015
Social Planning
Planning and Urban Development
UOC6 HPW6

The course is intended to provide students with a deeper understanding of the social and cultural issues central to contemporary urban planning. It provides in-depth examination of the diverse characteristics and needs of the different groups who inhabit and claim space in the postmodern city. The focus is on the notion of the humane, multicultural city, human expressions of difference and diversity, and the realities of everyday living. Groups explored include ethnic communities, Aborigines, children, youth, older people, homeless, poor, those with disabilities, and gays and lesbians. Using both key theoretical readings and practical exercises, students question their own prejudices and values and the way

that these impact on their professional roles. Assessment is generally based on participation in class exercises, workshops and field trips, set readings, some written assignments and a group presentation.

PLAN3031
Integrated Planning 2 -Strategic Planning
Planning and Urban Development
UOC6 HPW6

Strategic planning is a dynamic, analytical, and interdisciplinary process. It can encompass comprehensive area planning, targeted problem solving, and non-physical planning scenarios. A major characteristic is the synthesis of diverse information sources and community opinions into communicable planning documents. This course provides instruction in the theory and practice of strategic planning as an integrative activity. It adopts an applied focus in considering a typical multifaceted planning issue. Examples include environmental, town centre, open space, transportation, employment zone, redevelopment, heritage or general locality studies which typically underpin local environmental planning actions. The emphasis is on individual and team research, analysis, report production, and presentation, with a significant fieldwork component. The course explicitly builds on the skills and knowledge which students have gained in other courses and is the second in sequence of three major courses in integrated learning and skills development.

PLAN3032
Integrated Planning 3 - Master Planning
Planning and Urban Development
UOC6 HPW6

This course focuses on planning frameworks for the delivery of quality urban outcomes on complex major development sites. The primary aim is for students to acquire a working knowledge and skills for planning and development using techniques of Master Planning. This is an increasingly common technique in planning practice as government and the development industry strive to create more liveable and sustainable communities. The course introduces students to the theory, processes, techniques, and politics of master plans. The focus is more than physical and other aspects covered include social capital, economic appraisal and due diligence. Students workshop the development of a Master Plan for a real world development site. As the third in a series of integrative planning projects, the course enables students to synthesise knowledge and skills acquired in other courses.

PLAN3041
Planning Law and Administration
Planning and Urban Development
UOC6 HPW6

The course provides an overview of the legal system and environmental planning law with particular reference to the Australian experience. The course targets three main foci: planning law, planning administration and land valuation. Planning law considers historical and theoretical issues in law and jurisprudence. The administrative context within which planning operates as a function of government is addressed, principally the role and function of statutory bodies in the planning and environment area. The property dimension covers fundamental issues of property rights, definitions of value, methods of valuation, and compensation and betterment. Lectures and seminar presentations are involved with assessment based on written work and an examination.

PLAN3051
Development Assessment
Planning and Urban Development
UOC6 HPW6

This course introduces students to the implementation of planning objectives via the statutory development control system, with particular reference to the NSW planning system. Various development control systems are examined, based on common law, statute and policy. Considered in detail are aspects of statutory and policy planning including the nature of environmental planning instruments, the development application process, and statutory-based development assessment. Emphasis is placed on familiarising students with the practical and creative skills required by a professional planner in undertaking various tasks involved in the development assessment process.

PLAN3052
Qualitative Methods
Planning and Urban Development
UOC6 HPW6

This course focuses on the importance of inter-personal relationship skills in planning practice. The emphasis is on developing and refining such skills to facilitate interviewing techniques for successful qualitative research, dealing with people empathically and sensitively, team building, community consultations and conflict resolution. Basic instruction is given in interviewing technique, its use in different qualitative research situations, community consultation, mediation and related planning techniques. Students undertake a variety of class exercises to develop their skills. A major qualitative research project involves in-depth interviewing, transcription preparation, data analysis, and reporting of findings. Students have the opportunity to reflect on and share experiences. Assessment is based on participation in class discussions and exercises, a major research project and reading set texts.

PLAN4031
Research Design
Planning and Urban Development
UOC3 HPW3

Consideration of issues of research design in planning studies that seeks to integrate a range of relevant methodological issues into a foundation for major research investigations. The primary focus is on the substantive research project in the final year of the planning degree. The course considers fundamental epistemological questions about research paradigms, explores the realities of the research process, and covers practical topics such as writing and presentation. Students gain an understanding of the conceptual, methodological, and technical bases for the construction and delivery of research projects. Lectures, tutorials and assessments guide students toward a developed thesis proposal and plan of study.

PLAN4121
Spatial Policy
Planning and Urban Development
UOC6 HPW6

Collective efforts to influence land use change and the structure and behaviour of spatial activity systems in their environmental, social and economic dimensions take place at different geographical scales. This advanced course focuses on the supra - local - regional - scale: that is, metropolitan sub-regions, metropolitan regions as a whole, and non-metropolitan regions. The emphasis is primarily on the metropolitan scale where the conditions requiring spatial planning are most in evidence. The course addresses the organization of government and public-private relationships in achieving spatial planning objectives. While the empirical focus is primarily on the Australian scene the principles apply internationally and reference is made to international cases. Instruction employs lectures and class discussions. Assessment is via research papers and student presentations

PLAN4132
Thesis Project
Planning and Urban Development
UOC12 HPW2
Prerequisite: PLAN4031

A major research project is the culmination of the undergraduate planning program. The form of the project is most conventionally a written thesis. The option of incorporating a significant multi-media (e.g. CD-ROM) component may be approved. The thesis project is an individual study taken with the object of allowing students to acquire more specialised knowledge. The range of topics and the methodology is flexible, but a rigorous approach is required. A thesis proposal is developed in the complementary course PLAN4031. While most research, analysis and final preparation may be done off-campus, students are required to maintain close contact with their advisers.

PLAN4142
Professionalism, Ethics and Politics
Planning and Urban Development
UOC6 HPW6

This course in the final session of the final year of the planning degree addresses vital issues surrounding the professional planning practice. It equips students to think more critically of planning (particularly as a function of the state) and their role as future practitioners. Students develop an advanced understanding of the fundamentals of professional practice in terms of ethics, standards, negligence, as well as common tasks such as responding to a consultant's brief, managing a project, and preparing for court work. Hands-on skills are discussed in the broader context of philosophical positions, planning trends, and broader societal

environment in which planning practice is situated. Lectures, workshops and seminars from visiting professionals are employed.

POLS1002
Power and Democracy in Australia
School of Politics and International Relations
UOC6 HPW3

Explores Australian democracy starting with the basic premise that the notion of democracy is complex and sometimes contradictory. Democracy is heralded in Australia and across the world as an inherent good because it is rule 'of the people, by the people, for the people'. Yet there is no simple formula to apply that will ensure democracy is a success. In Australia, democracy involves voting by all citizens to ensure the people's will reigns. But there is no such clear idea as this. Furthermore, the nature of representative democracy and political parties complicates the outcome. Different, contending groups of institutions within society can appeal to different aspects of the concept of democracy in order to justify their actions. Explores the concepts of democracy, representation, government and opposition, parties, pluralism and interest groups, the state, the High Court and the Constitution, and the electoral system.

POLS1003
Australian Political Practice
School of Politics and International Relations
UOC6 HPW3

The nature and history of Australian political institutions in depth, including a study of the Australian constitution and federal structure and the role of the High Court, the political parties and the formal institutions of government (parliament, cabinet and the bureaucracy), elections and voting in Australia and pressure groups.

POLS1005
Politics and Crisis: An Introduction to Western Political Theory
School of Politics and International Relations
UOC6 HPW3

An introduction to Western political theory through the study of major texts taken from distinctly different political civilisations. Each text is studied against its social and intellectual background and in the context of the political crises to which it was addressed. The main themes of the lectures concern the relationship between political theory and practice and that between language and political awareness. The texts could include Plato, The Republic; Machiavelli, The Prince and Discourses; Hobbes, Leviathan; More,T, Utopia.

POLS1013
Thinking About Politics
School of Politics and International Relations
UOC6 HPW3

Introduces students to some texts, central questions and thinkers of politics in the West. Topics include the nature of justice and political obligation, the foundations of authority and legitimacy, the relation between politics and ethics, inequality, and toleration.

POLS1017
International Relations in the 20th Century
School of Politics and International Relations
UOC6 HPW3
Excluded: INST1000, INST1300

Traces the development of international relations and its major concepts and theories through key themes and events in international history over the past century. Examines ways in which international politics is viewed, and the events, forces, and trends that provide context and justification to these theories. Introduces the major theories of international relations, as well as developments such as the Cold War and the arms race, decolonisation and revolution, globalisation, and the rise of international organisations.

POLS1020
International Relations: Continuity and Change
School of Politics and International Relations
UOC6 HPW3
Excluded: INST1002, INST1400, POLS2005

An introduction to world politics and its study by scholars of International Relations. The course is in three sections which deal respectively with the key actors in, the dynamics of, and issues currently facing, the system of international politics.

POLS2003
The Political Development of Contemporary China
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit

An introductory study of Chinese politics with special attention to political issues, values, and the conflicts of interests in policy-making. Includes the development and nature of communism in China, economics and development strategy, education and culture, defence and foreign policy.

POLS2008
Power and Policy in Australian Politics
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: AUST2024

Examines Australian public policies in the context of contemporary theories and techniques of policy analysis. Considers the problems of government administration and decision-making in the modern state. Examines the role of the state and the impact of economic rationalism and managerialism. Focuses on a range of policy issues and areas including: economic policy, social policy, Industrial relations and industry policy, the environment, Indigenous affairs, immigration and women's policy. Encourages specialisation in specific policy areas, drawing on relevant analytical frameworks to produce policy briefs and case studies.

POLS2020
Sex, Human Rights and Justice
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit in Arts and Social Science courses; Excluded: AUST2025, WOMS2004

Examines thought and practices of human rights in connection with questions of sex and sexual relations. Conceptions of equality, autonomy and freedom will be examined, with some reference to classic liberal expositions of justice and the rights of the person. Areas include discrimination and harassment, abortion, prostitution and sexual slavery, pornography, sexual violence and rape. Attention will be given to both domestic and international policy in these areas.

POLS2023
Globalisation and Uneven Development
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GLST2104, SLSP2701

Examines the problems and political prospects of 'Third World' or 'Less Developed' countries in the context of the development of a global economic and communications system. The first part examines the historical development of the system, the second part looks at its current structure and functioning and the third part considers the specific role of less developed countries and regions within the global system.

POLS2024
Theories and Concepts of International Relations
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GLST2105

Introduces students to both classical and contemporary writing on the nature of international politics. Particular emphasis is given to topics such as war and peace, human rights and the future of the state system.

POLS2036
Political Development in Northeast Asia
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit

An introduction to contemporary political development in Northeast Asia. Applies Western modernisation theory to the process of socio-political and economic change in China, Japan, South and North Korea and Taiwan. Also discusses the relationship of these countries to the outside world. Their internal politics are analysed in the context of history, culture and economic development. Topics include: land and people, political culture, state/society relationship, environment, ideology and nationalism, government, the military and political parties. Examines similarities and differences in political development among the countries in the region. One particular emphasis will be on the on-going reform and democratisation process in Northeast Asia.

POLS2037
International Law: Power, Politics and Ideology
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: INST2300

International law is integral to the system of international politics. It is the medium through which states and other actors negotiate their positions on a vast array of subjects and via which politics has, over recent decades, undergone a process of globalisation. Introduces students to the alternative approaches to analysing the political role of international law and examines the role of international law in particular case study scenarios.

Note: No prior knowledge of law is assumed.

POLS2040
Politics and Business
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit

An examination of the relationship between business and politics at both international and national levels. The emphasis is on developed capitalist countries, but attention is also devoted to transitional, NIC and developing countries. Topics dealt with include globalisation, politics and business; corporatist relationships; business lobbying; business influence on public opinion; and corruption.

POLS2041
Sexuality and Power: The Social Relations of Sex and the Sexes
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: POLS3049, WOMS2006

Introduces some of the main theories of power and of sexuality; analyses different sexualities, and issues relating to sexuality, in the context of theories of power. Topics include compulsory heterosexuality; the construction of masculinity, femininity and desire; marriage and prostitution; sexuality and work; body politics; and pornography and popular culture.

POLS2043
Free Speech
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit

Examines the issue of free speech. Aims to engage students in thinking conceptually about speech and about the politics of speech policy. Examines free speech arguments, and the relationship between these arguments and conceptions of speech. In this context, students will discuss how speech is regulated and debate whether this regulation is appropriate or not. Types of regulated speech which will be investigated include hate speech, pornography and gender-specific language. Areas of speech regulation which will be investigated include parliamentary privilege, academic freedom, terrorism and national security.

POLS2046
Political Rhetoric
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit

Introduces students to the study of political rhetoric and the art of speech-making. Explores rhetorical theory including informal reasoning, aesthetic evaluation, prose style and an array of commonly used argumentative strategies. Focuses on political oratory in the twentieth century.

POLS2048
International Security
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GLST2106, INST2302, POLS3023

Examines the concept and practice of security in international relations. Examines theories of security, before addressing central actors to the security project such as states, institutions and civil society forces. Then considers key issues for security in international politics, including traditional conflict; humanitarian crises; environmental change; population movements and terrorism.

POLS3024
Australian Foreign Policy
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 12 units of credit at the POLS2000 level

An examination of the foreign policy making and implementing processes in Australia; traditions, assumptions and perceptions; actors and audiences; interests and issues; incentives and constraints.

POLS3040
Early Political Texts
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 12 units of credit at the POLS2000 level

An examination of Thomas Hobbes's Leviathan (1651), its contexts, the controversies surrounding its reception and some of the uses to which it has been put in the twentieth century. Leviathan is, by general consent, the most important work in political theory written in the English language; but it is more than a political theory; it is an argument about philosophy, science, language, human psychology and religion. It is a work of rhetoric and satire and is one of the great prose works of English. It thus evokes a range of contexts, of the Reformation, the Scientific revolution, the British and French Civil Wars, the humanism of the Renaissance. On publication it proved highly controversial. It was largely overlooked in the nineteenth century but in our own it has been re-discovered as central to the understanding of political civilisation. It is still as controversial, though for different reasons, as it was in the seventeenth century. Studying it is a way into our own civilisation as well as Hobbes's own world.

POLS3045
Policy and Politics: Theory and Practice
School of Politics and International Relations
UOC12 HPW3
Prerequisite: 12 units of credit at the POLS2000 level, including POLS2008

A policy oriented course based on a two day per week research internship attachment, usually with a member of parliament, a government department or unit or an NGO. Students must be able to demonstrate familiarity with the Australian parliamentary and political system. Students are required to produce a research report and a weekly journal and attend a weekly debriefing session as part of their assessment.

Note: Enrolments are limited to the number of available internships, which may vary from year to year. Available spaces are allocated by interview in order to match qualifications of individuals with the requirements of available internships.

POLS3054
Theorising International Political Economy
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 12 units of credit at the POLS2000 level

Introduces key perspectives and central issues in the study of international political economy. Establishes links between theories about the relationship of politics and economics, and the analysis of key structures and processes in the world economy. Explores the theories and concepts designed to investigate the expansion and globalisation of a world economy. Key substantive issues include state-firm relations, production, international trade, and monetary relations.

POLS3943
US Hegemony & International Law
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 18 units of credit at the POLS2000 level at credit level or better; Excluded: POLS3043

Considers the US 'attitude' towards international law from 1918 to the present in the context of the rise of the US to sole superpower status and examines literature relating to topics such as the US and treaty law, US participation in international courts and tribunals, and US compliance with its international law obligations in order to assess current theoretical understanding of the political operation of international law and the implications for international law of the US as sole superpower.

POLS3948
Language, Satire & Politics
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 18 units of credit at the POLS2000 level at credit level or better; Excluded: POLS3048

Explores the nature and problems of political analysis from the point of view of rhetoric and argumentation. Examines satire as another form of persuasive language and as a certain sort of evidence about politics and central political concepts.

POLS3952
Sovereignty, Order and the State
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 18 units of credit at the POLS2000 level at credit level or better; Excluded: POLS3052

Explores the meanings of the concepts of sovereignty and order in the context of historical and contemporary discussions concerning the operations of the state, both internally and externally. Particular focus is given to the early development of the theory of sovereignty and to the attacks on this notion made in the name of pluralism and internationalism, now and in the early part of this century. The question of justice in international politics, the issues of post-nationalism and the future of the state are also examined.

POLS4000
Politics and International Relations Honours (Research) Full-Time
School of Politics and International Relations
UOC24 HPW5
Prerequisite: 54 units of credit in POLS at an average of at least 70%, including at least 6 units of credit from POLS1###, and 12 units of credit in Pre-Honours (or equivalent) POLS 3### courses at a minimum of 70% each

During the honours year, students are required: a) to undertake an original piece of research work extending throughout the year and to submit a thesis based upon it; b) to complete two coursework courses offered in the first Semester; c) to participate in the thesis workshop each week in the first Semester.

POLY3011
Polymer Science - Theory
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CHEM2021, INDC2040

Polymerisation chemistry and processes. Step and radical chain polymerisation. Ionic (including stereo regular) polymerisation. Methods including bulk, suspension, emulsion, solution and gas phase polymerisation. Industrially important polymers and their manufacture. Principles of analysis. Molecular weight distribution. Thermodynamics of polymer solutions. Polymer chain conformation. Viscoelasticity. Mechanical behaviour. Polymer morphology. Thermal behaviour and analysis. Chemistry and physics of elastomers. Elements of polymer compounding and fabrication. New polymers.

POLY3012
Polymer Science - Practice
School of Chemical Engineering and Industrial Chemistry
UOC3 HPW3
Prerequisite: CHEM2021, INDC2040, POLY3011

A series of practical laboratory exercises designed to illustrate the kinetics of polymerisation and the mechanical behaviour and properties of polymers.

PSYC1001
Psychology 1A
School of Psychology
UOC6 HPW5
Excluded: GENB4001, GENS9001

This course introduces the content and methods of psychology as a basic science, with emphasis on the social bases of behaviour. After an initial review of the historical foundations for the scientific study of human behaviour, several specific topics related to the social aspects of human behaviour are discussed. Specific topics covered in this course include: development, measurement of personality, theories of consciousness, and social influences on behaviour. In addition, training in the methods of psychological inquiry and basic procedures of data analysis is also provided.

PSYC1011
Psychology 1B
School of Psychology
UOC6 HPW5
Excluded: GENB4002, GENS9002

This course introduces the content and methods of psychology as a basic science, with emphasis on the biological bases of behaviour. Specific topics covered in this course include: perception, learning, memory, motivation, emotion, and abnormal behaviour. After describing the basic phenomena within an area, the goal will be to explore the neural bases of these behaviours. In addition, training in the methods of psychological inquiry and basic procedures of data analysis is also provided.

PSYC1021
Introduction to Psychological Applications
School of Psychology
UOC6 HPW4

Restricted to students currently enrolled in program 3432 Psychology

The approach of psychology to issues arising in the management of human affairs and to the remediation of human problems. Topics include psychology as a scientific discipline, an overview of areas such as clinical psychology, neuropsychology and developmental disabilities in which psychological knowledge is applied to help individuals to change or to function optimally, and specific areas of public concern where psychology has a major contribution to make such as education, selection, training in industry, traffic and aircraft safety, and the law. The practical component focuses on the professional and social responsibilities of psychologists.

PSYC2001
Research Methods 2
School of Psychology
UOC6 HPW4
Prerequisite: PSYC1001, PSYC1011 Excluded: GENB4004, GENB4005, GENB4007, GENB4008, GENS9005, GENS9007, GENS9008 and GENS9009.

General introduction to the analysis of data by means of inferential statistics (z, t and chi square). Issues in the use of statistics (power, robustness). General features of research methodology. Laboratory and statistical traditions affecting design and control procedures. The implications of the use of inferential statistics for research methodology generally. Ethics of research and interpretation of data.

Note: PSYC1001 may be taken as a corequisite.

PSYC2061
Social and Developmental Psychology
School of Psychology
UOC6 HPW4
Prerequisite: PSYC1001, PSYC1011

Two strands: 1. Social - The basic principles of research and theory in social psychology, with a special emphasis on understanding how people relate to each other. Issues such as the nature of human sociability, the perception and interpretation of social behaviour, ambiguities of interpretation of interpersonal behaviour, verbal and nonverbal communication processes, impression formation and impression management and related topics will be covered. 2. Developmental - The age at which certain abilities or dispositions develop or are learned, and the processes by which developmental changes occur. Issues such as nature and nurture, continuity vs discontinuity, nomothetic vs ideographic approaches and the methods and ethics of developmental research will be covered from various perspectives - psychodynamic, biological/ethological, environmental/learning, and cognitive - developmental.

PSYC2071
Perception and Cognition
School of Psychology
UOC6 HPW4
Prerequisite: PSYC1001, PSYC1011

Introduces the fundamental principles underlying human perception and cognition such as sensory coding, perceptual organisation, perception of spatial layout, perceptual learning, object recognition, attention, memory storage and retrieval, problem solving and decision making. The practical program will provide an introduction to the use of psychophysical methods, experimental approaches to the study of cognitive processes, and the application of findings in society.

PSYC2081
Learning and Physiological Psychology
School of Psychology
UOC6 HPW4
Prerequisite: PSYC1001, PSYC1011

An examination of brain and behaviour relationships with emphasis on learning, memory and motivation. Topics may include habituation, sensitisation, classical/operant conditioning, basic motivations, hunger, sex aggression, neuropsychology of amnesia and normal memory.

Note: PSYC1001 may be taken as a corequisite.

PSYC2101
Assessment and Personality
School of Psychology
UOC6 HPW4
Prerequisite: PSYC1001, PSYC1011

Systematic measurement of various aspects of people occurs in many different settings such as clinical, counselling, legal, educational and vocational guidance, and personnel settings. An introduction to the principles and techniques of psychological measurement, including consideration of what makes tests useful, how to evaluate tests and factors that are important to consider in their interpretation. Underlying many tests is a theoretical position about personality. Discussion of how aspects of personality are operationalised and measured will enable students to understand how tests relate to these theories. The practical program will provide the opportunity to explore the application of tests in a number of different settings.

PSYC3001
Research Methods 3A
School of Psychology
UOC6 HPW4
Prerequisite: PSYC2001

Analysis of variance for single factor and multifactor designs. MANOVA model analyses of repeated measures data. Simultaneous inference procedures for contrasts defined on parameters of ANOVA and MANOVA models. General principles of experimental design. Analysing experimental data with the PSY program.

PSYC3011
Research Methods 3B
School of Psychology
UOC6 HPW4
Prerequisite: PSYC3001

Multiple regression and its application to prediction, analysis of designed experiments and construction of structural models. Principal components analysis and factor analysis. Data analysis using SPSS.

PSYC3051
Physiological Psychology
School of Psychology
UOC6 HPW4
Prerequisite: PSYC2001, PSYC2081

An overview of the neuroscience of learning, memory, and psychopathology (especially stress, anxiety, depression and addiction). Emphasis is placed on contemporary theories and approaches including the role of interactions between environmental events, synapses and genes.

PSYC3121
Social Psychology
School of Psychology
UOC6 HPW4
Prerequisite: PSYC2001, PSYC2061

A review of the history, principles and methods, and ethics of social psychology at an advanced level. Substantive research areas such as the nature of affiliation and attraction, interpersonal relationships, the study of beliefs, values and attitudes, persuasion and processes of attitude change, social influence processes, and group behaviour, among others, will be covered.

PSYC3141
Behaviour in Organisations
School of Psychology
UOC6 HPW4
Prerequisite: PSYC2001 and PSYC2061; Exclusion: PSYC3526.

The application of general psychological theories and principles to contemporary management problems. It will aquaint students with research in employee motivation, satisfaction, selection, training, evaluation, and teamwork as well as other topics in industrial and organisational psychology, including the role of the professional in organisations and in dealing with other professionals.

PSYC3201
Psychopathology
School of Psychology
UOC6 HPW4
Prerequisite: PSYC2001, PSYC2081

An introduction to the scientific analysis of behavioural and mental disorders. The major syndromes, focussing upon current models and theories of causation and the empirically-based evaluation of these aetiological models and theories will be described. Treatment of the disorders will be outlined, especially where modern treatment developments throw light on fundamental causal mechanisms. Professional and ethical aspects of various treatments will be considered.

PSYC3211
Cognitive Science
School of Psychology
UOC6 HPW4
Prerequisite: PSYC2001 , PSYC2071

Considers a variety of different approaches adopted in the study of the mind. Critically appraises theories and models of mental processes and draws from studies of both normal and impaired cognitive functioning. Includes topics such as perception, visual cognition, attention, memory, reasoning, consciousness, and the association between mind and body. The professional implications of selected topics will be discussed.

PSYC3221
Vision and Brain
School of Psychology
UOC6 HPW4
Prerequisite: PSYC2001, PSYC2071

Seeing is an amazing achievement, taking up 40% of the visual cortex. This course will consider how we see and how this reveals and is related to principles of brain functioning. Topics will include stereo (3-D vision), the coding of brightness and colour, perceiving motion and self-motion, brain damage and the question of specialised visual systems, visual imagery, visual attention, and vision and art.

PSYC3241
Psychobiology of Memory and Motivation
School of Psychology
UOC6 HPW4
Prerequisite: PSYC2001, PSYC2081

Research and theory in memory and motivation as they underpin adaptive behaviour. Primary consideration will be given to general-purpose and specialised forms of learning. Implications for the origin and treatment of clinical disorders will be described.

PSYC3271
Personality and Individual Differences
School of Psychology
UOC6 HPW4
Prerequisite: PSYC2001, PSYC2101

The study of persons from two separate, but related perspectives. The psychology of personality involves the study of the structure and the processes involved in the organised functioning of individuals, their traits, cognitions and motives. The expression and measurement of the differences in those psychological characteristics between individuals and groups, and the theories or explanations that account for them, is what is involved in a psychology of individual differences.

PSYC3301
Psychology and Law
School of Psychology
UOC6 HPW4
Prerequisite: PSYC2001, PSYC2061

An introduction and broad overview to the discipline of psychology and law. You will be introduced to a wide range of forensic issues, civil and criminal, drawing on cognitive, social and clinical psycological research. The goal is ser to demonstrate the relevance of psycological research on the development of policy and all aspects of the legal process.

PSYC3311
The Psychology of Language
School of Psychology
UOC6 HPW4
Prerequisite: PSYC2001 , PSYC2071

One of the features that distinguishes humans from other animals is their use of a sophisticated symbolic system for communication - namely, language. This course will examine how humans cognitively represent their language system in order to successfully produce and comprehend spoken and written words. All levels of language will be considered ranging from the smallest sounds up to full discourse within context. Evidence obtained from language dysfunctions and from investigations of language developent will also be considered.

PSYC3331
Health Psychology
School of Psychology
UOC6 HPW4
Prerequisite: PSYC2001 , PSYC2061 or PSYC2101 Excluded: PSYC3536

This course aims to introduce students to some of the major theoretical and empirical work in Health Psychology. Its primary focus will be on the promotion and maintenance of health-related behaviour and the prevention of illness. The course will begin with a brief overview of core material in the discipline of psychology with an emphasis on personality, social and developmental psychology. The application of that knowledge will then cover health promotion strategies and methods (for example, improving diet-related behaviour and attitudes, initiating and maintaining exercise programs), and disease prevention skills and behaviours (for example, coronary heart disease, cancer, and smoking related problems).

PSYC3341
Developmental Psychology
School of Psychology
UOC6 HPW4
Prerequisite: PSYC2001, PSYC2061

This is an advanced level course which provides an overview of theories and research in developmental psychology, with an emphasis on understanding how biological, cognitive, emotional, and social processes develop and interact. Specific topics may include prenatal growth, attention and memory, language development, cognitive development, development of attachments, moral development, and gender-role development. The implications of research in these areas for the understanding of emotional, intellectual and behavioural problems during childhood will be examined.

PSYC3516
Psychology for Optometry
School of Psychology
UOC3 HPW2
Co-requisite OPTM3102

An introduction to various aspects of psychology of relevance to optometrical practice. Includes development of psychological theories, human development, social psychology, psychopathology, perceptual learning and human neuropsychology.

Note: Restricted to Program 3950 Bachelor of Optometry.

PSYC4053
Psychology 4A
School of Psychology
UOC24

A supervised research thesis and coursework to be determined in consultation with the Head of School.

PSYC4063
Psychology 4B
School of Psychology
UOC24
Prerequisite: PSYC4053

A continuation of PSYC4053.

PSYM5001
Psychiatry
School of Psychiatry
UOC10
Prerequisite: MDSG4001

Objectives: To be aware of the key symptoms, signs and syndromes of psychiatric disorder; to be able to take a history and conduct a mental state examination; to have acquired those skills necessary for a doctor in general or non-psychiatric specialised practice to decide appropriate management strategies; to be aware of, and have some experience in basic counselling skills; to be able to assess a patient's personality, psychological adjustment, coping repertoires, social function; to appreciate the importance of psychological factors in the diagnosis and treatment of illness; to be trained in interpersonal skills appropriate to clinical practice in any area of medicine; to be aware of the appropriate sections of the Mental Health Act and Guardianship Board legislation; to have received basic knowledge in special areas of development disability, forensic psychiatry, child psychiatry, transcultural psychiatry and psychogeriatrics; to be competent in prescribing psychotropic medications; and to be able to use simple behavioural techniques such as relaxation training.

Formal teaching seminars are held in the mornings and afternoons Monday to Friday in week 1, and mornings and afternoons Monday and Friday weeks 2-8. The remaining days are spent at Prince of Wales, St George, St Vincent's, Sutherland, Bankstown, Liverpool and Campbelltown Hospitals, where small group tutorials, case conferences and video analyses are carried out with academic and clinical staff, and clinical experience is obtained. Attachments to liaison psychiatry teams are organised so that students receive the appropriate teaching of skills related to general hospital patients. Visits to appropriate community facilities and to the Forensic Psychiatry Unit at Long Bay Gaol are organised. Voluntary attachments to Illawarra and to a number of rural sites (Wagga, Lismore, Port Macquarie, Armidale, Dubbo, Albury, Coffs Harbour and Taree) occur across the term.

Assessment: A video examination is held mid-term to assess interviewing skills. A written examination is conducted on the first day of the last week of term, and viva voce examinations are carried out during that week. A liaison psychiatry report and two clinical case histories are also part of the assessment.

PTRL1010
Introduction to the Petroleum Industry
School of Petroleum Engineering
UOC3 HPW3

UNIT 1: Worldwide distribution of oil and gas reserves. Subsurface data sampling and interpretation. Measurement scaling. Core, log and test data. UNIT 2: Rock/fluid systems. Rock and fluid parameters used in the petroleum industry. Interrelations between these parameters. Coring and core analysis. Well logging and log interpretation. Well testing and test analysis. UNIT 3: Drilling of oil and gas wells. Classification of wells. Drilling operating systems. Drilling fluids. Well completions. Gun perforating. Hydrocarbon production techniques. Hydrocarbon recovery mechanisms. UNIT 4: Economics of the upstream and downstream oil and gas industry. Supply and demand for oil and gas. International trading in oil and gas. Participation of Industry speakers.

PTRL1013
Computing for Petroleum Engineers
School of Petroleum Engineering
UOC6 HPW3

Overview of computer applications in petroleum engineering. Scientific programming languages. Introduction to mathematical software and spreadsheets. Basic probability and statistical concepts for geological applications. Cross-plotting. Use of spreadsheets for well log analysis and petrophysical evaluation. Computer contouring. Interpolation of spatial data. Reserves estimation. Volumetrics. Monte Carlo simulation. Petroleum economics and cash flow analysis.

PTRL1016
Reservoir Rock & Fluid Properties
School of Petroleum Engineering
UOC6 HPW6

Unit A: Porosity. The fluid content of subsurface rocks. Salinity, permeability, fluid saturations. Darcy's Law. The permeability coefficient. The measurement of permeability. The permeability of 'Dirty' Sands. Electrical and acoustic properties of reservoir rocks. The interpretation of fluid content data. Fundamentals of the behaviour of hydrocarbon fluids. PVT properties of oil-gas systems. Composition and phase diagrams of natural gases. Pseudo-critical properties of hydrocarbons. Surface tension and properties of the liquid and vapour phases. Properties of water and brines.

Unit B: An integrated reservoir engineering and formation evaluation laboratory incorporating experiments in porosity, permeability, capillary pressure, resistivity of reservoir rocks and PVT properties of crude oil. Introduction to the API standard laboratory equipment and their processes in measuring the above rock and fluid properties. Sample preparation from whole cores of different types of rock and shale. Demonstration of differences of properties in different rocks by conducting various

experiments. Understanding PVT properties of a mixture of hydrocarbon and their phase behaviour under different test conditions.

PTRL2010
Business Communications & Practices for Petroleum Engineers
School of Petroleum Engineering
UOC6 HPW3

Communication skills: Preparation of resume. Background research for interviews and guidelines for conduct during interviews. Preparation of written reports and memorandums for maximum audience impact. Impromptu and prepared oral presentation skills.

Business Practices: Joint Ventures, contracts, company structures, types of interest, stockmarket terminology and activities, acreage and reserves acquisition, farming, company annual reports, company special reports, oil and gas marketing, reserves reporting, relations with Governments and partners.

PTRL2014
Fluid Dynamics in Porous Media
School of Petroleum Engineering
UOC3 HPW3
Prerequisite: PTRL1016

Hydrostatic pressure and geothermal gradients. Darcy's Law. Porosity-permeability relationships and rock microstructures. Steady-state inclined flow and pressure potential. Steady-state radial flow. Flow in series and in parallel. Compressible gas flow Klinkenberg effect. Vertical well model and skin effect. Radial diffusivity equation and pseudo steady-state flow.

PTRL2015
Well Drilling Equipment & Operations
School of Petroleum Engineering
UOC3 HPW3

Introduction to physical processes involved in drilling oil and gas wells. Rotary drilling rigs for both land and offshore operation. Drilling equipment including rig powering and transmission, hoisting, rotary systems, BOP equipment and hookup, drill pipes and collars. Drilling fluid circulating systems including pumps, mud tanks, mud mixtures and mud cleaners. Elements of rock mechanics and its application in drilling. Selection of drill bits and penetration rate optimisation. Rig sizing and selection. Special marine equipment.

PTRL2016
Introduction to Petrophysics
School of Petroleum Engineering
UOC3 HPW3
Prerequisites: PTRL1010,PTRL1016,GEOS3321

The study of petroleum reservoirs. Fundamentals of petrophysics. Interrelation between petrophysical parameters. Borehole environment. Invasion profiles and invasion characteristics. Hydrocarbon mobility. Acquisition of petrophysical data. Data quality assurance. Presentation of petrophysical data. Measurement of natural gamma rays. Formation waters. Importance of formation water characteristics. The SP curve. Wellsite log evaluation. Formation resistivities. Shallow and deep resistivity measuring devices. Porosity related measurements with well logs in clean and shaly sands. Sonic (Acoustic), Formation Density and Neutron logs. Practical work with well log and core analysis and well pressure data.

PTRL3008
Reservoir Engineering A
School of Petroleum Engineering
UOC6 HPW3
Prerequisite:PTRL2014

Capillary-gravity equilibrium and initial fluid distribution. Relative permeability, capillary pressure, rock microstructure and multi-phase flow. Review of oil-gas phase behaviour and fluid PVT properties. Material balance equations. Calculation of water influx from material balance.

PTRL3009
Reservoir Engineering B
School of Petroleum Engineering
UOC6 HPW3
Corequisite: PTRL3008

Recovery factors, mobilisation, displacement and sweep efficiencies. Fractional flow analysis and displacement efficiency. Heterogeneity and gravity segregation and their effect on recovery. Water and gas coning. Unsteady-state field water influx calculations. Determination of aquifer parameters from history matching. Pseudo relative permeability and vertical equilibrium. Decline curve analysis.

PTRL3013
Reservoir Characterisation and Modelling
School of Petroleum Engineering
UOC3 HPW3
Prerequisites: PTRL1013,PTRL2016, MATH2899

Overview of reservoir characterisation and modelling problems. Reservoir mapping. 3D modelling. Univariate, bivariate and multivariate statistics for geological data analysis. Pattern recognition techniques. Petrophysical predictions from well logs. Introduction to petroleum geostatitsics. Variograms. Kriging. Uncertainty quantification. Stochastic reservoir modelling. Sequential simulation. Gaussian simulation. Indicator simulation. Integrating seismic attributes, well tests and production data. Constraining reservoir models with various sources of information. Reservoir upgridding and upscaling.

PTRL3016
Field Development Geology for Petroleum Engineers
School of Petroleum Engineering
UOC3 HPW3
Prerequisites: PTRL2016,GEOS3321

Introduction to the field development geology. Impact of sedimentary environment and associated diagenesis on field development strategy. Carbonate depositional processes and their effect on reservoir characteristics. Identification and characterisation of reservoir flow and barrier units. Reservoir seals. Importance of electrolog correlation in oil and gas field development. Identification and quantification of reservoir heterogeneity. 3D geological modeling. Reserves estimation. Geology of fractured reservoirs. Reservoir geophysics. Aquifer characterisation. New oil from old fields. Data planning during field development. Role of synergy in oil and gas field development. Case histories.

PTRL3021
Design Project for Petroleum Engineers
School of Petroleum Engineering
UOC6 HPW3
Prerequisite: CEIC2110

This course covers front-end engineering design of new production facilities for a potentially viable oil/gas field. Common offshore and onshore field development modes are first reviewed. Various oil/gas processing systems are studied, including gas dehydration, condensate handling, acid gas removal, LPG extraction, and crude oil stabilisation. Design tasks include process simulation, preparation of process flow diagrams/piping & instrument diagrams, HAZOP studies, and project management arrangements. Students will make extensive use of a commercial process simulation software package during tutorials. Each student shall carry out an example facilities scoping study and submit this as their final design report.

PTRL3023
Formation Evaluation
School of Petroleum Engineering
UOC6 HPW6
Prerequisite: PTRL2014, PTRL2016

Unit A - Well Log Analysis: Lithology plots. Saturation, irreducible saturation and permeability studies from well logs. Shaly sand analysis. Complex reservoir analysis. Wireline Formation Testing. Integration of core, log, well test and seismic data evaluation. Cementing quality monitoring. Gun perforating. Production Monitoring. Practical work with logs from an Australian oil/gas field. This Unit will prepare students for the petrophysical component of course PTRL4001.

Unit B - Well Testing: Theory of transient well testing. Principle of superposition. Drawdown and buildup tests. Actual and ideal buildup tests. Effects and duration of afterflow. Horner's approximation. Use of pseudo-pressure in gas well testing. Constant bottomhole pressure tests. Practical aspects of design and performance of field tests. Analysis of transient pressure data, effects of boundaries, reservoir heterogeneity, multiphase flow. Study of production, DST and formation interval tests. Pulse testing and multiwell tests. Computer assisted well test analysis techniques.

PTRL3024
Drilling Fluids & Cementing Techniques
School of Petroleum Engineering
UOC6 HPW6
Prerequisite: PTRL3016

Unit A: Introduction to the basic functions and properties of drilling fluids and cement slurries. Composition and related properties of drilling fluids and cement slurries. Types of equipment and methods used in cementing operations. Drilling fluid and cement slurry hydraulics. Determination of torque and drag. Calculation of cutting transport efficiency. Placement technique of cements. Gas migration through cement columns.

Unit B: Drilling and Production Laboratory: The laboratory includes measurement and control of the basic properties of drilling fluids (density, viscosity, filtration, lubricity and electrochemical properties) and cement slurries (density, viscosity, filtration, thickening time and mechanical properties). The objectives of this laboratory are to demonstrate the processes involved in drilling and cementing operations, introduce laboratory techniques which are used to select and optimise drilling fluids and cement slurry and to develop interest in experimentation.

PTRL3025
Petroleum Economics
School of Petroleum Engineering
UOC6 HPW6

Cash flow analysis in the petroleum industry (definition of cash flow, deriving net cash flow under tax/royalty systems and production sharing contracts, depreciation methods, inflation, sunk costs). Economic indicators (net present value, rate of return and other indicators). Fiscal analysis (the nature of petroleum fiscal regimes, the effects of fiscal regimes on exploration and field development decision making, economic analysis of fiscal regimes in Australia and Indonesia). Risk analysis (risks in each oil industry investment phase, project risk and expected value, sensitivity analysis, probability analysis, Monte Carlo simulation, probabilistic reserves estimates, probabilistic economics, portfolio analysis, asset management, risk and discount rates). Risk management (standards, establishing the context, identifying risk, analysing the risks, assessing and prioritising risks, treating the risks, insurance practices in the oil and gas industry, monitoring project risks).

PTRL4001
Integrated Oil/Gas Field Evaluation
School of Petroleum Engineering
UOC9 HPW6
Prerequisites: PTRL3008/3009/3013/3016/3023/3024/3025

The students gain hands-on experience of the complete evaluation of an actual field offshore Australia. This course covers (a) Field Geology-an analysis of the geological characteristics of the field itself, (b) Log and Formation Test Evaluation-analyses of the properties of the reservoir(s) to enable a later analysis of the reserves an d production performance and finally (c) an estimate of the hydrocarbons in place-involving mapping the reservoir and incorporating reservoir uncertainties. (d) the construction of a computerised economic model incorporating the fiscal terms for oil and gas developments offshore Australia, (e) reservoir engineering, well test analysis and simulation of reservoir(s) to predict reserves, production performance and field development options (this also involves assessing the economics of the field development options) and (f) valuing the field and formulating a bid to acquire a participating interest in the property.

PTRL4015
Numerical Reservoir Simulation
School of Petroleum Engineering
UOC3 HPW3
Prerequisites: PTRL3009,PTRL3023

Reservoir simulation and reservoir management. Differential material balance equations. Relative permeability, capillary pressure and residual saturations in two and three-phase flow. Compositional reservoir simulator equations and the Black Oil Model. Numerical solution of simulator equations. Truncation errors and stability. Transmissibilities, upstream weighing, explicit and implicit and explicit treatment of transmissibilities. Numerical dispersion and grid-orientation effects. Model and grid selection. Model initialisation and capillary pressure-gravity equilibrium. Well models and equivalent radius of a well block, relating well grid-block pressures to pressure test build-up pressures. Use of well dynamic and vertical pseudo-functions. Planning and executing a reservoir simulation study. Reservoir simulation workshop.

PTRL4016
Natural Gas Engineering
School of Petroleum Engineering
UOC3 HPW3

Properties of Natural Gases: typical compositions. Equations of state: general cubic equations, specific high accuracy equations. Use of equations of state to find residual energy properties. Gas Compression: positive displacement and centrifugal compressors; fans. Calculation of poser requirements. Compressible Flow in Pipes: fundamental equations of flow: continuity, momentum, energy equations. Isothermal flow in pipes: the Weymouth equation. Static and flowing bottom-hole pressures in wells. Fundamentals of Gas Flow in Porous Media: Steady-state flow equations. Definition of pseudo-pressure function. Gas Flow in Cylindrical Reservoirs: general equation for radial flow of gases in symmetrical homogeneous reservoirs. Non-dimensional forms of the equation; derivation of coefficients relating dimensionless to real variables. Infinite reservoir solution: pseudo-steady-state solution. Gas Well Deliverability Tests: Flow-after-flow tests: prediction of IPR curve and AOF for the well. Isochronal tests. Drawdown tests: need for data at two flow rates.

PTRL4017
Well Technology
School of Petroleum Engineering
UOC6 HPW6
Prerequisite: PTRL3024

Unit A - Well Design: Prediction of formation pore pressure and stress gradients. Determination of safety mud weight bounds for different in-situ stress conditions. Design and planning well trajectory. Surveying tools and methods. Design of drill string including bottomhole assembly. Drilling methods and equipment for directional, horizontal and multilateral wells. Selection of casing shoes, material properties and design of casing program.

Unit B - Well Completion and Stimulation: Well completion design, types of completion, completion selection and design criteria. Interval selection and productivity considerations: effect of producing mechanisms. Inflow performance and multiple tubing performance analyses using commercial software. Well stimulation and workover planning. Tubing-packer movement and forces. Tubing design: graphical tubing design and simplified tensional strength design. Selection of downhole equipment, tubing accessories and wellhead equipment. Basics of perforation, selection of equipment and procedure for perforating oil and gas wells. Technology of sand control: gravel packing. Fundamentals of well stimulation technologies: acidisation and hydraulic fracturing.

PTRL4018
Petroleum Production Engineering
School of Petroleum Engineering
UOC3 HPW3
Prerequisite: All Stage 3 Petroleum Engineering Courses.

Components of the petroleum production systems. Well productivity engineering. Production from under saturated oil reservoirs. Production from two phase reservoirs. Production from gas reservoirs. Pseudo critical properties of natural gases. Gas well deliverability for non-Darcy flow. The near-wellbore condition and damage characterisation, the effect of perforating conditions on well performance. Wellbore flow performance. Well deliverability. Well head surface gathering systems. Artificial lift systems. Horizontal well production. System analysis. Production Chemistry Basics (wax, scale, corrosion, emulsions).

RUSS1111
Introductory Russian 1
Russian Studies
UOC6 HPW6
Excluded: GENT0434

Intended for complete beginners, this course provides a basic introductory knowledge of spoken and written Russian. Assessment: weekly assignments, tests.

Note: Excluded native speakers of Russian and students with HSC qualifications.

RUSS1112
Introductory Russian 2
Russian Studies
UOC6 HPW6
Prerequisite: RUSS1111

A continuation of RUSS1111. Assessment: weekly assignments and tests.

Note: Excluded native speakers and students with HSC qualifications.

RUSS2101
Twentieth Century Russian Literature and Society
Russian Studies
UOC6 HPW3
Prerequisite: 36 units of credit

A survey of 20th century Russian literature and developments in Soviet society. Concentrates on the major events of the Revolution, World War II and Stalinism as reflected in literature. Authors studied in English translation include Gorky, Zamyatin, Bulgakov, Olesha, Solzhenitsyn, Pasternak, Chukovskaya, Shalamov. Assessment: 3 essay-type assignments.

Note: No knowledge of the Russian language required.

RUSS2102
The Great Terror
Russian Studies
UOC6 HPW3
Prerequisite: 36 units of credit in Arts and Social Science courses; Excluded: RUSS2302

An analysis of Stalinism, the purges and show-trials of the 1930s. The growth of Soviet organs of oppression, forced collectivisation, the Gulag system.

Note: No knowledge of the Russian language required.

RUSS2111
Intermediate Russian 1
Russian Studies
UOC6 HPW5
Prerequisite: RUSS1112 or RUSS1000; Excluded: RUSS2000, RUSS2001

A continuation of Level 1 Russian language for beginners (with consolidation and extension of written and oral proficiency in Russian). Assessment: weekly assignments, tests.

RUSS2112
Intermediate Russian 2
Russian Studies
UOC6 HPW5
Prerequisite: RUSS2111

A continuation of RUSS2111. Assessment: weekly assignments, tests.

RUSS2200
Soviet Cinema
Russian Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Provides an analysis of the history and development of film throughout Russian/Soviet history from the very early stages, including the essential turning points: Eisenstein, the Stalinist period, the thaw, selected masterpieces of the 60s and 70s; recent times. Note that the three hours per week does not include viewing time. Assessment: 2 essays.

RUSS3111
Advanced Russian 1
Russian Studies
UOC6 HPW4

Prerequisite: RUSS2112 or RUSS2001 or RUSS2000; Excluded: RUSS3000, RUSS3001

Advanced grammar, translation into Russian, essay-writing and advanced oral work. Assessment: weekly assignments, tests.

RUSS3112
Advanced Russian 2
Russian Studies
UOC6 HPW4
Prerequisite: RUSS3111.

A continuation of RUSS3111. Assessment: weekly assignments, tests.

RUSS4000
Russian Honours (Research) Full-Time
Russian Studies
UOC24 HPW5
Prerequisite: 54 units of credit in RUSS courses at 70%

Advanced language (2 hours) or equivalent plus two options and a 15,000-20,000 word thesis on a topic to be approved by the Head of Department.

RUSS4050
Russian Honours (Research) Part-Time
Russian Studies
UOC12 HPW3
Prerequisite: 54 units of credit in RUSS courses at 70%

Advanced language (2 hours) or equivalent plus two options and a 15,000-20,000 word thesis on a topic to be approved by the Head of Department.

RUSS4500
Combined Russian Honours (Research) Full-Time
Russian Studies
UOC12 HPW2
Prerequisite: 48 units of credit in RUSS courses at 70%

Advanced language (2 hours) or equivalent plus one option and a 15,000-20,000 word thesis on a topic to be approved by the Heads of the participating Schools/Departments.

RUSS4550
Combined Russian Honours (Research) Part-Time
Russian Studies
UOC6 HPW2
Prerequisite: 48 units of credit in RUSS courses at 70%

Advanced language (2 hours) or equivalent plus one option and a 15,000-20,000 word thesis on a topic to be approved by the Heads of the participating Schools/Departments.

SAED1402
Learning and Teaching Art & Design: Practice & Structure
School of Art Education
UOC3 HPW3
Corequisite: SAED1491.

This is the first in a series of three Learning and Teaching Art and Design courses. Students are introduced to practices of art and design teaching and system structures including syllabus and classroom requirements. Participants learn the importance of preparation, planning and evaluation. Content includes perceptions of teaching, management of risk in the art and design classroom, developing instructional skill, and an introduction to professional ethics. The course focuses on students becoming familiar with teaching and learning requirements of younger students while becoming aware of school practices and structures, and developing confidence as preservice Art and/or design teachers. Course content is applied to classroom settings in SAED1491 stage 1 professional experience school placement.

SAED1403
Foundations of Art and Design Education
School of Art Education
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course introduces the field of art and design education using a series of key theorists and an interview with an art or design teacher. A modular course structure facilitates an investigation of territories, institutions and issues in art and design education today. Transition into university life and pre-service teaching is explored through introduction to scholarly practices of writing, information literacy and database skills.

SAED1407
Making Curriculum in Art & Design
School of Art Education
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course introduces curriculum as a construct using current and proposed syllabuses in the Visual Arts and Design and Technology. Curriculum constructs shape understandings of art and design, classroom implementation, approaches to programming; the teacher's role; the resources used in developing learning experiences: including artists, designers, artworks and exhibitions and artworld references. Students will focus on how teachers generate content informed by personal interest and expertise, syllabus requirements and an understanding of good teaching practice.

SAED1491
Professional Experience Stage 1
School of Art Education
UOC3 HPW0
Corequisite: SAED1402.

Professional Experience 1 is a ten-day professional attachment orienting students to the conventional practices of the teaching profession and the typical school daily routine. The in-school component focuses on students becoming familiar with teaching and learning needs of younger pupils. Students are introduced to school procedures while developing

their confidence as prospective teachers. Students may extend and apply concepts and procedures introduced in SAED1402 Learning and Teaching: Practice & Structure, to prepare and implement lessons for classes in years 5/6 or 7/8 - in visual arts and/or design, working with whole classes and/or small groups.

SAED2401
Educational Psychology
School of Art Education
UOC6 HPW3

An introduction to the nature and objectives of educational psychology from a cognitive, social and ecological perspective, this course covers the nature of learning, the processes involved in social cognition and motivation, and theories of group processes in a school. Theories are applied through an analysis of the match between the teacher, the material and the student, the problems of different learning styles, the management of classrooms and principles of discipline and how these aspects contribute to planning and implementing a learning program in a positive educational environment.

Note/s: Prerequisites : SAED 1401

SAED2402
Learning and Teaching Art & Design: Language & Communication
School of Art Education
UOC3 HPW3
Prerequisite: SAED1402; Corequisite: SAED2491

This is the second in a series of three Learning and Teaching Art and Design courses. Students expand concepts and skills introduced in SAED1402 and applied in the first professional experience placement SAED1491. Course content focuses on the language and communicative demands of teaching and learning in Art and Design classrooms. The need for tutorial and instructional clarity in applying content to learning situations is explored through practical cases in the context of syllabus requirements. Students learn to extend their personal repertoire of teaching tactics through increasing awareness and development of classroom communication strategies, including language use, questioning and feedback skills.

SAED2405
Special Education in Art and Design Contexts
School of Art Education
UOC6 HPW3

Special Education in Art and Design Contexts extends and develops the pre-service teacher's experiences, attitudes and understandings of students with special and/or high support needs in the secondary school. Through in-class workshops, field trips, and hands on projects, students enhance their understanding of ways in which art and design can enhance the educational experiences of the special needs student. The Life-Skills component of syllabuses in Visual Arts, Design, and related subjects are introduced with regard to provision of appropriate experiences for students with special needs. The course, following a non-categorical approach, includes consideration of the psychology and special educational needs of students with mild and moderate intellectual disabilities and those with physical disabilities. It also includes the diagnosis and description of physical and learning disabilities and the role of and possibilities for art and design education in providing positive, supportive and inclusive educational choices and experiences for all students.

SAED2406
The Sociology of Education
School of Art Education
UOC6 HPW3
Currently enrolled in a program at College of Fine Arts.

Sociology examines the interaction between society and the individual and among socialising groups that shape behaviour. Students are encouraged to apply their knowledge of social processes for greater teacher effectiveness, to analyse and project strategies for effective student learning, to understanding group processes in classrooms and appreciating the school as a social system. Significant developments in and theoretical contributions to social research are investigated.

SAED2471
Histories of Australian Education
School of Art Education
UOC6 HPW3

This course aims to develop student understanding of the social and historical forces which have shaped traditions and policy in schooling and education in Australia. Social concepts including reproduction theory, structuration and cultural capital will be used with more orthodox historical tools to analyse, critique and revise historical explanations of educational developments. The impact of intellectual modes and paradigms originating beyond the educational arena will also be explored. Some art educational trends will be identified and explained in terms of these broader intellectual and historical origins.

SAED2472
Creativity in Art and Design Education
School of Art Education
UOC6 HPW3

The course introduces students to a range of explanations of creativity drawn from the fields of philosophy, psychology, sociology and art and design education. Student will explore how creativity is applied in art, design and education practice. Investigative topics will include the creative subject, genius and creative personality; the creative process, problem solving and divergent thinking; and the product as an outcome of performance valued by its recognition within a field of practice. Through a combination of lectures, seminars, and workshops student will consider how theories of creativity inform art and design teachers' beliefs and practices affecting their views on art and design, teaching, students, the artefacts produced, assessment, the HSC examination and ARTEXPRESS.

SAED2473
Seminar in Art Education
School of Art Education
UOC6 HPW3

The aim of this course is to provide a general introduction to research in art education. Through involvement in this subject students will become familiar with research bearing on major areas of interest in art education.

SAED2474
Art Education and the Primary School
School of Art Education
UOC6 HPW3

This course is designed to expand the student s knowledge of the art of the primary school child and to examine approaches to teaching art at that level. Students will examine curricula already designed for use at the primary levels and will construct programs suitable for implementation in specific environments. Through lecture and discussion groups, the course will renew the theories of development linked with children s artistic development, consider the place of art education in the primary school curriculum, and design and evaluate appropriate learning experiences.

SAED2475
Multicultural Contexts
School of Art Education
UOC6 HPW3

The course aims to explore multiculturalism, encompassing personal and professional contexts. The terrain of multiculturalism is both historically and currently contested, variously impacting policy and practice. Through lectures and seminar experiences, students will analyse the way in which race, gender, class and ethnic consciousness is produced. This consciousness, and the various conceptions of multiculturalism are examined in relation to the personal and professional contexts in which students are engaged. The course provides the opportunity for students to increase their awareness of the cultural diversity of Australia and develop their sensitivity and responsiveness to the needs of minority groups.

SAED2478
Art Education and Aboriginal Studies
School of Art Education
UOC6 HPW3

This course is designed to foster students' insights into the social and political background that has affected, and continues to affect, the educational opportunities of Aboriginal people in contemporary Australia. Through lectures, discussions, seminars and visits by Aboriginal guest speakers, this subject will examine the following topics: Aboriginal Identity, Kinship, Law, Religious and Educational Systems and Land Rights. It will also explore European ethnocentricity, prejudice, stereotyping and racism. All topics will be illustrated by the works of both Aboriginal and non-Aboriginal artists.

SAED2479
Dialogues and Communities
School of Art Education
UOC6 HPW3

Through a planned series of workshops, this introductory course enables students to become familiar with some of the issues and contexts of contemporary community arts, including cultural development and democracy, cultural resources, real wealth/community value and social capital. The practice and management of selected contemporary groups, events and public art and design projects, along with more traditional applications of community arts practice as social and cultural development are explored, including the preparation of funding applications, field work and collaborative projects.

SAED2480
The Art Museum and Art Education
School of Art Education
UOC6 HPW3

This course aims to foster an awareness in students of the ideology and philosophies of art museums and an understanding of the broad educational functions of the museum including the vernacular appreciation of art and the development of a lifelong approach to learning. Students will have the opportunity to observe the educational functions of the art museum within a diversity of contexts and systematically investigate the plurality of roles which the museum performs within our society.

SAED2481
Media and Communication Contexts for Art and Design
School of Art Education
UOC6 HPW3

This course utilitises contemporary theories and practices of communication to investigate the role of broadcast, print and electronic media in organising, producing and making knowledge and information in art and design curriculum. A series of case studies and lectures introduces key contributions to media studies (Baudrillard, Hall, Kuhn, McLuhan, Williams), theories of communication and texts (Berelson, Ellis, Fiske, Kress) social power, ideologies and discourse (Hall), reading and reception (Elliott, Giroux, Morley, Radway). Students will participate in workshops dedicated to the analysis of art, design and education media as they relate to print, radio, television, video, web and CD ROM.

SAED2491
Professional Experience Stage 2
School of Art Education
UOC3 HPW0
Corequisite: SAED2402.

Ten days professional experience in the practices, protocols, responsibilities and ethics of the professional art educator provides students the opportunity to extend their understanding of the function and organisation of schools and teaching practice within secondary contexts. The course models a typical high school structure and the concepts and conventions of the working educator are introduced and workshopped. Experts from a range of relevant educational fields are deployed to discuss policy and practice in their respective domains. These include the School Executive, the Child Protection Unit, Occupational Health and Safety, and Information Computer Technology. Students will investigate an individual school as a case study of these professional standards in practice. Each student works with a Cooperating Teacher in a negotiated program of classroom, departmental and whole school activities and responsibilities. Students with increased confidence plan and implement classes for Years 7-10 Visual Arts and Design.

SAED3402
Learning and Teaching Art & Design: Classroom Management
School of Art Education
UOC3 HPW3
Prerequisite SAED2491, SAED2402; Corequisite: SAED3491.

This is the third in a sequence of Learning and Teaching Art and Design courses. Students focus on integrating tutorial strategies introduced in Learning and Teaching courses and developed through professional experiences in schools. This is facilitated by focusing on the principles and practices of management in Art and Design classrooms through a series of clinical cases developed through a short webCT module utilising e-tutors. Capable educational management facilitates the development of positive learning communities, assured teaching performances and a productive classroom environment. Management entails student attitudes, content organisation, development and maintenance of safe working environments and teacher reflective practice in a range of art and design settings.

SAED3403
Issues in Contemporary Design Education
School of Art Education
UOC6 HPW3

Issues in Contemporary Design Education comprises an analysis and interpretation of the principal discourses shaping design education. This course examines the emergent possibilities for design education in the secondary school subject of visual arts and Key Learning Area Technology and Applied Studies, along with other curricula and educational applications. This course will facilitate the negotiation of two at times distinct fields and domains of knowledge, the fine arts and design within educational contexts.

SAED3404
Practices of Art and Design History in Education
School of Art Education
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course enables students to examine a range of conventions of art and design history. Fieldwork and in class debates provide real world contexts for the development of teaching strategies appropriate to pupil learning historical content in an active and authentic way. This is undertaken while developing an ability to explore and apply historical methodologies to art and design cases within the educational conditions of setting, student and curriculum. Students consider the educational significance of concepts of the historical event, the interpretation of artworks in cultural and historical contexts and the formation of spatio-temporal relationships among artworks.

SAED3407
Curriculum Studies in Art Education
School of Art Education
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course introduces and develops interpretive and critical perspectives in curriculum, with particular reference to contemporary art and design curriculum and theory and practice. Contributions to the field by significant educators and the principal theoretical positions in curriculum are examined. These orientations or ideologies are informed by the wider theoretical and philosophical contexts and related to art and design educational curriculum practice. Political, historical and institutional structures shaping curriculum contexts in visual arts and design with an emphasis on local contexts are investigated. The struggles and dilemmas manifested in the contested values of and challenges to contemporary curriculum discourse are considered.

SAED3491
Professional Experience Stage 3
School of Art Education
UOC3 HPW0
Prerequisite: SAED2491, SAED2402; Corequisite: SAED3402.

Professional Experience 3 involves further in-school professional experience. Students work in a secondary school setting selected with a view to diversifying their experience of a range of educational cultures and practices. Students are expected to extend concepts of the demands of the teaching profession introduced in SAED2491 including administration, collegial and community consultation, together with visual arts and design expertise demonstrated through completion of required classroom projects.

SAED4051
Practices of Research in Art, Design and Education
School of Art Education
UOC6 HPW3

Research is broadly conceived in this subject as a pattern of practices in which the major agencies which contribute to the research process are perceived as a mutually dependent relation. This course introduces students to the agencies of investigative practice in the humanities and social sciences and to an understanding of their role in the validation, analysis and interpretation of content within the domains of art, design and education. While practices of research in art, design and education vary widely in the their instrumental and political significance it is nevertheless the goal of this subject to enable students, through the analysis of exemplars of research, to rehearse these practices in a manner consistent with an apprenticeship model of learning. In particular students

will be able to integrate and apply systematically key agencies of research practice in art, design and education including - the role of explanatory theory, the functional stance of the researcher, the constraints imposed by art as the object of investigation, the use of nomothetic and ideographic methods, and the conventions of proposal writing.

SAED4052
Theoretical Frameworks in Art and Design Education
School of Art Education
UOC6 HPW3

This course aims to introduce students to the theoretical frameworks which form the basis for the conception of visual arts education as a distinctive field. Theoretical frameworks in art education will be explained as a largely discontinuous collection of histories. These histories are united by ruling paradigms many originating outside of the field in the human sciences, and in the practices of the visual arts. Examples include psychoanalytical approaches to creativity anthropological and socio-cultural studies, and cognitive theories.

SAED4053
Curriculum in Art, Design and Education
School of Art Education
UOC6 HPW3

This course will provide students with modernist and post-modernist theoretical frameworks of curriculum evaluation and critique. Particular reference will be made to the critical methodologies of Habermas and the genealogical archaeology of Foucault as appropriate to an interpretation of the visual arts in education.

SAED4055
Honours Research Project in Art and Design Education Studies
School of Art Education
UOC6 HPW12
Prerequisite: SAED4051.

This course enables students to prepare and complete an Art or Design Education research project in a chosen area of specialisation. Students will complete a research project submitting a report, which identifies an issue or problem of art or design educational significance and demonstrates understanding and appropriate application of selected methodologies to the investigation of the chosen problem, presented in the form of a project report of 5500-7500 words in length.

SAED4056
Theories of Knowing in Art, Design and Education
School of Art Education
UOC6 HPW3

This course aims to further students understanding of the cognitive foundation of the visual arts. It provides a general introduction to epistemology including concepts such as belief, truth, perception and representation. Reference will be drawn to recent concepts in metaphysics including, theory of mind, ontology and self. The course goes on to reposition these concepts within the assumptions of a variety of philosophical perspectives. Students will be required to examine a range of these concepts and perspectives for their relevance to the teaching of art.

SAED4057
Art and Design History in Education
School of Art Education
UOC6 HPW3

This course introduces a range of contemporary theories of art and design history. Students will examine and evaluate art-history methodologies and apply them to educational settings within the context of general education. The textual, interpretive and revisionist character of the historical act are experienced, analysed and understood as a set of interpretive and explanatory practices which enable identification and revision of historical narratives.

SAED4403
Aesthetics in Art, Design & Education
School of Art Education
UOC6 HPW3
Prerequisite: SAED 3404

This course aims to provide students with opportunities to examine aesthetics and art theory as these relate to the teaching of art and design to increase their critical awareness, to become more aware of their own philosophy of art and design education and its implications for their teaching. Through a combination of lectures and seminars the subject will investigate the ideas and aims of aesthetics in educational contexts.

SAED4406
Philosophical Issues in Education
School of Art Education
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

The aim of this course is to introduce students to contemporary philosophical theories applied to the field of education. Using the critical theories of society put forward by Jurgen Habermas, students will analyse knowledge and human interests in order to critically understand a range of significant educational issues in terms of their technical, practical and critical consequences.

SAED4472
Independent Study in Art, Design, and Education
School of Art Education
UOC6 HPW3
Enrolment Requirements: Completion of 48 Units of Credit in Art Education Core Courses

This course provides senior student with the opportunity to explore an area of art education, which is of particular interest. In collaboration with a staff number, students undertake a study in some issue or topic in art or design education, which is not encountered in other scheduled courses. Students are expected to demonstrate initiative and organisational skills in independently pursuing the research process and reaching educational objectives through completion of a series of preliminary investigations and construction of a short critical paper arguing a position regarding the selected issue/topic.

SAED4473
Politics and Identity in Art and Design Education
School of Art Education
UOC6 HPW3

This course provides students with opportunities to examine how practices of governments are manifested in civic values and cultural policy, and influentially reflected through art and design education. The impact of cultural theory upon education and understanding within the arts will be examined as a series of traditions, habits, practices, values and expectations. Students will become familiar with the way in which concepts such as identity, subjectivity, alterity, ethnicity, gender and post-colonialism mediate relationships between artworld and popular perceptions, governmental priorities, and art and design education. Students will focus on a range of historical and contemporary cases to understand the mechanisms and manifestations of politics, identity and power in art, design and educational contexts.

SAED4474
Dilemmas of Praxis: The State, the School and the Educator
School of Art Education
UOC6 HPW3
Excluded: SAED2472, COFA4025

This course utilises the student's internship experiences as a platform to explore the ethical, political and pedagogical dilemmas entailed in the School. Students will utilise a range of contemporary perspectives to explore philosophical, sociological and political dilemmas and conflicts in the context of education. Perspectives include Althusser's ideological state apparatuses, Gidden's Structuration; Haberma's communicative action; and Foucault's notion of discourse and difference.

SAED4491
Professional Experience Internship
School of Art Education
UOC24 HPW3
Prerequisite/s: SAED 2401, SAED 2406, SAED 3491, SAED 3402, SAED 3404, SAED 3407

During the Professional Experience Internship students make a full time teaching commitment in a secondary school. Students are required to take responsibility for several classes, including preparation of lessons and associated teaching materials, complete administration and record keeping as required by the school, including school reports, participate fully in the professional obligations of the school such as sporting and co-curricular activities, staff meetings, professional development days and community consultations. Students should demonstrate their knowledge of professional conduct required by the college and the school.

Students plan, implement, evaluate and document a curriculum of ten weeks duration for a selected class. Clinical supervision methods, applied at five weekly intervals, in consultation with their cooperating teacher, identify and address their developing teaching practice.

The Professional Experience Internship requires a synthesis and application of theoretical and practical understandings introduced and examined throughout the course. The Internship is supervised by cooperating teachers and jointly assessed by cooperating teachers and faculty of the School of Art Education.

Students may apply for a variation of program that will entail a placement for the final two to four weeks of the Professional Experience Internship in a museum, cultural, industry, media or community setting. These placements are competitive and subject to the completion of the related Art Education Elective (consult Head of School for conditions) and the approval of the Head of School. Students should consult the lecturer in their elective orientation for further advice.

Note/s: Prerequisites: SAED 2401, SAED 2406, SAED 3491, SAED 3402, SAED 3404, SAED 3407

SAHT1101
Mapping the Modern
School of Art History and Theory
UOC6 HPW3

Commencing in the nineteenth-century and concluding with World War Two, this course examines seminal art and design movements and tendencies within changing social, political and cultural contexts. The material covered includes Realism, Impressionism, Expressionism, Art Nouveau, Bauhaus, and early avant-gardes such as Futurism, Dada and Surrealism. These are considered against the backdrop of industrialisation, technological transformations, colonization, international conflicts and totalitarian regimes.

SAHT1102
Mapping the Postmodern
School of Art History and Theory
UOC6 HPW3

This course examines major transformations in art and design practice and theory from the late 1940s to the present, and locates these within changing social, political and economic contexts. Issues relating to Formalism, Pop, image and text, the 'de-materialisation' of art, and performance are addressed, as well as Feminist theories and practice, post-colonial culture, and the new technologies.

SAHT1211
Theories of the Image
School of Art History and Theory
UOC6 HPW3

An introduction to ways of understanding and evaluating the making, reception and theoretical understandings of images in our culture. Different cultures and historical periods have treated images in radically different ways with different ways of understanding the way images relate to their producer(s), viewer(s) and to the world. There is also a philosophical concern with the nature of the image, how it is able to have meaning, to represent at all. How are we able to read images? Is it a natural process or culturally determined? These issues will be addressed by critically examining the different ways of understanding the artistic image in Western and Non-western arts, and in crucial developments in Western art history (including Renaissance perspective; the invention of photography; photo-mechanical reproduction; Modernism and abstraction; and feminist critiques).

SAHT1212
Theories of Art History and Culture
School of Art History and Theory
UOC6 HPW3

Introduces art history and cultural analysis as forms of narrative, which aim to explain and integrate cultural objects into historical or other order. Draws upon and critically assesses the key methodologies (such as connoisseurship, periodisation, formalism, iconography, historicism and historical materialism, social history, psychoanalysis, semiotics, high culture/popular culture, ethnocentrism, and feminism). These methodologies will be examined by reference to such historians as Wolfflin, Panofsky, Gombrich, Baxandall, Fry, Antal, Clark, and Pollock.

SAHT1221
Contexts for Art
School of Art History and Theory
UOC6 HPW3

The course exposes students to the different types of contemporary art exhibited locally - in public galleries, dealer galleries, contemporary art spaces, artist run initiatives, community centres and non-art spaces such as shopping malls. Designed to reflect the diversity both of art and the institutions through which it is viewed, this subject is structured around an examination of works in situ. Students are encouraged to engage with work in relation to specific contexts, to consider issues of taste and value and how these are mediated by place and modes of display.

SAHT1222
The Production of Art
School of Art History and Theory
UOC6 HPW3

The emphasis in this course t is on a behind the scenes exposition of art. It looks critically at the processes by which visual art is made available to viewing publics. These processes take into account a range of concerns (practical, strategic, ideological) that vary widely between institutions. Students are introduced to various professional art practices, through the processes of curating, managing, catalogue writing and production, exhibition display and handling of works. The infrastructure of the art industry , including the administration of State Museums and other art organisations, such as funding bodies, are presented as a subject for practical purposes, as well as critical consideration.

SAHT1301
Design History, Theory and Aesthetics 1
School of Art History and Theory
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course provides an overview of design history from the early modern period through to Postmodernism. The theories and strategies employed by industrialists, designers, philosophers and artist/designers will be explored. An understanding of elements and principles of design, and the role that design plays in the evolution of market systems along with its emergence as a powerful tool for national and cultural identity will be investigated. Key moments in design history - designers, movements, innovations etc. - are considered against the backdrop of industrialisation, technological transformations, colonisation and international conflicts. The theories, practices, aesthetics, cultural and economic considerations employed by 20th Century designers will be explored both from a formal elements and principles base and a socio-political standpoint. Within these parameters 20th Century design movements , styles, manufacturers and retailing will be considered to assist students to understand the designer's role in society as well as to provide a context for the analysis of their designs.

SAHT2211
Eurocentred Visions: Grand Narratives in Western Art
School of Art History and Theory
UOC6 HPW3

To tell progressive stories about Western art, grand narratives were constructed. In these grand narratives, as this course reveals, Eurocentric and ethnocentric historical material was ordered into stories about Western nations becoming more and more civilised as signified by the development of perspective, the Classical canon, landscape and cityscape, portraiture and the nude from Ancient Greece to Modernism. Positioned as peripheral to this evolution or merely a sub-text to these grand narratives, Non-Western art, particularly that of Islam, was either excluded or misrepresented as uncivilised, regressive and barbaric. Issues of cultural difference capable of disrupting the seamless flow of Western art's evolution, such as gender relations, sexualities, ethnicities, nationhood, diaspora, work, patronage and money, criminality and disease, were disavowed. To deconstruct these grand narratives, this course will use these exclusions and denials as its tools. Drawing upon interdisciplinary models for reconstructing history provided by Michel Foucault, Edward Said, Jonathan Crary and Abigail Solomon-Godeau, amongst others, it will explore how to rewrite histories of art in relation to non-western art, homoeroticism, manhood and the 'heterosexual imperative', prostitution and 'the venereal peril', health, disability and hysteria, the alienated and displaced, the 'orientalised other', the nuclear family and 'docile bodies'.

SAHT2212
Art and Cultural Difference
School of Art History and Theory
UOC6 HPW3

The conceptualisation of difference, diversity and multiplicity, both within and across cultural boundaries, has occupied a central position in the historical trajectory of Art, particularly since the end of World War II and the advent of a variety of neo and postcolonialisms. Topics covered include the relationship of theories of ethnicity, gender, race, class, culture, knowledge and power to the complex history and practices of art. These will be addressed by critically examining Adorno, Benjamin, Freud, Irigaray and Marx, and theorists and artists of colonial struggle such as Kahlo, Rivera, Sartre and Fanon. The implications for art of such contemporary issues as multiculturalism will also be included.

SAHT2213
Memory and Self
School of Art History and Theory
UOC6 HPW3

This course traces contemporary ideas of body and subjectivity through the work of a range of artists and writers. Its major focus is on the experience of memory and self-understanding. It addresses the questions of how memory is constituted and how it is crucial to our sense of self; how memory affects our relations to images and objects, and how memory is represented. Themes include: horror and humour, gesture, performativity and mimesis. Contemporary art and writing practices will be used as the basis for a creative engagement with theoretical ideas.

SAHT2214
Approaches to Australian Art
School of Art History and Theory
UOC6 HPW3

This course introduces some of the preoccupations of Australian art in the years since colonisation. Issues to be discussed include: the notion of the artist as a recorder in the 19th century and a tourist in the 20th; the search for a 'Great' Australian artist; national identity and art; links between art and commerce; the idea of 'modern' in an Australian context; and attempts to place Australian art in an international context.

SAHT2218
Theories of the Digital
School of Art History and Theory
UOC6 HPW3
Excluded: 4810 Bachelor of Digital Media students.

This subject explores theoretical frameworks within which the content, meaning, aesthetics and impact of digital and new media practice can be critically analysed and evaluated. Topics covered include metaphors of convergence and divergence that structure digital media and aesthetic production; interfaces (particularly the interface between the body and technology), theories of the real, virtuality, materiality and immateriality, and concepts of post-media and software aesthetics. Experimental, innovative and conceptually sophisticated practitioners and current critical debates and theories relating to digital media are considered.

SAHT2221
Writing for Art and Design
School of Art History and Theory
UOC6 HPW3

This course examines different genres of writing on the visual arts, with an emphasis on contemporary practices. Newspaper reviews, journal criticism, scholarly catalogue essays, in house catalogue notes, coffee table art books and collaborative works between artists and writers are studied in terms of their connections to other genres of writing (for example journalese, fictional narrative, descriptive prose). The course looks at these writings within specific cultural fields and their assumed sets of values. It also demonstrates how such categories play an active role in the shaping and production of meanings in art. Students also become participants in the writing, editing and design of the School of Art Theory's magazine, Artwrite.

SAHT2222
Methods of Research and Writing on Art and Design
School of Art History and Theory
UOC6 HPW3

This course is primarily concerned with the teaching of skills necessary to conduct specific research projects. The focus is on methods of researching primary material as well as locating archival documentation, in order to evaluate and effectively utilise different forms of visual and theoretical evidence for research projects. Topics include field work methods, such as oral history, together with knowledge of indexing procedures, statistical analysis and the utilisation of computer resources, as well as critical methodologies for appraising research material. The course also includes topics to address the logical construction of a valid argument, the rhetorical promises of different genres of writing and the delineation of ideas.

SAHT2223
Modern Art and French Imperialism
School of Art History and Theory
UOC6 HPW3

When Paris was invaded by Nazi troops, the art writer Harold Rosenberg reminisced how it had once been "the Holy Place of our time. The only one.". Until then, a Modern Art market had flourished in Paris, unsurpassed in scale and complexity by any other nation. It was actively supported by the French Third Republic. Whilst encouraging artists worldwide to come to Paris, it also encouraged international collectors to acquire Modern Art made in France. At the same time, the Republic also bought artwork for transmission to French provinces and colonies in its ethnocentric conviction that those at the 'peripheries' would become "civilized" by this "mission". This course will explore how Paris evolved as a unique field of cultural production through the network of institutional interrelationships forged between the French State, Paris Salons, art dealers and patrons. It will examine the huge number and national diversity of artists from Rupert Bunny and Marie Vassiliev to Pablo Picasso, who flocked from cities as geographically diverse as Sydney, St. Petersburg and Barcelona to this Modern Art Centre. By charting the dissemination of acquisitions, it will reveal how cultural imperialist strategies deployed by America during the Cold War, were alive and well in twentieth-century France.

SAHT2224
Art and Biogenetics: Breeding the Body Beautiful
School of Art History and Theory
UOC6 HPW3

When Eugenic Sterilisation became law in the Third Reich, American, Australian, European and British Eugenic Societies immediately congratulated Hitler. He, in turn, commended their eugenic policies and acknowledged them as his precedent. Far from being an isolatable phenomenon, this course will then reveal why Nazi eugenics may be perceived as the extreme realisation of a biogenetic culture that flourished worldwide. By examining images and exhibitions of the body beautiful, alongside those of degeneracy, it will explore different ways in which art propelled the quest for genetic perfection. Through an investigation of the artwork of such critical Modernists as Marcel Duchamp, it will expose ways in which art was also able to parody this quest.

SAHT2225
Decadents, Dissidents, and Degenerates: Fin-de-Siecle Symbolism to Nazi Degenerate Art Exhibitions
School of Art History and Theory
UOC6 HPW3

Before the Third Reich came to power, Adolf Hitler vowed to unleash 'a thunderbolt against degenerate art' as epitomized by Symbolism, Cubism, Futurism, Expressionism, Dadaism and Surrealism. Once he was Chancellor, Hitler commanded President of the Third Reich's Chamber of Art, Adolf Ziegler, to extract 16,000 'degenerate' artworks from German museums. Before being sold or burnt, they were exhibited in Degenerate Art Exhibitions designed to expose this art as pathological in their words, 'the product of sick minds and bodies'. Yet the Third Reich was by no means the first to conflate 'degeneracy' with dissonant Modernism. Its genealogy was spawned when Darwinism became a dominant discourse in Western nations seventy years earlier and any sign of deviation from 'normalcy' signified the threat of racial extinction. Its best-known theorist was Max Nordau who, aghast at images of bodily distortion and sexual transgression, declared that "degenerates are not always criminals, prostitutes, anarchists, and pronounced lunatics", but "decadent authors and artists". Starting with such Symbolist painters such as Gustave Moreau, and writers such as Huysmans (author of 'Against Nature'), this course will investigate the relationship of self-proclaimed 'decadents' to the new aetiologies of neurology and sexology, the diagnosis of such disorders as hysteria and neurosthenia, as well as the new practice of psychoanalysis. It will examine their linkage with such twentieth-century dissidents as Khnopff, Munch, Nolde, Ibsen, Alfred Jarry, Gauguin, Picasso, Kees Van Dongen, Kirchner, Picabia, Duchamp, Max Ernst, Sonia Delaunay, Hannah Höch, Suzanne Valadon and Meret

Oppenheim, to examine why those artists, who featured so prominently in Nazi Decadent Art Exhibitions, were long derided elsewhere as decadent, dissident and degenerate.

SAHT2227
Fashion History and Theory
School of Art History and Theory
UOC6 HPW3

The course examines the history of Western fashion from the Middle Ages to the present day. Methodologies employed include those of art history, cultural and media studies, anthropology, history, and economic history. Theories of gender, sexuality and the politics of identity will be emphasised. The social and economic histories of making and consuming clothes and the relationship of dress to the body, and to urban and domestic space, which will provide a focus for the course. Topics to be studied include Elizabethan court dress, representation and politics, the 18th-century consumer revolution, the rise of the dictator-designer within modernism, and post-modern dressing.

SAHT2301
Design History, Theory and Aesthetics 2
School of Art History and Theory
UOC6 HPW3
Prerequisite: SAHT1301

This course reflects upon histories, theories and practices in the realm of design in order to provide an analytical framework for understanding present and future design from the designer's viewpoint. Within this context a variety of themes and issues will be analysed in relation to; the "designer" product, the designer's role in society, designer education, the designer and mass production and consumption. This course through further reflection on historical and contemporary theories and practices in design, will address such specific issues as packaging, marketing and retailing of designed products as well as aspects of consumer psychology. The communication qualities inherent in design products, graphics and environments will be considered in some depth.

SAHT2601
The Art of Ancient Cultures: Assyria, Mesopotamia, Egypt, Persia, Greece & Rome
School of Art History and Theory
UOC6 HPW3

How do we 'read' objects and images from cultures that lived thousands of years ago? What methods can we use to enhance our appreciation and understanding of ancient artefacts? With knowledge and understanding increasing with every new discovery, where does this leave Prehistory? These and other commonly asked questions will be answered in this course, which provides an historical, cultural and theoretical study of the Ancient world through examining a variety of objects and images. This will include presentation of a range of thematic studies that examine the arts of the Ancient world including the role of jewellery, body ornament and clothing towards defining gender, status and wealth. A cultural decoding of the symbolic messages contained within ancient ornament and decoration will be presented from a variety of perspectives. The culture of death (including burials, rituals and ceremonies) and the artefacts associated with this, will be examined. The course will also include a discussion of a variety of objects and images that portray the history of theatre, sport and other forms of entertainment.

SAHT2605
The Avant-Garde and the Academy, the Politics of Colonialism and
School of Art History and Theory
UOC4 HPW2

Following Napoleon s blaze of European and colonial conquests and his downfall, a waning of revolutionary fervour marked early 19th century reaction in Europe, in which church, monarchy and such authoritarian institutions as The Academy for Arts became reactivated, but subsequently contested. The schism between Neoclassism and Romanticism, concepts of art-for-art s-sake, oppositions to academic art, the rise of Orientalism , the emergence of photography and formations of an avant-garde are issues which will be examined in this context, through such artists as Ingres, Canova, Goya, Turner, Daumier and Delacroix.

SAHT2606
The Painting of Modern Life: French and English Painting in Focus
School of Art History and Theory
UOC6 HPW3

This course focuses on Realist and Impressionist painting in the second half of the nineteenth century in France and England. The work is considered within changing social, political and cultural contexts, with special attention paid to its critical reception in reviews and cartoons. Questions to do with gender, class, sexuality, labour and leisure are examined in relation to such well known artists as Courbet, Manet, Morisot, Degas, Holman Hunt and Ford Madox Brown, as well as lesser known figures including Augustus Egg, Luke Fildes and Francois Salle.

SAHT2612
Art and its Others: Interdisciplinarity in Contemporary Art
School of Art History and Theory
UOC6 HPW3

This course examines interdisciplinarity as a major trend in post sixties and contemporary visual art. It studies international and Australian art from the sixties to the present that interfaces with other cultural fields, including design, architecture, science, environment and pornography. The course interrogates the historical and theoretical implications of visual art's increased dialogue with other disciplines.

SAHT2633
Peripheral Visions: Perspectives of Colonial and Post-Colonial Art
School of Art History and Theory
UOC6 HPW3

This course will investigate the effects of the spread of Euro-American modernism through the so-called Third World during the 20th century and particularly during the period following World War II. It will analyse the ways in which different cultures selectively adopt and transform aspects of various modernist styles and the ways in which these styles are incorporated into indigenous visual practice. It will examine such matters as the relationship between economic imperialism and cultural production, the transition from colonialism to postcolonialism, the effects of tourism and the value of 'decentred' postmodern modes of understanding in a Third World context. Art of the Asia-Pacific region, Africa and Latin America will be addressed. Some general knowledge of the evolution of modern and postmodern art will be assumed.

SAHT2641
Modern Aesthetics: From the Enlightenment to the 21st Century
School of Art History and Theory
UOC6 HPW3

This course introduces students to key critical philosophies of modern aesthetics from the 18th Century to the present. Specifically, it examines the relevance of aesthetic theories of Kant, Hegel, the German Romantics, Nietzsche, Lyotard, Derrida, psychoanalysis and marxism to new modes of perceptual and affective experience associated with postmodernity. Themes investigated include debates between formal and historical aesthetic theories; the revival of aesthetic theory in the visual arts in recent decades; responses to the spectacular image culture of postmodernity; and the relationship between aesthetics and ethics. The course addresses how key currents of modern aesthetic theory might be applied and revised in light of contemporary social and cultural conditions.

SAHT2642
Art, Gender, Sexuality and the Body
School of Art History and Theory
UOC6 HPW3

This course concentrates on art after 1960 which deals with issues of gender, sexuality and the body. The course will start with postminimalism, performance and body art. It examines the rise of women's art in the 1960s and 70s, the first art to self-consciously attempt to represent gender difference, and will track the shifting concerns and debates in art about the body, gender and sexuality from then until now. This period coincides with an explosion of feminist theory and the widening of feminist debates to include questions of sexuality, race and ethnicity. The course will explore the particular ways in which these debates are refracted through art practice and art history. Key questions to be explored in the course include: Is there a feminine aesthetic? Is the depiction of the body linked to essentialism? Is masculinity the new dark continent? How can the body be used as an expressive medium? How does art practice relate to both identity formation and fantasy? Topics to be covered include: the rise of body art; performance and masochism; identity and essentialism; postmodern irony; female and male masquerade; queer and gay art; and the rise of bad girl and bad boy art in the 1990s.

SAHT2643
Pornography, Art and Politics
School of Art History and Theory
UOC6 HPW3

This course will explore the boundary between art and pornography and the social function of that boundary in western society. It will look at the ways in which bodies are eroticised and/or designated as pornographic or perverse. Concepts such as fetishization, voyeurism, sadism and masochism will be discussed in relation to art history and contemporary art practice. The politics of pornography will be debated in relation to such issues as gender/feminism, child sexuality, censorship and AIDS.

SAHT2644
Psychoanalysis and Art
School of Art History and Theory
UOC6 HPW3

Psychoanalysis is a key approach to the study of art and visual culture. This course will consider the work of the founder of psychoanalysis, Sigmund Freud and three of the main streams of contemporary psychoanalysis his work has spawned: object relations, Kleinian and French Freudianism (Lacan, Kristeva). It will also examine an emerging area of research: affect theory. The course will examine the key concepts from psychoanalysis that have been applied to the analysis of art, such as: dreams and primary processes, sublimation, the uncanny, the fetish and abjection. Each week we will read a key psychoanalytic text and then consider what it illuminates about the nature of art in general, or specific works of art. The aims of this course are to examine how psychoanalysis is used to interpret: the function of art, the origins of vision and creativity, and the unconscious processes that works of art deploy or activate.

SAHT2661
Experimental Film and Video since the 1960s
School of Art History and Theory
UOC6 HPW3

This screenings course will offer an overview of experimental film and video from the 1960s to the present, incorporating international and Australasian practices. It examines neo avant-garde practices and theories of the 1960s and 1970s, as well as film and video art of recent decades. The course addresses the history and significance of the current proliferation of the moving image in the international art world and examines the impact of new technologies.

SAHT2663
Avant-Garde Cinema: 1900-1950
School of Art History and Theory
UOC6 HPW3

This screenings course will survey avant-garde cinema of the first half of the Twentieth Century. It will include historical and theoretical examination of Abstract Cinema, Dada and Surrealist film, Soviet Cinema, German Expressionism, Impressionist film, and avant-garde film of the U.S. The course will give students grounding in the early history of avant-garde cinema, framed by key film theories.

SAHT2667
After Modern Sculpture: Installation, Structures and Space
School of Art History and Theory
UOC6 HPW3

This course examines the radical changes in sculptural practices from the mid-1960s to the present. Movements to be analysed include: Fluxus, Arte Povera, Minimalism, Land Art, Postmodernism, and emerging trends such as Designer-Artists (Jorge Pardo, Andrea Zittel). Particular attention will be given to the emergence of installation art and the questioning of the integrity of the art object. The course aims are: to trace and examine the historical and philosophical understandings of late modern, postmodern and contemporary spatial and sculptural practices; to consider how these practices relate to conceptions of time, space and subjectivity and; to examine two recurrent themes in the discussion of installation: the total work of art and the spectacle.

SAHT2676
Art, Technology and New Media
School of Art History and Theory
UOC4 HPW2

This course explores the ways in which artists have responded to developments in technology and new media. A range of practices are examined from digital media to holography to techno-performance. In addition to investigating the work of specific artists, the subject investigates the ways in which museums and galleries are responding to the demands of new media and developing new strategies of presentation. The course will also introduce a range of theoretical work on new media and on virtual reality. In particular it will debate the nature of virtual experience, examining the temporal and spatial implications of operating within a virtual environment. The course incorporates a certain amount of hands-on experience and also demonstrations of artist's work.

SAHT2677
Time-Based Art: Histories and Themes
School of Art History and Theory
UOC4 HPW2

This course will look at changing notions of identity, time and space, cultural production and media brought about by our engagement with networked, nonlinear communications. At a conceptual level it will look at new theories of complexity and connectivity, globalisation and the information society. There will be an emphasis on how net communication, art and design have changed our relation to time-based media. Students will be asked to locate and research aspects of net culture such as virtual worlds and to look at new forms of animation used online. Particular attention will be paid to how artistic practices and productions have developed through networked cultures and to the growing genre of net art.

At a practical level, students can expect to develop research and network communication skills by taking this course. The course will focus on an engagement with net structures such as search engines, hypertext, databases, flash animation and basic web design. It is envisaged that the course will trial and develop several online teaching facilities such as a chronologically web log or 'blog' that experiements with time in online spaces.

SAHT3211
Art After Postmodernism
School of Art History and Theory
UOC6 HPW3
Excluded: SAHT3105.

This course will re-examine a number of theoretical approaches to the understanding of images and objects that have been addressed during the course. These approaches will be applied to a range of artworks produced in Australia and internationally over the last decade or so. It will offer an overview of many of the contemporary developments, themes and issues that have concerned artists in the period up to and beyond postmodernism. Issues to be considered include: how objects and images come to have meaning; the ways in which artworks differ from other objects; the relations between language and visual images; the ways images and objects can be seen and the sort of viewer(s) they imply; the different forms of perceptual address that we bring to artworks, including visual, tactile and kinaesthetic; and the significance of art images and objects in relation to the politics of information dissemination, gender, postcolonialism, class and ethnicity.

SAHT3212
Art and Everyday Life
School of Art History and Theory
UOC6 HPW3

This course examines the major structures and ways of thinking which have both constituted and transformed the practices of art and criticism and evaluation of art in an era characterised by the pervasiveness of mass media and the aestheticisation of everyday life. The course explores the forms and significance of popular culture in the 20th century, focussing on such phenomena as consumerism, mass media, TV and advertising, subcultures, the city and the suburb. The interdisciplinary development of cultural studies provides tools for reading artistic strategies in the light of television, film, computer imaging, the popular press and advertising. The work of theorists such as Jean Baudrillard, Michel de Certeau and Meaghan Morris is applied to these areas and critically examined.

SAHT3213
Museum Studies: Exhibitions, Collections and Material Culture
School of Art History and Theory
UOC6 HPW3

This course reviews theoretical frameworks and current research on museums and art museums. It examines the history of collecting and exhibiting, and the museum as an institution. Taking the new museology as its theoretical starting point, it considers the cultural role of museums. It compliments the practical emphasis of the professional contexts strand within the core of the BArtTh by exploring critical theoretical approaches

to museum culture. Its emphasis is on material culture, objects, artworks and curatorship in the contexts of collections and exhibitions.

SAHT3214
Research Project
School of Art History and Theory
UOC6 HPW3

This course provides an opportunity for students to complete a sustained piece of research and to develop their skills of independent writing and research. Students can choose to research a topic concerned with either a particular artist, art writer, art historian or philosopher, an institution or particular issue, such as modernity, nationalism, orientalism or gender. Students must then, under the supervision of the assigned academic staff, conduct independent archival and field research. The writing of a 6,000 word paper on the basis of this research will allow the development of such key research practices as cohesive methodology, critical evaluation and classification of research material, valid argumentation and writing skills, as well as speculation and a clear delineation of ideas. This course is recommended for students who are considering undertaking Honours.

SAHT3221
Contexts, Professions and Practices
School of Art History and Theory
UOC6 HPW3

This course orients students towards professional practice in arts administration, curatorship, writing and other arts-related professions. Students will critically consider the professionalisation of the arts, and the notion of the arts and cultural industries. They will investigate the nature of employment and practice, drawing on theoretical and case study approaches. They will examine the idea of professional skills, and have the opportunity to practise some skills and knowledge-based tasks, such as developing exhibition and funding proposals, preparing budgets and reports, developing marketing and promotion strategies, preparing education and/or public programs, and seeking sponsorships. The aims of the course are to prepare students for the Industry Placement, to help clarify career goals, to give students an understanding of professional practice and to ensure that they develop the confidence in their preparation for working in the arts.

SAHT3301
Design History, Theory and Aesthetics 3
School of Art History and Theory
UOC6 HPW3
Prerequisite: SAHT2301

Through reference to philosophers and scholars whose theories underpin historical and contemporary design practice, students will be encouraged to conceptualise and develop their own design philosophy. A number of specific design examples will be analysed in order to highlight the influence various theories of aesthetics and function has had on the design domain.

SAHT3613
Digital Theory and Aesthetics
School of Art History and Theory
UOC6 HPW3

Currently enrolled in a program at College of Fine Arts.

This subject explores theoretical frameworks within which the content, meaning, aesthetics and impact of digital media practice can be critically analysed and evaluated. Topics covered include rhizomic organisation of thought, temporality; interfaces (particularly the interface between the body and technology) and theories of the real, virtuality, materiality and immateriality. Experimental, innovative and conceptually sophisticated practitioners and current critical debates and theories relating to digital media are considered.

SAHT3614
Screen Culture
School of Art History and Theory
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

Information and screen culture is central to the shaping of the political and economic structures and cultural experience of contemporary global society. The impact of screen culture is pervasive and deeply integrated into everyday life and yet digital media are also capable of generating and communicating complex and highly critical cultural insights. Topics covered in this subject include authorship, virtual communities, utopianism, cyberculture, gaming, interactivity, privacy, censorship and intellectual property. Social responsibility and ethical action in digital media practice is explored through a critical understanding of the significance and impact of screen culture.

SAHT3669
Critical Theories of Photography
School of Art History and Theory
UOC6 HPW3

This course will critically examine the major ways in which photography has been theorised. Semiotic and post structuralist approaches to the photographic medium will receive particular attention. Other areas covered include realist theories of photography, aesthetic and contextualist approaches, and theories about the impact of digital technologies on the photographic image. The theories studied in the course will be applied to historical and contemporary examples of photographic practice.

SAHT3690
Special Project
School of Art History and Theory
UOC6 HPW3

From time to time, one-off opportunities arise for the College to offer special programs of study for credit. For example, supervised international experiences (such as study tours, exhibition participation or attendance, or special projects). This course is intended to facilitate the College in developing its educational program for undergraduate students by incorporating such opportunities into the academic program. Specific course outlines will be distributed detailing the academic content, objectives, assessment tasks and criteria, modes of teaching and learning, expectations and requirements of student participation. Please note that there may be costs involved (such as costs associated with travel, accommodation, meals and museum visits) in taking this course.

SAHT4211
Thesis A
School of Art History and Theory
UOC12 HPW0

This course comprises the first semester's research and writing which will lead, in Session 2, to the completion of a research thesis of 15-18,000 words, or equivalent research project (for example, in curatorship), on an approved topic. Students are expected to consult with the Honours Co-ordinator in February about their topics. A supervisor will be assigned no later than mid-March, when work on the thesis should commence. Students attend and contribute to Thesis Seminars and such presentations and seminars as required. Satisfactory participation in the Thesis Seminar and presentations is a requirement of the successful completion of Thesis A. Thesis A is a prerequisite for completion of Thesis B.

SAHT4212
Honours Seminar
School of Art History and Theory
UOC6 HPW3
Corequisite: SAHT4211 Thesis A.

The Honours seminar course is to be taken in the first session of Honours enrolment. It complements the Honour Thesis subject. The course is designed to enhance skills in research and writing necessary for the preparation of an honours thesis in art history and theory. Topics addressed include: refining a research topic, writing an abstract, exegetical and analytical skills, visual analysis and thesis structure.

SAHT4213
Thesis B
School of Art History and Theory
UOC24 HPW0
Prerequisite: SAHT4211 Thesis A.

Thesis B follows on from Thesis A and is the completion of a research thesis of 15-18,000 words, or equivalent research project (for example, in curatorship), on an approved topic. Students attend occasional intensive workshops and seminar presentations as required.

SART1301
Introductory Studies: Drawing & Painting
School of Art
UOC6 HPW3

This course will introduce students to the basic relationships between drawing and painting. Through a series of projects, incorporating the study of line, tone, colour, proportion, composition and the use of media,

students will be encouraged to explore creative possibilities of these areas in order to make an informed choice of core studies for sessions 2-6.

SART1302
Introductory Studies: Sculpture & Time Based Art
School of Art
UOC6 HPW3

This studio based course introduces the student to the broad experience of working with sculpture focusing on installation, object, performance and with time based art focusing on sound, video, performance. Emphasis is on the development of a keen critical awareness by looking at the content and context of contemporary art and culture. The questions of intent, content, process and context are explored in relation to the production of project based works that lay the foundations for the development of the individual student's artistic language and allow them to make an informed choice of core studies.

SART1303
Introductory Studies: Photomedia & Printmaking
School of Art
UOC6 HPW3

This studio based course introduces the student to the broad experience of working with photomedia and printmaking focusing on image and object. Emphasis is on the development of a keen critical awareness by looking at the content and context of contemporary art and culture. The questions of intent, content, process and context are explored in relation to the production of project based works that lay the foundations for the development of the individual student's artistic language and allow them to make an informed choice of core studies for sessions 2-6.

SART1305
Drawing/Painting 1B
School of Art
UOC6 HPW3

This course will assist students to develop and extend the basic concepts and skills in drawing and painting. Students will be encouraged to understand both the inter-relationship of form and content and the creative possibilities of various media and technologies. The importance of analytical observation will be emphasised along with investigations into composition, design and colour. Students will be expected to attain a basic competence in drawing and painting by the end of the session.

SART1306
Printmaking 1B
School of Art
UOC6 HPW3

This course will introduce students to basic concepts and skills in printmaking, developing a firm conceptual base from which they will expand in their continuing studies in the discipline. Students will be encouraged to understand the inter-relationships of form and content and the creative possibilities of various media. In line with current art practice expression is encouraged through the use of traditional and contemporary print media including etching, digital imaging, lithography, paper moulding, photocopying, relief and screen printing. Students will be expected to attain a basic competence in printmaking by the end of session. Studio health and safety and the appropriate handling and presentation of printworks will be covered.

SART1307
Sculpture/Performance/Installation 1B
School of Art
UOC6 HPW3

This is a studio based course that provides a range of practical skills and processes along side an awareness of sculptural language, such as metaphor, narrative, symbolism and quotation. A range of media and processes are explored, as well as practical inductions and teaching of manipulative skills in a variety of materials. The course focuses on current sculptural practice including work sited on, or derived from the body, the encoded object, installation, and work devolving from an awareness of time, materials and processes. Aesthetic considerations such as scale, materiality, duration, mass, placement are analysed, towards developing increased sensitivity and perceptual awareness.

SART1311
Drawing/Painting 1A
School of Art
UOC6 HPW3
Prerequisite: SART1301 Introductory Studies: Drawing & Painting.

This course will assist students to develop and extend basic concepts and skills in drawing and painting. Students will be encouraged to understand both the inter-relationship of form and content and the creative possibilities of various media. The importance of analytical observation will be emphasised along with investigations into historical precedents and conventions. Students will be expected to attain a basic competence in drawing and painting by the end of the session.

SART1313
Printmaking 1A
School of Art
UOC6 HPW3
Prerequisite: SART1303 Introductory Studies: Photomedia & Printmaking.

This course will introduce students to basic concepts and skills in printmaking, developing a firm conceptual base from which they will expand in their continuing studies in the discipline. Students will be encouraged to understand both the inter-relationships of form and content and the creative possibilities of various media. In line with current art practice expression is encouraged through the use of traditional and contemporary print media. The importance of analytical observation will be emphasised. Students will be expected to attain a basic competence in printmaking by the end of session.

SART1314
Sculpture/Performance/Installation 1A
School of Art
UOC6 HPW3
Prerequisite: SART1302 Introductory Studies: Sculpture & Time Based Art.

This studio based course provides the basic foundations for sculptural studies through a series of projects that are a trajectory into the students' personal creative enquiries. The projects foster a relation between concept to process, and intention to outcomes. Critical awareness and interpretive skills are developed along with an understanding of basic sculptural languages such as metaphor, narrative, metonymy, space, materiality, form, mass and scale. The interdisciplinary nature of contemporary sculptural practice is emphasised and includes a diversity of experiences such as producing works using time, light, installation, sound, collaboration and performance, as well as exploratory applications of traditional forms and methodologies.

SART1361
Etching
School of Art
UOC6 HPW3

This course provides an introduction to the basic principles and techniques of intaglio printing, including etching, drypoint and engraving. Through investigation and selection students will develop an understanding of the technical means and aesthetic qualities of the original print. Students will attain a level of competence in intaglio processes and develop their potential as creative artists in the printmaking medium as well as investigate the historical precedents of the discipline.

SART1401
Foundation Studies: Draw/Paint/Print (BArtEd)
School of Art
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course will introduce students to a dynamic studio methodology that integrates the theory and practice of the visual arts and provides a basic overview of its current and historical contexts. The focus of this course will be on the use of drawing as a platform for interdisciplinary artwork in other 2 dimensional forms. Through sustained inquiry, students will have the opportunity to be critical, inventive and experimental in their approach. An emphasis is placed on the student's own developing practice.

SART1402
Foundation Studies: Sculpt/Photo/Time (BArtEd)
School of Art
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course introduces three-dimensional, and photo-media based art practices by engaging students in a series of structured projects to encourage individual exploration and expression. The focus of the course

is to extend existing two dimensional skills into the areas of sculpture and still and moving photography. Through sustained inquiry, students will have the opportunity to be critical, inventive and experimental in their approach. These studies will expand the range of critical and practical skills through which the student may develop a personal visual language and ideas whilst further developing their own art practice.

SART1501
Painting
School of Art
UOC6 HPW3

The aim of this course is to enable the student to develop skills and an intuitive awareness of aesthetic values in painting so that the student can use the discipline of painting as a means of individual artistic expression. The student will explore theoretical concepts and develop relevant skills as a basis for making paintings. The student will undertake projects aimed at encouraging an individual, creative and professional approach to painting.

SART1502
Drawing
School of Art
UOC6 HPW3

This course will enable students to develop a command of drawing as a visual arts discipline and to relate the art of drawing to other areas of creative endeavour. The student will explore various aspects of drawing and develop competence and confidence in drawing. The student will undertake exercises which will emphasise drawing as a means of creative expression, and also as a tool of research in the visual arts.

SART1581
Screen Printing
School of Art
UOC6 HPW3

This course aims to introduce the student to all techniques involved in screen printing. Through investigation and selection students will develop an understanding of the technical means and aesthetic qualities of the original print. Students will investigate the historical precedents of these processes in the context of art practices. These courses will deal with skills and techniques, experimental approaches, the relationship between the technical and aesthetic properties of prints and the ability to assess the results of one's own work.

SART1591
Printmaking
School of Art
UOC6 HPW3

In line with current art practice, expression is encouraged through the use of traditional and contemporary print media to be chosen (dependant upon availability) from the range of etching, digital imaging, lithography, paper moulding, photocopying, relief and screen printing. The aim of this course is to enable the student, by application of theory and developed skills, to create print-based works in both two and three dimensions. The student will undertake projects, either as separate entities or combined in installed pieces, aimed at encouraging an individual, creative and professional approach to printmaking.

SART1601
Sculpture
School of Art
UOC6 HPW3

Through a program of practical studio projects, students will experiment with sculptural methods, ideas, techniques and mediums to develop a series of works. Through studio practice, group discussion and individual tutorials, students will consider aesthetic, conceptual, technical and material factors towards the fabrication of these works. The projects will introduce students to a variety of approaches that are characteristic of the breadth of contemporary art practice. Pertinent research and a studio theory project will broaden the student's appreciation of contemporary sculpture will also support the student's art practice.

SART1606
Drawing for Media
School of Art
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

Various drawing media will be introduced to the student and their applications and use explored. This course aims at making the student proficient in the depiction and understanding of line, space, volume and proportion, using a variety of different media. The fundamentals of drawing taught in this unit will be orientated towards its use as a tool in the solving of creative problems. This subject encourages the use of drawing, perspective, and the projection systems, as elements in the manipulation and creation of space on the two dimensional format, and analysis and clarification of tasks and concepts.

SART1621
Installation
School of Art
UOC6 HPW3

This course provides the opportunity to explore the various forms and disciplines three-dimensional activity can take in contemporary art practice. This course is designed to allow flexibility for both multimedia experimentation and specialisation in the exploration of the construction, installations and spaces as an expressive vehicle. This course is studio based with an emphasis on the critical analysis of research, experiential learning and conceptual development. This discussion is centred around a rigorous studio theory program, conducted on the studio floor and in tutorials.

SART2320
Drawing/Painting 2A
School of Art
UOC6 HPW3
Prerequisite: SART1311 or SART1401.

In this course, students will begin the investigation and imaginative interpretation of conventions of the disciplines of drawing and painting. In consultation with lecturers, students will examine and begin to develop a program of studio studies which demonstrate an understanding of contemporary and historical pictorial theories.

SART2322
Printmaking 2A
School of Art
UOC6 HPW3
Prerequisite: SART1313 or SART1401

In this course students will investigate and imaginatively interpret the significant concepts and conventions of the disciplines within printmaking. In consultation with lecturers, students will begin to develop a program of printmaking studies which reflects their individual focus within the printmaking discipline. Students will be encouraged to develop concepts relating to the characteristics of specific media in the context of contemporary practice.

SART2323
Sculpture/Performance/Installation 2A
School of Art
UOC6 HPW3
Prerequisite: SART1314 or SART1402

This studio based course supports the development of the individual student's sculptural ideas and through seminars, tutorials and critical evaluation, broadens the students' awareness of related issues in contemporary thought, sculptural theory and practice, and diverse areas of concern in the social and cultural environment. Students may choose to produce divergent or interdisciplinary works such as, site specific, temporal, ephemeral or performative installations, or develop particular sculptural forms such as object making or body works. The emphasis at this stage is on an open-ended, exploratory investigation of sculptural language, the stimulation of the imagination, and the development of creative ideas and rigorous studio methodologies through challenging project work. This process is supported by the acquisition of skills pertinent to the students' needs, including the presentation of projects, field work, studio theory and documentation of completed works.

SART2330
Drawing/Painting 3A
School of Art
UOC6 HPW3
Prerequisite: SART2320

In this course students will investigate and imaginatively interpret concepts relevant to the disciplines of drawing and painting. In consultation with lecturers students will develop a program of studio studies which reflect

their individual interests and enable them to view their work in relation to both art history and contemporary developments.

SART2332
Printmaking 3A
School of Art
UOC6 HPW3
Prerequisite: SART2322

In this course students will continue to investigate and imaginatively interpret the significant concepts and conventions of the discipline of printmaking. In consultation with lecturers, students will further develop a program of printmaking studies which reflects their individual interests and which may be built upon and expanded in subsequent sessions. Students will be encouraged to develop concepts relating to the characteristics of specific media. Documentation and conservation of prints and printmaking will be covered.

SART2333
Sculpture/Performance/Installation 3A
School of Art
UOC6 HPW3
Prerequisite: SART2323

This studio based course continues to support the development of the individual student's sculptural ideas and through seminars, tutorials and critical evaluation, broadens the student's awareness of related issues in contemporary thought, sculptural theory and practice, and diverse areas of concern in the social and cultural environment. Students may choose to produce interdisciplinary works such as spatial, temporal, ephemeral or performative installations, or develop particular sculptural forms related to object making or works related to the body. The emphasis is on the transition from a reliance on set projects towards self initiated project work in consultation with lecturers. The representation of the students' ideas and studio methodologies are supported by the continued acquisition of skills pertinent to their needs, including the presentation of projects, field work, studio theory and the documentation of completed works.

SART2340
Drawing/Painting 2B
School of Art
UOC6 HPW3

In this course students will begin the investigation and imaginative interpretation of conventions of the disciplines of drawing and painting. Students will examine and interpret issues of space, form and structure within their emerging practice.

SART2342
Printmaking 2B
School of Art
UOC6 HPW3

In this course students will investigate conventions of the disciplines within printmaking. In consultation with lecturers, students will begin to develop a program of printmaking studies. Various media, techniques and aspects of printmaking will be examined, and students will be encouraged to develop work relating to the characteristics of specific media. Workshop procedures will be covered.

SART2343
Sculpture/Performance/Installation 2B
School of Art
UOC6 HPW3

This studio based course focuses on the students' sculptural practice, and the importance of skills acquisition, experimentation, interdisciplinary technologies, and the manipulation of materials. Practical aspects of professional practice are taught - the development of project proposals, the documentation of completed work, the formal exhibition of project work. Research skills are introduced to encourage an increased rigour in the realisation of ideas, including exploratory field work, preparatory drawing, journals, analysis and critique of work in progress and completed project work. Problem solving projects are devised to ensure a continued, lateral approach to the students' chosen areas of interest, which are addressed in self-initiated project work. Appropriate health and safety procedures are demonstrated, discussed and practised in the production of works.

SART2350
Drawing/Painting 3B
School of Art
UOC6 HPW3

In this course students will investigate and imaginatively interpret processes relevant to the disciplines of drawing and painting. Students will develop a program of studio studies which reflect their individual interests and enable them to view their work in relation to both art history and contemporary developments. Students will undertake investigations into the appropriateness of a range of media, materials and processes related to contemporary practice.

SART2352
Printmaking 3B
School of Art
UOC6 HPW3

In this course students will continue to investigate the discipline of printmaking. In consultation with lecturers, students will further develop a program of printmaking studies which reflects their individual interests and which may be built upon and expanded in subsequent sessions. Various media, techniques and aspects of printmaking will be examined, and students will be encouraged to develop concepts relating to the characteristics of specific media. Documentation and conservation of prints and printmaking will be covered.

SART2353
Sculpture/Performance/Installation 3B
School of Art
UOC6 HPW3

This is a studio based course with an emphasis on an increasingly rigorous representation of ideas, and the development of a speculative studio methodology. Self initiated project work is supported by practical workshops, set project work, and excursions to generate ideas, develop a creative visual language, acquire skills, including research skills, perceptual acuity, conceptual analysis, technical proficiency, explorative problem solving. This course develops the student's documentation skills, and focuses on a considered presentation of completed works of a standard appropriate to this level of study.

SART2361
Advanced Etching
School of Art
UOC6 HPW3
Prerequisite: SART1361.

This course allows students to develop the basic principles and techniques of intaglio printing, including etching, drypoint and engraving. Through investigation and selection students will demonstrate an understanding of the technical means and aesthetic qualities of the original print. Students will attain a level of competence in a chosen process and develop their potential as creative artists in the printmaking medium in the context of contemporary practice.

SART2501
Life Painting
School of Art
UOC6 HPW3

The aim of this course is to enable students to develop a command of painting as a visual arts discipline whilst consolidating and extending previously acquired painting skills and applying these to various aspects of life painting. Students will explore those aspects of life painting which will involve an examination of the clothed form, the nude or portraiture whilst providing opportunities to work from observational, interpretive and conceptual approaches.

SART2502
Advanced Drawing
School of Art
UOC6 HPW3

The aim of this course is to enable students to develop a command of drawing as a visual arts discipline whilst consolidating and extending previously acquired drawing skills. Students will explore various strategies of drawing which provide observational, interpretive and conceptual approaches. Emphasis will be given to drawing as a means of creative expression and also as a tool of research in the visual arts.

SART2581
Advanced Screen Printing
School of Art
UOC6 HPW3
Prerequisite: SART1581.

This course aims to develop the student's emerging practice in the discipline of screen printing. Through investigation and selection students will demonstrate an understanding of the technical means and aesthetic qualities of the original print. These courses will deal with skills and techniques, experimental approaches, the relationship between the technical and aesthetic properties of prints and the ability to assess the results of one's own work in the context of contemporary practice.

SART2591
Advanced Printmaking
School of Art
UOC6 HPW3
Prerequisite: SART1591.

In this course students focus on a chosen area of traditional and contemporary print media (dependant upon availability) from the range of etching, digital imaging, lithography, paper moulding, photocopying, relief and screen printing. The aim of this course is to enable the student, by application of theory and developed skills, to create print-based works of an increasingly professional standard in both two and three dimensions. The student will undertake projects, either as separate entities or combined in installed pieces, aimed at encouraging an individual, creative and professional approach to printmaking in the context of contemporary art practice.

SART2601
Advanced Sculpture
School of Art
UOC6 HPW3
Prerequisite: SART1621 or SART1601.

The aim of this course is to develop in the student the capacity to resolve aesthetic, theoretical, technical and material considerations in the creation of sculptural works. Through a program of theoretical and practical studies, students will experiment with sculptural concepts, techniques and mediums toward the resolution of original works.

SART2621
Advanced Installation
School of Art
UOC6 HPW3
Prerequisite: SART1621 or SART1601.

This course provides the opportunity to develop skills in the various forms and disciplines three-dimensional activity can take in contemporary art practice. This course is designed to allow maximum flexibility for both interdisciplinary experimentation and specialisation in the exploration of the installations and space as an expressive vehicle. This course is studio based with an emphasis on the critical analysis of research, experiential learning and conceptual development. This discussion is centred around a rigorous studio theory program, conducted on the studio floor and in tutorials.

SART2818
Custom Printing
School of Art
UOC6 HPW3

This course will provide students with a valuable professional practice opportunity of engaging with a number of visiting artists in the operating of a print editioning workshop. Students will refine their technical and production skills and be exposed to professional methodology of the editioning process. Students will work with the artists and also realise a body of their own work from concept to final production. Previous printmaking skills are essential to undertake this course.

SART2819
Advanced Custom Printing
School of Art
UOC6 HPW3
Prerequisite: SART2818.

This course will further the students professional practice opportunity of continuing to engage with visiting artists in the operating of a print editioning studio. Students will perfect their technical and production skills and work within the professional methodology of the editioning process. Students will work with the artists and also realise a body of their own work from concept to final production to the highest professional standards.

SART2827
Sculpture Field Studies
School of Art
UOC6 HPW3

This course is designed to enable students with a particular interest in working in the natural environment to devote an extended and concentrated time in the field to research a chosen location. By direct experience and observations, students will deal with the natural world as a source of ideas and inspiration particularly relevant to the focus of their major studies in sculpture. Students will be encouraged to seek out, identify and document new material that they can gather in the field that they feel will be most relevant to their developing work in the studio.

SART2828
Artists' Books
School of Art
UOC6 HPW3

This course will enable students to acquire skills in the production of artists' books, folios and other limited edition publications. Examples of the different kinds of artists' publications will be examined. A variety of materials, skills and techniques, both traditional and contemporary, which are involved in book and folio production will be demonstrated. Students will have the opportunity to produce an artists' book.

SART2829
Anatomy for Artists
School of Art
UOC6 HPW3

This course will provide an introduction to human anatomy through the studies of comparative anatomy, skeletal structure, musculature and a perspective on the history and philosophy of anatomical images. A practical examination of the structure, form and function of the body will develop an understanding of the human figure. The course will also include the study of canons of proportion and cultural perceptions of the body.

Emphasis will be placed on direct observations of the nude. Students will draw from the skeleton, casts and prepared anatomical specimens. A range of approaches will be covered that will encourage students to understand basic anatomical constructs. This course is designed to be relevant to a broad range of student interests from diverse disciplines.

SART2831
Spatial Constructions in Drawing
School of Art
UOC6 HPW3

This course is designed to consolidate and extend previous drawing experience. Students will be engaged in the practical representation of form/space relationships within interior and exterior spatial contexts. Specific studies may be made from architecture, furniture, the street, land and natural forms. Particular reference will be made to human scale and location in each spatial context.

SART2832
Life Drawing
School of Art
UOC6 HPW3

This course will provide the opportunity for students at all levels of drawing experience to explore the drawing of the human figure. Students will develop an understanding of the structure and form of the human body. A range of approaches will be covered that will encourage students to understand relationships of contour, form, mass, volume, line, movement, rhythm and gesture. This course will provide an introduction to anatomy. Emphasis will be placed on direct observations and their interpretation in graphic media.

SART2833
Figurative Composition in Painting
School of Art
UOC6 HPW3

This course is designed to enable students to explore a range of visual images and ideas related to the human figure. The course will deal with practical and theoretical issues of figurative painting. Through interpretation and translation of two and three dimensions the student will examine space, form and composition. Students will also be encouraged to investigate the historical and contemporary contexts of the various genre associated with figurative representation.

SART2834
Experimentation in Mixed Media
School of Art
UOC6 HPW3

This course will facilitate experimentation across disciplines. Students will be encouraged to investigate the physical and aesthetic possibilities and limitations of a range of media and materials. Attention will also be given to developing such practical skills and methodologies as may be required by students' own workshop projects.

SART2835
Composition and Design
School of Art
UOC6 HPW3

This course will introduce students to the theory and application of two dimensional composition and design. It will examine terminology, proportion and format, elements and principles of design and colour theory. It will investigate the application of theories of composition, colour interaction and visual measurement.

SART2836
Colour
School of Art
UOC6 HPW3

This course will investigate the theory and practice of colour as it applies to the discipline of painting.

SART2841
Electronic Technologies
School of Art
UOC6 HPW3

This is a workshop based course which aims to provide the student with skills in the application of low voltage electricity and electronics sculpture. Basic understanding of power source and linking will precede instruction in the use of small motors and lighting units. This will progress to practical exercises in the use of simple computer boards.

SART2842
Metal Casting
School of Art
UOC6 HPW3

This is a practical class for those students seeking skills in metal casting and mould making. Through lectures, demonstrations and projects, students will learn how to make moulds of increasing complexity and to cast various metals, especially bronze. The theory of metal casting will be discussed as it applies to individual work required by the student.

SART2845
Drawing/Painting Field Studies
School of Art
UOC6 HPW3

This course is designed to enable students to experience the practical applications of a concentrated time in the field drawing and painting a range of visual motifs derived from a first hand encounter with a specific landscape. By working 'en plein air' from direct observations, this course will deal with the natural world as a source of ideas and inspiration and the practical solutions to working outside the studio environment. Students will also be required to use the material gathered in the field in developing studio work.

SART2846
Figurative Sculpture
School of Art
UOC6 HPW3

This is a workshop based course founded on observation and interpretation of the human figure. It contains information and practice concerning skills in representing the figure in various materials, with aesthetic considerations. Modelling and casting skills are followed by basic constructivist techniques.

SART2848
Advanced Drawing/Painting Field Studies
School of Art
UOC6 HPW3

This course is designed to enable students with a particular interest in the natural world to devote an extended and concentrated time in the field to researching a remote location through drawing. By direct encounter and observations, students will deal with the natural world as a source of ideas and inspiration particularly relevant to the thrust of their major studies in drawing and painting. Students will be encouraged to seek out, identify and document new material that they can gather in the field that they feel will be most relevant to their developing work in the studio.

SART2849
Alternative Printmaking
School of Art
UOC6 HPW3

This subject will allow students at any level of experience to explore the use of alternative materials and procedures in printmaking. Through lectures, demonstrations and projects students will gain understanding and skills in the uses of inexpensive and low-tech materials in the production of medium to large scale printworks. Emphasis will be placed upon investigating and exploiting the manner in which these materials and techniques influence the resulting imagery with respect to contemporary practice.

SART2851
Print as Object
School of Art
UOC6 HPW3

This course is designed to consolidate and extend previous printmaking experience. Students will be engaged in projects using both traditional and non traditional materials, which will allow them to explore the concept of a print in relation to the third dimension. Specific techniques will be demonstrated which involve the manipulation of three dimensional space. Beginning with exercises utilising comparatively low relief techniques such as embossing and paper casting, students will move towards the construction of multiples, and finally to the fabrication of printworks which are freestanding, or in the form of an installation piece.

SART2856
Digital Printmaking
School of Art
UOC6 HPW3

This course will introduce students to digital imaging and output procedures as they apply to printmaking. Through lectures, demonstrations and projects, students will gain understanding and skills in the use of computing software and hardware as a means to extending the possibilities for the creation of unique and original works of art in a fine art context. Emphasis will be placed upon the applicability of methods and materials to artistic purpose; the pros and cons of these procedures as compared directly with traditional print practice, and the extension of traditional print media through the incorporation of these practices into existing technologies.

SART2859
Abstraction for Drawing and Painting
School of Art
UOC6 HPW3

This course will assist students to develop and extend their awareness of concepts of abstraction. Through a series of studio based projects, students will gain knowledge of historic and contemporary models of abstraction as well as an understanding of formal developments as they apply to drawing and painting.

SART3340
Drawing/Painting 4A
School of Art
UOC6 HPW3
Prerequisite: SART2330

In this course students will concentrate on developing their individual creative interests. In consultation with lecturers, students will undertake a body of studio work which demonstrates the relationship between their own ideas and current concepts and conventions. Students will be encouraged to evaluate the relationship between intention and outcome achieved in their studio practice.

SART3342
Printmaking 4A
School of Art
UOC6 HPW3
Prerequisite: SART2332

In this course students will further investigate and resolve the significant concepts and conventions of the discipline of printmaking. In consultation with lecturers, students will further develop a program of printmaking studies which reflects their emergent practice. Various media, techniques and aspects of printmaking will be examined, and students will be

encouraged to consolidate concepts relating to the characteristics of specific media. Documentation and conservation of prints and printmaking will be covered.

SART3343
Sculpture/Performance/Installation 4A
School of Art
UOC6 HPW3
Prerequisite: SART2333

This studio based course centres upon the students' self initiated work programs which are devised in consultation with their lecturers towards the development of their emergent practice. Tutorials, lectures, field work, the acquisition of advanced skills in studio research methodologies and the presentation of seminars by each student about the content and contexts of their practice are employed to achieve a thorough knowledge and critical awareness of contemporary sculptural practice and an ability to articulate the concerns of their art making. An experimental approach to sculptural practice is encouraged and may take the form of divergent or interdisciplinary works such as site specific, temporal, ephemeral or performative installations, or the development of particular sculptural forms related to object making or works related to the body.

SART3350
Drawing/Painting 5A
School of Art
UOC6 HPW3
Prerequisite: SART3340

In this course students will concentrate upon their major creative interests. Students will be required to initiate and execute a body of studio work which demonstrates the relationship between their own work and current art practice. In this course students are expected to extend and develop the focus of their inquiry towards a coherent body of work which incorporates previous theories and concepts.

SART3352
Printmaking 5A
School of Art
UOC6 HPW3
Prerequisite: SART3342

This course will consolidate concepts and skills developed in previous sessions. Students will be required to execute a body of work which demonstrates the relationship between their own practice and contemporary issues. Students are expected to incorporates previous investigations into theory and concept.

SART3353
Sculpture/Performance/Installation 5A
School of Art
UOC6 HPW3
Prerequisite: SART3343

This studio based course focuses on the resolution of the students' self initiated projects which are devised in consultation with their lecturers towards the development of their emergent practice. Tutorials, lectures, field work, studio research methodologies, and the presentation of seminars by each student about the content and contexts of their practice are employed to achieve the synthesis of conceptual concerns and studio practice. The students are required to furnish support material and visual documentation of works produced during their sculpture studies, along with a body of works that represent the culmination of an intensive application of their study of sculptural practice.

SART3360
Drawing/Painting 4B
School of Art
UOC6 HPW3

In this course students will concentrate on developing their individual creative interests. In consultation with lecturers, students will undertake a body of studio work which demonstrates the relationship between their own concepts and outcomes. Students will specialise in a range of media pertinent to their individual practice with a demonstrable relationship between content and process.

SART3362
Printmaking 4B
School of Art
UOC6 HPW3

In this course students further investigate and interpret the significant conventions of the disciplines within printmaking. In consultation with lecturers, students will further consolidate a program of printmaking studies which reflects their individual interests. Various media, techniques and aspects of printmaking will be refined, and students will be encouraged to resolve the characteristics of their chosen media. Documentation and conservation of prints and printmaking will be covered.

SART3363
Sculpture/Performance/Installation 4B
School of Art
UOC6 HPW3

This is a studio based course that pursues a self initiated program of project work, formulated in consultation with the student's lecturers. Studio research training requires students to submit project proposals and to furnish support material for a series of works of a standard appropriate to this level of study. Students are required to demonstrate the intellectual and practical skills required to execute a coherent body of work. With lecturers' guidance students broaden their understanding of the relationship of their conceptual concerns to their personal working methods, their project management skills, enabled by a hypothetical public art project, strategies for research, the representation of ideas, and the presentation of their art work.

SART3370
Drawing/Painting 5B
School of Art
UOC6 HPW3

In this course students will concentrate on the resolution of their major creative interests. Students will be required to initiate and execute a body of studio work which demonstrates the relationship between their own work and current art practice. In this course students are expected to resolve the focus of their inquiry towards a coherent body of work which incorporates previous investigations into theories and concepts. Appropriate techniques of presentation for exhibition will be addressed in this course.

SART3372
Printmaking 5B
School of Art
UOC6 HPW3

This course will consolidate concepts and skills developed in previous sessions. Students will concentrate upon their major creative interests and will be required to initiate and execute a body of studio work which demonstrates the relationship between their own work and current art practices and concepts. Appropriate techniques of presentation for exhibition will be addressed in this course.

SART3373
Sculpture/Performance/Installation 5B
School of Art
UOC6 HPW3

This studio based course is comprised of a self initiated work program that is planned in consultation with the students' lecturers. The result of this program will be a body of work of a standard appropriate to this level of study, suitable for public exhibition. This process is supported by the continued acquisition of advanced skills, refined perceptual analysis, material manipulation, and technologies pertinent to the students' ideas. This includes the writing of project proposals, exploratory, interdisciplinary research, the planning, production and presentation of projects, and the documentation of completed works at a professional standard. This course provides a focus for the development of strategies towards the rigorous resolution of the student's artworks as an emergent, professional artist.

SART3501
Advanced Life Painting
School of Art
UOC6 HPW3

The aim of this course is to enable students to develop skills and an awareness of aesthetic values in life painting so that the student can use the discipline of painting as a means of individual artistic expression. The student will explore theoretical concepts and develop relevant skills to allow them to realise their ideas. The student will undertake projects aimed at encouraging an individual, creative and professional approach to painting.

SART3800
Professional Practice
School of Art
UOC6 HPW3

This course intends to prepare students for professional practice as artists (or as arts-related professionals) in order to ease the transition from student to the work place.

The course provides an overview of professional practice in Australia, including such topics as: the arts infrastructure and 'industries'; arts and cultural policy and funding; legal and commercial frameworks; professional ethics; intellectual property and copyright; service organisations, unions and professional organisations.

The course also introduces students to some of the basic skills needed for establishing professional practice in such areas as: small business organisation and management; taxation, finance and accounting; planning, marketing and promotion; preparation of applications (for grants, studios, scholarships), submissions (exhibitions, projects), documentations of work, and curriculum vitae.

SART3801
Special Projects - Studio
School of Art
UOC6 HPW3

This course is intended to facilitate the School of Art in developing its educational program for undergraduate students by incorporating such opportunities into the academic program. Specific course outlines will be distributed detailing the academic content, objectives, assessment tasks and criteria, modes of teaching and learning, expectations and requirements of student participation appropriate to the event/proposal. Please note that there may be costs involved (such as costs associated with travel, accommodation, meals and museum visits) in taking this course.

SART3860
Approaches to Digital Outputting for Artists
School of Art
UOC6 HPW3

The objective of this course is to give a wide selection of students an understanding of the diverse range of digital output options presently available at UNSW that are of potential interest to the artist. As the aim of the course is to teach and encourage innovation with outputting devices, it is desirable that students have knowledge of the software needed to create the output. Currently this software could include Photoshop, Illustrator, and Maya. Students will not require knowledge of all programs, but choose the one that relates to their desired output. Alternatively, students may do a course of study in the software required to achieve their desired output at the same time.

SART3862
Ceramic Shell Casting
School of Art
UOC6 HPW3

This sculpture course is an advanced studio workshop devised to extend the student's understanding, research skills and practical expertise in traditional and alternative metal casting technologies. Research and practice using a variety of casting techniques will be undertaken with a focus on ceramic shell casting. The conception and processing of the student's self initiated project work will be developed in the context of contemporary art theory and practice.

SART3863
Installation and Electronic Art
School of Art
UOC6 HPW3

This research based elective course in studio practice engages in the investigation of the theory, aesthetics and three dimensional applications of electrical, electronic and digital components in contemporary sculpture, performance, installation and digital media. Research will be studio based and it is expected that a diversity of ideas and practices within the electronic arts will be explored. The course will build upon the students' technical knowledge of electronic and digital technologies to conceptualise, process and present completed art works. The course has a studio theory component in which all students will actively engage in the research, discussion and debate of issues related to contemporary thought in electronic arts, such as interactive sculpture, installation, IT spaces, and the interface of the visual arts with technology and science.

SART3864
Advanced Electronics
School of Art
UOC6 HPW3

An advanced workshop devised to extend students' existing skills and understanding of artistic practice at the intersection of sculpture, installation and performance with electronic technologies and digital media. The acquisition of skills and research methods in technical areas are fuelled by the students' advanced, self initiated project work. Reportage of research is required as a skill sharing strategy. A diversity of practices will be explored, ranging from movement and light sensing to digital input and imaging, to site specificity and presentation methodologies. Students will be encouraged to liaise with both industrial and research organisations to achieve goals and meet deadlines.

SART4030
Honours Paper
School of Art
UOC6 HPW0

A paper of approximately 5,000 words researching a selected subject, or subjects, related to the student's studio practice and interests. Subject to approval, the work undertaken will be initiated by the student.

SART4044
Honours Studio Practice
School of Art
UOC18 HPW0

The completed studio-based research works appropriate to the field of study which will be formally exhibited, published or displayed at the end of the course.

SCIF1110
Perpectives in Medical Science 1
Faculty of Science
UOC3 HPW2
Excluded: BSSM1110.

In this course we examine the historical background to the advent of scientific medicine in the 19th and 20th centuries, looking particularly at the intellectual climate which made such innovations possible.

This course is restricted to students enrolled in programs 3991 Bachelor of Medical Science and 3821 Science/ Medicine.

Assessment is by written work and participation, and open-book class test.

For further information about this course contact the School of History and Philosophy of Science.

SCIF2220
Perspectives in Medical Science 2
Faculty of Science
UOC3 HPW2
Excluded: BSSM2220.

This course is based on a series of colloquia given by visiting specialists on topics of historical, philosophical and contemporary relevance in medical science. It is intended, as a sequel to SCIF1110, to broaden students' understanding of the extent to which science is important throughout society, well beyond laboratory-based conceptions of scientific activity.

The course is available only for students enrolled in program 3991 Bachelor of Medical Science and program 3821 Science/ Medicine.

For further information regarding this course, please contact the School of Medical Sciences.

SCIF3001
Exchange Program with National University of Singapore for (northern) Summer Session
Faculty of Science
UOC6 HPW6

This course covers an exchange program that permits UNSW Advanced Science students to complete a 6-week residential program of studies and cultural experience in Singapore and on Tioman Island in Malaysia. In Singapore students undertake an intensive course of Chinese or Indonesian language as well as another course component related to Business, History, Politics and/or Cultural Developments in the Asian context. Students study biodiversity during a 1-week residence on beautiful Tioman Island.

Enrolment in this course is subject to approval by the Science Student Centre.

Note: Students will incur some personal costs.

SCIF4013
Combined Geology Physics Honours Full-time
Faculty of Science
UOC24

Combines Geology and Physics in Program 0100, made by arrangement with the Heads of the two Schools.

SCOM1011
Science, Technology and Society
Faculty of Science
UOC6 HPW3
Excluded: HPSC1400, SCTS1001, SCTS1106.

Examines the relations of science and technology with societies in the modern world. The status and authority of science. Can science tell us what we ought to do? Critiques of science. Is technology applied science? What is the relation between technology and social change? The political uses of expertise. Experts and the rest of us. Issues of participation. These topics will be explored theoretically and by reference to case studies including: modern genetics and its use in agriculture and medicine; information technology, computers and cyberspace; energy technologies, nuclear and solar; and technologies of everyday life.

SCOM1021
Introduction to Science Communication
Faculty of Science
UOC6 HPW3

This course employs activities and discussion to introduce students to methods of reporting, discussing, debating and learning in relation to concerns involving science. The course surveys employment in science communication and introduces the range of skills required of practitioners in the area. It provides practical skills in research, organising, writing and presenting scientific and quantitative information to a non-scientific audience with clarity and accuracy. Students will gain experience in talking and writing about science and help in achieving the skills required through presentation of science reports for group feedback. There will be consideration of the need to present information to non-scientific audiences and to consider the likely impact of what is communicated. Case studies and guest lectures will illustrate the differing requirements of communicating controversial and non-controversial issues.

SCOM2014
Science Communication
Faculty of Science
UOC6 HPW3
Excluded: SCOM1021

Activities and discussion are used to enhance students' abilities in reporting, discussing, debating, and stimulating learning in relation to science and related concerns.

The course surveys a broad range of employment in science communication from management to journalism and introduces a range of strategies required in each area. Practical skills in researching, organising, writing, and presenting scientific and quantitative information to non-scientific audiences are refined through frequent practice and feedback to improve accuracy and impact. Students also develop skills in facilitation and teamwork.

There is special focus on understanding different types of audiences - from children to non-scientific professionals - in terms of their knowledge, learning styles, and vested interest in the scientific issues addressed. The differing requirements for communicating controversial and non-controversial issues are illustrated through case studies, guest lectures, and excursions.

SCOM2021
Professional Science Communication
Faculty of Science
UOC6 HPW3
Prerequisite: SCOM1021 or LIFE1001 or INOV3100 or SCOM2014

Key issues in science communication are addressed and skills in science communication are practised and developed - writing and speaking as well as multi-media.

Tensions faced by the professional science communicator that are addressed include: the need to identify and communicate the 'truth'; the need to simplify in order to be understood by the public and non-scientific professionals; the need to deal with a range of stakeholders with incommensurable viewpoints; and whether to allow the hopes and fears about the potential impact of what is communicated to influence the act of communication.

The course is taught as a seminar and workshop, combining examination of current issues with simulations for practising professional communication skills. Guest lecturers will include accomplished communicators from business, government and the media.

Note: This course is only offered in alternate years, and is offered in 2006.

SCOM2505
Science Communication Project A
Faculty of Science
UOC3 HPW2
Prerequisite: SCOM1021 or LIFE1001 or INOV3100 or SCOM2014

Students pursue a project to learn about an area of science communication of their choice - e.g. museum work, web site development, writing for publication - plus project management, extending professional networks, and garnering feedback to improve what they produce. A 'learning contract' determines the scope of effort and the nature of the deliverable product.

Assessments include a log of reflections on communication, science, and professional relationships; a short interim report; and a final product.

Approval for enrolment depends on the project's suitability, and availability of a lecturer to supervise. SCOM2505 and SCOM3505 may be taken simultaneously.

SCOM2700
Topics in Science Communication- Language and History
Faculty of Science
UOC3 HPW2

This course on the role of language and history in science communication involves hands-on examination of topics such as the evolving jargon of science and technology, changes in the instrumentation of science, and the careers of people who have made scientific discoveries. The focus is on the day-to-day processes of arguing with colleagues or government bureaucrats, a scientist trying to be understood by his or her business partner, or how specialists in a field learn to exploit new instrumentation. This course reveals practical insights into how technical and nontechnical people interact in various scientific and institutional settings. Course content will vary significantly from session to session depending on the lecturer. Initial courses will address topics such as the evolution of scientific instrumentation or the recording of oral histories of Australian science. A number of these 3 UOC courses are being offered by the SCOM program.

SCOM2750
Topics in Science Communication - Social and Organisational Processes
Faculty of Science
UOC3 HPW2

Social and organisational processes often necessitate communication among various kinds of scientific or technical specialists as well as involvement of relatively non-technical people. New technology gets developed and integrated with other new or existing technologies, or court cases get heard on environmental issues with each side having its 'experts'. This course reveals practical insights into how technical and nontechnical people interact in various organisational and institutional settings. Course content will vary significantly from session to session depending on the lecturer. Initial courses will address topics like - how designers and operators interact in the design of new technology or how one addresses ethical concerns in science communication. A number of these 3 UOC courses are being offered by the SCOM program.

SCOM2800
Topics in Science Communication - Processes in Science Media and Education
Faculty of Science
UOC3 HPW2

Whenever scientific or technical specialists engage with lay people, interesting things can happen - such as the development of new technology, publicity for scientific discoveries, or changes in how science is taught. This course reveals practical insights into how technical and nontechnical people have - and how they can - communicate with each

other through the media and in educational settings. Course content will vary significantly from session to session depending on the lecturer. Initial courses will address topics like - how to make a science video or how to design a museum exhibit. A number of these 3 UOC courses are being offered by the SCOM program.

SCOM3011
Communicating Science: Theory and Practice
School of History and Philosophy of Science
UOC6 HPW3
Pre-requisites: 36UOC of credit in Science courses. Excluded: SCTS3127, HPSC2730

Communicating science is crucial in modern societies. Scientists need to communicate not only among themselves but with representatives of business, unions, government, the media, and environmental and community interest groups. This course examines how different ideas about the nature of science affect our understanding of how science is communicated. Topics include: the history of science communication; new communication technologies and science; popularisation; distortion; the communication of uncertainty and risk. The course considers the role of communicators and policy advisors and guides students toward the latest on-line tools required to access, evaluate and use current information about science, technology and their social and environmental impacts. The class will simulate issues of communication and the roles of science communicators and produce appropriate outputs, such as journalistic articles, press releases and presentations to be published through an online journal.

Note: This course is only offered in alternate years commencing 2005.

SCOM3021
Science Communication Internship
Faculty of Science
UOC6 HPW3
Prerequisite: SCOM1021 or SCOM2014 and SCOM2021

Students undertake an internship in a scientific or science communication workplace relevant to the student's career plans and science focus. The internship placement may be outside the University, or the student may pair up with a scientific researcher at UNSW. The intern will benefit from working with a mentor who permits them access to observe and discuss research in progress, policy issues under debate, or products being developed for commercialisation. The course coordinator will assist students to write and/ or produce a series of pieces that explain the character of the research, its primary aims, and its potential contribution to the development of a scientific field and the community at large. With the help of the course coordinator, the student will produce a series of reports on the scientific activities there, reports that are suitable for popular and technical audiences. Students will engage in regular meetings of their internship cohort to share insights and broaden their professional networks.

SCOM3505
Science Communication Project B
Faculty of Science
UOC3 HPW3
Prerequisite: SCOM1021 or LIFE1001 or INOV3100 or SCOM2014

Students pursue a project to learn about an area of science communication of their choice - e.g. museum work, web site development, writing for publication - plus project management, extending professional networks, and garnering feedback to improve what they produce. A 'learning contract' determines the scope of effort and the nature of the deliverable product.

Assessments include a log of reflections on communication, science, and professional relationships; a short interim report; and a final product.

Approval for enrolment depends on the project's suitability and availability of a lecturer to supervise. SCOM2505 and SCOM3505 may be taken simultaneously.

SDES1101
Design Studio 1 - Elements and Principles of Design
School of Design Studies
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

In this course, students are introduced to the elements and principles of design. Acquisition of a design vocabulary will be encouraged through analysis of definitions of design, the designer, conceptualisation and abstraction within a design context. The course will require students to begin developing a visual language for use in communicating their design intentions. Examples will clarify key points from a wide range of design practices and fields. Students will undertake and complete exercises and projects using two-dimensional and three-dimensional responses. The philosophy of integrated and multi-disciplinary design on which the Bachelor of Design is founded, is emphasised throughout this early stage of the program.

SDES1102
Design Studio 3 - Analysing Design Principles
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1101

This course extends the study of fundamental design principles. The relationship between two-dimensional and three- dimensional representation of form and space is examined through a series of process exercises and projects. Students are introduced to concepts of constructing and de-constructing form as well as relationships between form and function. The studies of Design Studio 1A are progressed to analyse designed objects, environments and graphics as well as the processes of designers and their practice. Students are required to respond to the projects contained within this course using both two-dimensional and three-dimensional techniques to communicate their creativity and resolutions. Further understanding of the design process is encouraged by placing emphasis on extended development of concepts as well as methods and techniques for presenting design solutions.

SDES1104
Interactive Systems
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1101

The aim of this course is to introduce and develop understandings about patterns of interaction between design processes and natural and manufactured systems. The relationship between nature, human society, ethical values and design are examined in the context of pressures on resources and the implications for the quality of life. The course will refer to ecology, ethics, value systems, social systems, political systems and legal systems so that students understand some of the dynamics of the social and environmental contexts for design as well as the foundations of responsible design practice.

SDES1106
Design and Computers 1 - Introduction to Graphics Computing
School of Design Studies
UOC6 HPW3

This course is an introductory investigation of computers and applications for graphics. It explores manipulation, image acquisition, layers, and various effects. The course investigates rapidly developing tool sets, identifies and familiarises students with basic user interface metaphors utilised by most software packages while placing into context software applications commonly seen in industry and studio work flows.

SDES1107
Design Studio 2 - Materials, Equipment and Process in the Design Studio
School of Design Studies
UOC6 HPW3
Corequisite: SDES1101.

The aim of this course is to introduce and demonstrate the multidisciplinary and integrated nature of the design process. Students will be introduced to basic materials, equipment and techniques involved in presenting and representing ideas both visually and verbally. The importance and relevance of two-dimensional and three-dimensional models/studies within the design process is emphasised by understanding their place as tools of exploration, communication, visualisation and presentation. This course will equip students with necessary knowledge and skills to apply within the design studio setting.

SDES1108
Design Studio 4 - Thinking and Theory in the Design Studio
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1101, SDES1107; Corequisite: SDES1102.

In this course, students are introduced to thinking processes whereby theoretical and philosophical understandings are applied to support the

creative process. These understandings within the design process are used to create complexity and to reinforce design outcomes. Further, students are involved in critical analysis of solutions derived in order to develop the capacity to evaluate different design approaches. Questions of intent, content and application are focused toward the development of the individual's visual language.

SDES1110
Design and Computers 2 - Introduction to CAD
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1106

This course provides an introductory investigation of computers and applications for 2D CAD. It explores rapidly developing tool sets, identifies and familiarises students with basic user interface metaphors utilised by most 2D CAD software packages, while placing into context software applications commonly seen in industry and studio work flows.

SDES1144
Textile Processes
School of Design Studies
UOC6 HPW3

This course introduces students to a range of textile techniques and processes used in contemporary textiles art, craft and design practices. The course allows students to develop a knowledge and understanding of these processes from historical and contemporary perspectives with projects addressing conceptual and material understanding of textile design. The course will cover a range of textile processes such as embroidery, printing, dyeing, basketry and weaving.

SDES1154
Introduction to the Jewellery Studio
School of Design Studies
UOC6 HPW3

This is a practical class open to those students requiring skills related to jewellery and silversmithing. Through lectures, demonstrations and projects, students will acquire skills in techniques and the handling of materials related to the practice of jewellery and small scale objects. As the student passes through the elementary stages, more self-initiated projects will occupy the attention of the student and lecturer.

SDES1155
Introduction to the Ceramics Studio
School of Design Studies
UOC6 HPW3

This course introduces basic ceramic processes and materials and provides the opportunity for students to develop some familiarity with ceramic media and studio skills. While primarily practical in nature, the course seeks to place the acquisition of skills within the broader context of ceramic art/ design/ craft history, theory and contemporary practice. Lectures, demonstrations and studio practice introduce a range of approaches which may include hand building, techniques, throwing, low impact processes, clay and glaze technology and firing. Appropriate health and safety procedures associated with the studio are demonstrated, discussed and applied in the production of studentsâ ' work.

SDES1304
Introductory Studies: Ceramics, Jewellery, Textiles
School of Design Studies
UOC6 HPW3

This studio based course introduces the student to the broad experience of working with ceramics, jewellery and textiles. Emphasis is placed upon the development of a keen critical awareness by looking at the content and the context of contemporary visual arts and culture. The questions of intent, content, process and context are explored in relation to the production of project based works that lay the foundations for the development of the individual student's artistic language.

SDES1316
Ceramics 1A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1304 Introductory Studies: Ceramics, Jewellery, Textiles.

This course introduces students to basic ceramic processes and materials through engagement with a series of projects that incorporate analysis, instruction/explanation and investigation. The creative potential of various ceramic media and techniques are explored alongside the health and safety issues associated with the ceramic studio. The course is primarily practical in nature, but seeks to place the acquisition of skills within the broader context of art/ceramic history, theory and contemporary practice. Students are expected to display competence in basic studio processes by the end of the session.

SDES1317
Jewellery 1A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1304 Introductory Studies: Ceramics, Jewellery, Textiles.

This course will extend students understanding of the scope and possibilities of the jewellery workshop and provide an overview of traditional and contemporary perceptions of jewellery practice. Through lectures, demonstrations and projects, students will develop ways of working, acquiring skills and knowledge in techniques and with materials related to the practice of jewellery. Studio activity will examine the technology of metals and other materials applying such cold joining techniques as sawing, filing, drilling and riveting to translate ideas into wearable and non-wearable jewellery works.

SDES1318
Textiles 1A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1304 Introductory Studies: Ceramics, Jewellery, Textiles.

This course introduces students to contemporary art textile practice, extending their understanding of the scope and possibilities of textiles. Contemporary, traditional, cultural and historical textiles are referenced and examined to develop knowledge and a critical awareness of textile processes and ways of integrating cloth, fabric, fibre and materials into the contemporary context. Textiles 1A provides the context to develop individual approaches with research, experimentation and investigation through lectures, demonstrations and conceptually based projects.

SDES1319
Ceramics 1B
School of Design Studies
UOC6 HPW3

This course introduces basic ceramic processes and materials and provides the opportunity for students to develop familiarity with ceramic media and studio skills. While primarily practical in nature, the course seeks to place the acquisition of skills within the broader context of ceramic art/design/craft history, theory and contemporary practice. Lectures, demonstrations and studio practice introduce a range of approaches which may include handbuilding, techniques, throwing, low impact processes, clay and glaze technology and firing. Appropriate health and safety procedures associated with the studio are demonstrated, discussed and applied in the production of students' work.

SDES1320
Jewellery 1B
School of Design Studies
UOC6 HPW3

This course extends students' understanding of the scope and possibilities of the jewellery workshop and provides an overview of traditional and contemporary perceptions of jewellery practice. Through lectures, demonstrations and projects, students acquire skills in techniques and the handling of materials related to the practice of jewellery and small-scale objects. Studio activity examines the technology of metals and other materials applying such techniques as sawing, filing, drilling, riveting and soldering to translate ideas into wearable and non-wearable jewellery works. This is a practical class in skills related to jewellery and metal-working.

SDES1321
Textiles 1B
School of Design Studies
UOC6 HPW3

This course introduces students to contemporary art textile practice, extending their understanding of the scope and possibilities of textiles. Contemporary, traditional, cultural and historical textiles are referenced and examined to develop knowledge and a critical awareness of textile processes and ways of integrating cloth, fabric, fibre and materials into

contemporary practice. Textiles 1B provides the context to develop individual investigations into art textiles by introducing a range of textile processes. Students are expected to attain basic competence and incorporate these textile processes into their work.

SDES1601
Colour, Composition and Typography
School of Design Studies
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course introduces students to the critical and fundamental theories of colour, typography, graphics and composition. Understanding the relationship of colour, text, graphics and composition is seen as essential to all BDM students and their future success in the Degree. The majority of this course is conducted using analogue technology.

SDES2101
Applied/Object Studio 1 - Materials and Connections
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1102

This course aims to develop a design practice which requires students to integrate technical knowledge and skills with material, form and contextual issues in applied/object design. Research into a range of materials will be undertaken including material properties, structural qualities, construction methods, finishes, fittings and connections. Projects will address the conceptual, material and sculptural understandings of 3D object design. The foundation of a design process will be undertaken including: critical analysis, research, problem-solving and design development to facilitate the resolution of form and fabrication of 3D design outcomes.

SDES2102
Environment Studio 1 - Concepts and Process
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1102

In this course, design practice is undertaken which requires students to integrate technical knowledge and artisan skills with space, form and contextual issues in the human environment design discipline. Projects will address the conceptual, material and spatial understandings of both exterior and interior environments. Elements of the design process - critical analysis, research, problem solving and design development - will be undertaken to facilitate the resolution of space and form in fabricated and structured human environments.

SDES2103
Graphics Media Studio 1 - Community and Communication
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1102

This course explores relationships in graphic design between visual communication and audiences. The course introduces and reviews contemporary and historical graphics media practices in Australian and international contexts. Print and screen graphic outcomes and processes are examined through a series of design tasks to integrate visual research with typographic, image and layout experimentation. Students develop an introductory understanding of both conceptual and technical skills in graphics media studio practice in a series of lectures, readings and studio workshops and tutorials.

SDES2104
Ceramics Studio 1 - Material and Technologies
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1102

This course introduces students to the basic skills and technologies associated with the ceramic studio; and ideas, language and contexts pertinent to contemporary ceramic design practice. It provides a setting in which students integrate theoretical knowledge, technical knowledge and skills with material, formal and contextual issues in ceramic design. Theoretical and practical enquiry highlights the conceptual, material and sculptural understandings of three dimensional object design in clay and associated materials. In particular, the course provides an introduction to the ceramic studio and addresses issues of identity, seriality, certainty, familiarity and the mundane, interrogating the meaning of the repeated object. In practical terms, it provides the opportunity to investigate techniques of replication, including the principles and applications of model and mouldmaking. Students are encouraged to develop and explore ideas in relation to the articulation, transformation and reproduction of objects using a range of ceramic materials. Elements of the design process - critical analysis, research, problem solving and design development - are undertaken to facilitate the resolution of formal, material, fabrication and design issues in ceramic practice.

SDES2105
Jewellery Studio 1
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1102

In this course design practice integrates conceptual exploration with technical knowledge and material investigations applied to jewellery and object design. Projects address stages of the design process, critical analysis, research, problem solving and design development and culminate in the fabrication of design solutions for wearable or body related objects. This course develops students' understanding of jewellery practice through investigations of materials and jewellery processes. In practical terms, students will examine the technology of metal and its translation through heat into three-dimensional forms. The techniques of soldering, casting, hydraulic forming and fabrication will be explored using both ferrous and non-ferrous materials, to translate design drawings and models into three-dimensional jewellery objects, both wearable and non-wearable.

SDES2106
Textiles Studio 1: Material Processes
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1102

This course introduces the language, traditions, materials, processes and practices that constitute textile design. Design projects are undertaken which require students to integrate knowledge, conceptual ideas, references and technical skills with materials, surface, form and contextual issues. Aspects of the design process, research, critical analysis, problem solving and design development are undertaken to facilitate the resolution and fabrication of textile designs. Through projects, the course develops an understanding of a variety of surface design processes and textile construction techniques to translate design concepts, drawings and models into textiles for the body and interior contexts.

SDES2107
Design and Computers 3 - CAD & Graphics Computing
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1110 or SDES1106

This course is an investigation of graphics and CAD software used in the design of graphics/media and 3D models. The skill sets covered include photographic enhancement, image manipulation, typography and multi page documents, including style sheets and vector illustrations. This course also covers procedural techniques for conceptualisation in 2D and 3D as well as the processes and techniques used in computer-generated design within the graphics & print arena, objects and environments.

SDES2108
Applied/Object Studio 2 - Form Function and Fabrication
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2101

This course aims to extend knowledge of materials and processes and their relationship to three dimensional object design. Projects address the cultural positioning that objects have in the world around us. A series of case studies exemplifying design research, production/technology methodologies including moulding/casting, laser cutting and sheet forming and fabrication is undertaken. Students further develop skills in problem solving and creatively explore the relationship between the human interface and object design. Communication techniques in both 2D and 3D format are developed, including basic computer skills.

SDES2109
Environments Studio 2 - Space and Context
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2102

In this course design practice is investigated which requires students to extend their capacity to integrate technical knowledge and artisan skills with space, form and contextual issues in the human environment design discipline. Projects will address the conceptual, material and spatial understandings of both exterior and interior environments. Elements of the design process - critical analysis, research, problem solving and design development - will be undertaken to facilitate the resolution of complex spatial relationships and forms in articulated and structured human environments.

SDES2110
Graphics Media Studio 2 - Media and Experience
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2103

This course examines a range of media forms with a critical practitioner perspective of how experiences in media shape discussion, exchange and international understanding. Students explore media production and consumption to develop skills in media generation and visual interpretation. The aim of the course is to develop skills in discerning between information and misinformation in a range of contexts. The graphic languages of television, the internet, news print and SMS inform studio projects that develop strategies for typographic design in a range of media for information retrieval in work, leisure and entertainment contexts.

SDES2111
Ceramics Studio 2 - Concepts and Contexts
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2104

The course extends students' awareness of relevant theoretical, critical and contemporary contexts; and deepens understanding of an engagement with materials, processes and technologies relevant to ceramic design and studio production. In particular, the course highlights relationships between form and surface. It introduces and critiques processes that are involved in the development of painted, printed and digitally generated surfaces on ceramic media: students engage with issues, materials and techniques relevant in their development. Elements of the design process - critical analysis, research, problem solving and design development - are undertaken to facilitate a more complex resolution of formal, material, fabrication and design issues in ceramic design practice.

SDES2112
Jewellery Studio 2
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2105

In this course, students investigate existing design practice extending their capacity to integrate technical knowledge and skills with material and conceptual issues in the jewellery design domain. Projects address the conceptual, material and technical understandings of jewellery and object design, applying a design process that involves critical analysis, research, problem solving and design development to more complex formal and fabrication issues. This course focuses students on a thorough examination of the body as the format or site for design solutions, allowing for experimentation and the development of an understanding of techniques such as advanced fabrication, repousse, anodising, use of the lathe, and research and experimentation with a variety of non-metal materials and processes. Studio activity combines the development of one-off designs and multiple production of jewellery objects.

SDES2113
Textiles Studio 2 - Surface and Structure
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2106

In this course textile design practices are investigated, requiring students to extend their understanding of the language of textiles and their capacity to integrate knowledge, conceptual understanding and technical skills with materials, surface, form, structure and contextual issues in textile design. The design processes of research, critical analysis, problem solving and design development are undertaken to facilitate the resolution and fabrication of 2D and 3D textile designs. All projects involve conceptual development, historical and contemporary references and consideration for the application of the textile. Projects require students to consider the development of their individual design aesthetic. Through projects, the course develops an understanding of surface and print design techniques and construction processes to translate design concepts, drawings and models into textiles for apparel and interiors contexts.

SDES2116
Design Practice
School of Design Studies
UOC6 HPW3

Currently enrolled in a program at College of Fine Arts.

In Design Practice, students will investigate: the moral and philosophical contexts for professional activity, professional ethics, contract law, patents, copyright and registration of designs, preparation and budgeting for a brief, production co-ordination & project management, preparation of reports and other written material, Corporate Identity, and Design Culture. Students will be introduced to the broader question of general management, design management and the importance of a design culture within an organisation, company or institution. The relationship between design management procedures and good design will be a focus.

SDES2140
Clay, Glaze, and Firing Technology
School of Design Studies
UOC6 HPW3

This course provides an introduction to the basic materials and technology associated with the development and production of creative work in clay. Practical and theoretical classes focus on approaches to firing; and the chemistry, preparation and modification of clay bodies, slips and glazes. Workshop activity highlights experimentation, testing and evaluation, and the application of knowledge to studio practice. It provides the context in which students may explore personally relevant ideas and goals through an investigation of a range of materials and approaches. Theoretical information is contextualised with reference to ceramic history and to contemporary developments/usage. The course includes an introduction to specialist software designed to facilitate relevant calculations, assist in the development of ceramic formulations and provide for the storage of data.

SDES2141
Moulding and Casting in Clay
School of Design Studies
UOC6 HPW3

This course introduces moulding, casting and extrusion processes as a means of developing and producing three-dimensional form in clay. It provides a working knowledge of the principles and applications of model and mouldmaking and encourages students to develop and explore ideas in relation to the articulation, replication and transformation of objects using a variety of ceramic media. The course spans a range of applications from casting/moulding associated with multiples and series (e.g. in small scale industrial and studio production) to casting for "one-off" or sculptural outcomes. Theoretical information is contextualised with reference to ceramic history and to contemporary developments/usage. In addition, the course examines the impact of new and emerging technologies, particularly computing technologies such as CAD, on the manner in which ceramic artists and designers understand, develop, produce and replicate objects.

SDES2142
Drawing, Photographic and Print Techniques on Clay
School of Design Studies
UOC6 HPW3

This course examines media and processes associated with the elaboration of both raw and fired clay surfaces. It provides students with the opportunity to explore, evaluate and develop a range of approaches to the production of graphic surfaces on clay. Theoretical information is contextualised with reference to ceramic history and to contemporary developments/usage. Lectures, demonstrations and individual projects provide the focus for gaining understanding and skills in the practical application of drawn, painted, photographic, printed and digitally generated images/surfaces to clay. Studio activity is conducted within a context of enquiry in which students are challenged to interrogate the relationship between idea, material, process, outcome and meaning. It highlights experimentation, testing and evaluation, and the application of knowledge to studio practice.

SDES2143
Self-sufficient Studio Processes and Firing
School of Design Studies
UOC6 HPW3

This course provides an introduction to "alternative" materials and low impact processes relevant to the construction and firing of work in clay. Lectures, demonstrations and practical projects examine approaches that include adobe, pise, paper clay and a range of accessible, low impact firing methods. Theoretical information is contextualised with reference to ceramic history and to contemporary developments/usage. Throughout, students work with readily available materials to produce clay media, equipment and firings that are inexpensive, energy efficient and easily replicated in the domestic studio.

SDES2147
Jewellery Materials and Technologies
School of Design Studies
UOC6 HPW3

This is a practical class open to those students requiring skills related to jewellery and small scale object making. Through lectures, demonstrations and projects, students will experiment and investigate a wide range of materials both metal and non-metal and acquire skills in techniques and process applicable to them. This knowledge will be applied in the development of finished works.

SDES2149
Metal Casting for Jewellery and Small Scale Objects
School of Design Studies
UOC6 HPW3

This is a practical studio based class open to those students requiring skills in jewellery and small-scale object making. This course will extend students familiarity with the scope of the jewellery workshop and build their skills in particular areas related to the production of three-dimensional forms. Through experimentation with the materials and with processes associated with lost wax casting and mouldmaking for multiple production, students will be asked to realise three-dimensional works metal works within the jewellery studio.

SDES2150
Jewellery Processes for Multiple Production
School of Design Studies
UOC6 HPW3

This is a practical class open to students requiring skills centred in the jewellery studio. This course will develop students experiences with those jewellery materials, techniques and processes which are linked to the production of multiples and series for jewellery and small-scale objects and include the use of CAD to design object prototypes.

SDES2151
Surface Investigations in Jewellery Design
School of Design Studies
UOC6 HPW3

This is a practical class open to those students requiring skills centred in the jewellery studio. This course will focus on a thorough examination of surface as applied to jewellery and object making allowing for experimentation in any one of a variety of specialist surface techniques for example reticulation, patination, married metal and granulation.

SDES2152
Jewellery Workshop in Colour
School of Design Studies
UOC4 HPW3

This is a practical class open to students requiring skills centred in the jewellery studio. This course takes colour as a focus as it applies to jewellery practice. This advanced class will encourage students to integrate ideas, processes and materials from their major study area with the specific colour techniques demonstrated within the Workshop. Techniques such as enamelling, anodising and the application of a variety of applied pigments appropriate to the jewellery studio would form the basis for experimentation.

SDES2153
Jewellery Experiments with Emerging Technology
School of Design Studies
UOC6 HPW3

Students will develop an understanding of jewellery practice and concepts producing both wearable and non-wearable objects. The course will guide students in their experimentation with a range of materials and techniques emphasising the use of emerging technology in the production of these works.

SDES2163
Contemporary Wearables
School of Design Studies
UOC6 HPW3

This practical course encourages students to gain insight into, and understanding of jewellery practice in a contemporary context. Within a framework of contemporary jewellery perceptions, students will develop a sound understanding of jewellery skills and materials to be used when translating ideas into objects. Central to the course is the focus on the body as the format for wearable work.

SDES2164
Jewellery and Small Scale Object Design
School of Design Studies
UOC6 HPW3

This course will develop students understanding of jewellery practice, as applied to three-dimensional form. Through experimentation with materials and jewellery processes students will be asked to realise both wearable works and works which are body related and which may be expressed as vessels or implements.

SDES2167
Textiles for Fashion
School of Design Studies
UOC6 HPW3

The course provides an introduction to textiles, explored in the context of Fashion. The course covers the design of textiles for the fashion, apparel and accessories Industry. Particular emphasis will be placed on the textiles used, the selection of fabrics and the manipulation of the textile surface for fashion garments. It will also cover the work of selected designers, investigating how they incorporate specific textile techniques into their fashion ranges. The course will focus on design as a process, ways of interpreting trend inspirations and will culminate in a final textile surface design / print collection. Students will design their own textile collection based on research into current market and fashion trends, applying these influences to the design process.

SDES2168
Commercial Textile Design
School of Design Studies
UOC6 HPW3

This course tracks the evolution of a textile design from sketch, design brief, concept development to sampling and final commercial production. It examines weave, stitch and print design processes at studio and industry level covering professional presentations, “colourways”, client requirements, studios equipment and sources of inspiration. Industry visits will enable students to see the work of professional textile designers involved in the fashion, home wares & interior design industries, offering excellent insights into career possibilities in textile design. The course will cover the historical evolution of textile design and techniques and consider techniques currently used commercially including screen printing, roller printing, digital design development and direct digital printing onto fabric. Students will develop their own designs for printed textiles to set briefs, relating to fashion or furnishing fabrics.

SDES2170
Rendering and Illustration for Designers
School of Design Studies
UOC6 HPW3
Pre:SART1333,SART1319,SART1606,SART2831,SART2832, SDES1109.

Students will undertake traditional and contemporary methods of hand rendering illustration as well as concept drawing, process drawing, storyboard and highly finished realization drawings. This course will examine through practice the techniques, processes, media and ideas associated with various design domains.

SDES2171
Design Management Elective - Brand & Identity
School of Design Studies
UOC6 HPW3

This subject will develop students’ understanding of how design management assists in the development of a company’s brand and identity. Through a series of case studies students will investigate: company branding and communication, leadership and management, retail branding and positioning strategies, corporate identity and design management within corporate culture. They will also be introduced to

the broader question of general management, and the importance of the development of a design culture within organisations whether Companies or Institutions.

SDES2174
Fashion and Costume Design 1
School of Design Studies
UOC6 HPW3

This course will introduce students to the contemporary and commercial applications of fashion and costume design. Students will learn pattern making, basic garment construction, fashion drawing and design, and they will study applied decoration, embroidery and the uses of fashion accessories. The history of costume and fashion will be explored through the study of museum objects and artworks, and this will be supported by contact with the contemporary fashion industry in Australia.

SDES2177
Design in Performance
School of Design Studies
UOC6 HPW3

Theatricalisation and design theming of public occasions, community ceremonies, performance events and sporting events is an established design trend. Design in staging large-scale events, including theatre performance, will be the major focus of this subject. Through a series of lectures and workshops, students will be introduced to the design processes used in a variety of performances. Through close examination of the characteristics by which such occasions are represented and communicated to audiences, students will systematically investigate the crafts and contemporary theories of staging such events. A design brief will be set for students to design, draw and construct.

SDES2178
Independent Study
School of Design Studies
UOC4 HPW3

This course is a directed study in a discipline or multidisciplinary area of interest and of relevance to the professional and vocational interests of the student. It should extend the knowledge and understanding of the subject through a systematic investigation and development of a project in association with a supervisor. Permission of the Head of School may be sought to determine the suitability of undertaking an independent study.

SDES2179
Design in the Theatre
School of Design Studies
UOC6 HPW3

Students will be introduced to the fundamentals of stage design for the theatre. This will include scenic design, painting, perspective, lighting, special effects and costume design. Through a series of lectures, workshops and design projects, students will explore basic design skills such as: technical drawing, rendering and model construction. Costume will cover character analysis, design, rendering, and pattern making. Historical and social research in theatre design will be given as well as design briefs for students to design, draw and construct.

SDES2184
Textiles: Woven Forms
School of Design Studies
UOC6 HPW3

This course covers the textile processes and techniques of woven, interlaced and constructed textiles with practical projects in tapestry, basketry, 3d interlacing and loom weaving. Weaving produces structures that can be used to make the finest of silk fabrics, define a shape or image in tapestry, create a texture or interlace any flexible material, metal or plastic to express a concept. Practical work in basketry, tapestry and loom weaving are complimented by historical, theoretical and conceptual references and information, providing an understanding of contemporary textile art and design practices involving woven structures.

SDES2185
Textiles: Fabric Manipulation
School of Design Studies
UOC6 HPW3

This course provides an introduction to textile processes and techniques associated with surface design and fabric manipulation as a means of expressing ideas. Practical work is complemented by critical, historical and theoretical information which assists the students in understanding elements of contemporary textile work. This subject covers processes involved in the surface decoration and manipulation of fabric including altered surfaces such as hand embroidery, machine embroidery, piecing, and fabric collage; mixed media techniques incorporating materials other than fibre; and drawing, design and concept development.

SDES2187
The Contemporary Vessel, I
School of Design Studies
UOC6 HPW3

This course provides an introduction to basic processes and technology associated with the construction and firing of studio based work in clay. Students develop familiarity with key skills and materials used in translating ideas to objects, establishing a sound foundation from which to continue study in the ceramic discipline. Practical work is contextualised within the historical, theoretical and critical considerations/debates that frame contemporary ceramic practice. In particular, projects give prominence to disparate contemporary interpretations of the vessel and associated notions of containment.

SDES2188
Wheel Throwing in Contemporary Ceramic Practice
School of Design Studies
UOC6 HPW3

This course highlights a range of fundamental approaches and skills that underpin the multiple strands of contemporary ceramic practice. Practical work is contextualised within the historical and theoretical considerations/ debates that frame contemporary ceramic practice. In particular, studio projects give prominence to ideas and processes associated with the development of ceramic multiples and work in series, using the wheel as the principal tool.

SDES2198
Advanced Typography and Publication Design
School of Design Studies
UOC6 HPW3

Complexity of information and data density have increased with the integration of information in a greater range of private and public contexts. This course involves cultural, historical and practical exploration of typographic and publication genres from a design perspective. The relationship between typography as an expressive medium and it's technological development is explored through a series of studio workshops. Publications such as books and magazines in print and screen media are developed to gain an advanced understanding of dynamic typography, page and screen architecture and information layout for publication.

SDES2199
Propaganda and Advertising
School of Design Studies
UOC6 HPW3

Design and visual communication are often discussed in terms of transparency and clarity. This course proposes that design artefacts have rarely been politically neutral and that insights into the role of design in society can be drawn from conceptualising and developing design to express specific points of view. Students explore the relationships between graphic design and political persuasion in the 20th and 21st centuries both locally and internationally and use typography, layout and a range of media to develop both theoretical and practical understandings of "promotion" for a range of contexts. Studies of visual rhetoric, subjectivity and representation and alternative processes for the research and development of designed communication are explored individually and as a group.

SDES2200
Maps, Art and Design
School of Design Studies
UOC6 HPW3

We have evolved from thinking that the world is flat, to hand held Global Positioning Systems. What do you think of when you think of a map? How have you used maps, in your personal and professional life? The elective course 'Maps, Art and Design' explores these questions in the context of how maps and developments in measurement have impacted on the work of selected artists and designers. It also examines the influence of artists and designers on the early development of mapmaking. Grids, models, diagrams and maps, their structures, symbols, and orientation of space,

provide creative opportunities which students will explore in practical, sequenced projects. From small to large scale, students in this course will create individual portfolios of practical examples of different types of maps and two dimensional models. From personal mind mapping, to archaeology, to global mapping systems, this course will take you on a journey of creative discovery.

SDES2213
Digital Textiles
School of Design Studies
UOC6 HPW3

Digital design for textiles is covered in this course, introducing the specific requirements for digital textile design and production. Digital technologies have radically changed the way textiles are designed, printed, stitched, tufted and woven. This course will give students an understanding of these digital processes, designing in Photoshop for specific textile design projects. Studio design projects will cover all aspects of digital textile design from repeats, "colour ways", directional effects, production, finishing and end use applications.

SDES2214
Art and Fashion
School of Design Studies
UOC6 HPW3

This studio-based course explores the relationship between art and fashion, looking specifically at how artists have used clothing and the creation of garments as a medium for their creative expression. "Art and Fashion" presents the work of artists and practitioners from the Futurists to today who clearly demonstrate the significance of fashion and clothing as an expression of the aesthetics and the philosophical issues of their times. Artists and practitioners such as Sonia Delaunay, Roy Lichtenstein, Robert Rauschenberg, Andy Warhol, Beverly Semmes, Issey Miyake, Akira Isogawa, Wendy Parmour and Caroline Broadhead have all created individual one off garments for exhibition, production and the cat walk. Many have influenced fashion trends and museum collections. Studio projects will cover the design and construction of textiles and garments inspired by these artists and their practice.

SDES2325
Ceramics 2A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1316 or SART1402

This course highlights both mechanical and non-mechanical approaches to the construction of three-dimensional objects in clay and associated considerations of form, purpose, permanence, scale and site. Studio projects require that students gain competency in the use and manipulation of ceramic materials, while encouraging an innovative, experimental approach in their deployment and an imaginative interpretation of the significant ideas, conventions and precedents of the discipline.

SDES2326
Jewellery 2A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1317 or SART1402

This course will develop students understanding of jewellery practice, as applied to three-dimensional form. Through experimentation with materials and jewellery processes students will be asked to realise works which are body related three-dimensional jewellery objects. Studio activity will examine the technology of metal and its translation through heat into three-dimensional forms. The techniques of soldering, casting and advanced fabrication will be explored using both ferrous and non-ferrous materials to translate two-dimensional designs into three-dimensional jewellery objects.

SDES2327
Textiles 2A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES1318 or SART1402

This course extends the practice of contemporary art textiles by developing conceptual interpretations and the experience of individual textiles practice. The studio emphasises an open ended, innovative and experimental investigation of the language of textiles with historical, cultural and contemporary references. Students produce individual work integrating technical and conceptual approaches in response to studio projects. Textiles 2A provides an environment and context to develop individual approaches with research, experimentation and investigation through lectures, demonstrations and conceptually based projects.

SDES2328
Ceramics 2B
School of Design Studies
UOC6 HPW3

This course highlights a range of fundamental approaches and skills that underpin the multiple strands of contemporary ceramic practice. Practical work is contextualised within the historical and theoretical considerations/ debates that frame contemporary ceramic practice. In particular, studio projects give prominence to ideas and processes associated with the development of ceramic multiples and work in series, using the wheel as the principal tool.

SDES2329
Jewellery 2B
School of Design Studies
UOC6 HPW3

This course develops students' understanding of jewellery practice as applied to three-dimensional form. Through experimentation with materials and jewellery processes, students are asked to realise works which are body related and which may be expressed as vessels or implements, expanding their understanding of this traditional component of jewellery practice. The techniques and processes introduced may include the fabrication of hollow forms, raising and die-forming. Students are required to work with a variety of materials, exploring their potential and limitations through the application of jewellery skills. Each set of exercises culminates in a body related three-dimensional object.

SDES2335
Ceramics 3A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2325

This course provides the opportunity for students to further develop and enhance ideas via participation in the practical activities and debates of the ceramic studio. It provides the context in which students continue to explore personally relevant ideas and goals through an investigation of a range of ceramic materials, procedures and approaches. In particular, this course highlights relationships between form and surface, introducing and critiquing processes that are involved in the development of painterly, printed and digitally generated surfaces on clay. The intention and meaning of surface elaboration and image development is examined with reference to both traditional and contemporary approaches to work in clay.

SDES2336
Jewellery 3A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2326

This course will focus on a thorough examination of qualities of surface as applied in jewellery practice allowing for experimentation and the development of techniques such as metal alloying, etching, patination, mokume gane, keum boo and granulation. Studio activity will combine the development of one-off designs and multiple production of jewellery objects both wearable and non-wearable.

SDES2337
Textiles 3A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2327

This course extends the practice of contemporary art textiles by developing conceptual interpretations and the experience of individual textiles practice. The studio emphasises an open ended, innovative and experimental investigation of the language of textiles with historical, cultural and contemporary references. Students produce individual work integrating technical and conceptual approaches in response to studio projects. Textiles 3A provides an environment and context to develop individual approaches with research, experimentation and investigation through lectures, demonstrations and conceptually based projects.

SDES2338
Ceramics 3B
School of Design Studies
UOC6 HPW3

This course examines media and processes associated with the elaboration of both raw and fired clay surfaces. It provides students with the opportunity to explore, evaluate and develop a range of approaches to the production of graphic surfaces on clay. Theoretical information is contextualised with reference to ceramic history and to contemporary developments/usage. Lectures, demonstrations and individual projects provide the focus for gaining understanding and skills in the practical application of drawn, painted, photographic, printed and digitally generated images/surfaces to clay. Studio activity is conducted within a context of enquiry in which students are challenged to interrogate the relationship between idea, material, process, outcome and meaning. It highlights experimentation, testing and evaluation, and the application of knowledge to studio practice.

SDES2339
Jewellery 3B
School of Design Studies
UOC6 HPW3

This is a practical studio class for students requiring skills in jewellery and small-scale object making. This course will extend students familiarity with the scope of the jewellery workshop and build their skills in particular areas related to the production of three-dimensional forms. Students will explore the concepts of making multiples to produce wearable and non-wearable objects. Through experimentation with materials and with processes such as casting, advanced fabrication and hydraulic forming, students will be asked to realise three-dimensional works.

SDES2345
Textiles 2B
School of Design Studies
UOC6 HPW3

This course extends the practice of contemporary art textiles by developing conceptual interpretations and the experience of individual textiles practice. The studio emphasises an open ended, innovative and experimental investigation of the language of textiles with historical, cultural and contemporary references. Students produce individual work integrating technical and conceptual approaches in response to studio projects. Textiles 2B provides an environment and context to develop individual approaches by exploring textile processes relating to surface design, providing knowledge to realise conceptual ideas. Students are expected to have the ability to incorporate various surface design processes into their work at the completion of the course.

SDES2355
Textiles 3B
School of Design Studies
UOC6 HPW3

This course extends the practice of contemporary art textiles explored in Textiles 2A/2B by developing conceptual interpretations and the experience of individual textiles practice. The studio emphasises an open ended, innovative and experimental investigation of the language of textiles with historical, cultural and contemporary references. Students produce individual work integrating technical and conceptual approaches in response to studio projects. Textiles 3B provides the context for developing individual approaches by exploring three dimensional textile structures and techniques providing the knowledge to realise conceptual ideas. Students are expected to have the ability to incorporate 3D constructed textiles into their work at the completion of the course.

SDES3101
Applied Object Studio 3 - Reuse/Recycle
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2108

In this course, design solutions are developed from briefs that address problems associated with ethical and environmental responsibility typical of applied design in professional practice. Students are encouraged to develop a philosophical approach to their design process and apply their skills to facilitate the resolution of form and fabrication of design solutions. Projects address the multidisciplinary relationships between manufacturing, design and the end user. Students develop skills in analysing and articulating primary and secondary research and communicating this information in both 2D and 3D formats. 3D computer modelling and rendering is introduced and designs are conceived as full-scale prototypes.

SDES3102
Environments Studio 3 - Commissions and Practice
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2109

In this course, design solutions are developed from briefs that are academically based or emulate problems typical of environment design in professional practice. The design proposals must address complex contextual issues and the interactions presented by the brief. Students will be encouraged to develop a clear design process and apply their skills to appropriate documentation and presentation by use of environment design conventions.

SDES3103
Graphics Media Studio 3 - Visual Representation
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2110

This course explores strategies for the design of visual information for print, interactive and signage design. A range of multi-dimensional spaces in which graphic designers provide navigation cues and complex information will be considered from the perspectives of content, context and purpose. Students design information graphics for specific users according to a brief provided by a client in a real-world setting.

SDES3104
Ceramics Studio 3 - Innovation and Interdisciplinarity
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2111

The course deepens students' awareness of the theoretical, historical, critical and interdisciplinary settings of contemporary ceramic design. Moreover, it extends students' capacity to operate independently in response to the design brief through increasing experience of the complexity and attributes of diverse ceramic materials, their application and processing. It provides the opportunity to extend skill, knowledge and familiarity with the conceptual contexts relevant to the design and production of objects in clay and associated materials. Students develop design solutions from briefs that are academically based and emulate the approaches and problems typical of ceramic design in the professional context. The design proposals address complex contextual issues and the interactions presented by the brief. Students are encouraged to develop a clear design process and apply their skills to appropriate documentation and presentation.

SDES3105
Jewellery Studio 3 - Contextual Issues
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2112

In this course design solutions are developed from briefs that are academically based or emulate problems typical of jewellery design in professional practice. The design proposals must address complex contextual issues and the interactions presented by the brief. Students will be encouraged to develop a clear design process and apply their skills to appropriate documentation and presentation.

SDES3106
Textiles Studio 3 - Forecasting and Innovation
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2113

This course provides an opportunity for students to develop and predict design solutions from briefs that emulate approaches and problems typical of the professional textile design industry. Individual design proposals will address complex contextual issues and the interactions presented by the brief, requiring design solutions ranging from one-off textiles for exhibition and production, to designs and trend predictions for commercial textile production. Briefs cover design for a range of industries and may include fashion, apparel, homewares, rugs, interior and exterior textile designs. Students will be encouraged to develop a clear design process and apply their skills to appropriate documentation, presentation and the execution of innovative textile designs.

SDES3107
Design and Computers 4 - Introduction to Multimedia
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2107

This course is an introductory investigation into computers and interactive multimedia authoring and its application in the graphics/media industry. The course includes combinations of various media such as sound, animation, digital video and dynamic interactive eventing mechanisms. This course introduces interface design processes and concepts within an industry context.

SDES3108
Applied/Object Studio 4 - Design and Production
School of Design Studies
UOC6 HPW3
Prerequisite: SDES3101

Self-direction is encouraged so that students apply their skills within the development and articulation of a project brief. Project documentation and presentation methods are expected to reflect a substantial sophistication of design ideas and communication techniques. Projects undertaken consider a range of manufacturing processes and production systems used in industry and demonstrate a professional focus on the design process. Collaboration with industry is utilised in the development of projects. Students acquire knowledge of detailing, construction techniques and costing. Designs are realised as either scaled models or full-scale prototypes.

SDES3109
Environments Studio 4 - Philosophies and Processes
School of Design Studies
UOC6 HPW3
Prerequisite: SDES3102

The aim of the course is to build on the skills and knowledge of Environments Studio 3 and to increase the complexity of studio practice within the environments discipline. Self-direction is encouraged so that students develop and apply their skills within the development and articulation of a brief. Project documentation and presentation methods are expected to reflect a substantial sophistication of design ideas and communication techniques.

SDES3110
Graphics Media Studio 4 - Design and Reflection
School of Design Studies
UOC6 HPW3
Prerequisite: SDES3103

This course explores advanced concepts and practices in graphics media concerned with a range of approaches to visual identity and reflective practices in design. Studio discussions, lectures and readings contextualise designer, client and supplier, user and artifact interactions. Students develop a design portfolio and through reflection on designs completed in the program, explore strategies to attract client-based work and/or to attract funding for self initiated work in future practice.

SDES3111
Ceramics Studio 4 - Research, Application and Practice
School of Design Studies
UOC6 HPW3
Prerequisite: SDES3104

The course provides for consolidation, application and elaboration of skills in the design and protyping/production of a unique body of ceramic work. Students extend research relevant to their individual design practice and produce a body of work which evidences a critically engaged and technically accomplished/ appropriate approach. Self-direction is encouraged so that students develop and apply their skills within the framing and articulation of the brief. Project documentation and presentation methods are expected to reflect a substantial sophistication of design ideas and communication techniques.

SDES3112
Jewellery Studio 4 - Design and Production
School of Design Studies
UOC6 HPW3
Prerequisite: SDES3105

This course extends the skills and knowledge of Jewellery Studio 3 and increases the complexity of the studio practice within the jewellery domain. Self-direction is encouraged so that students develop and apply their skills within the development and articulation of a brief. Projects address the conceptual, material and technical understandings of jewellery and object design and require, in some instances, for students to liaise with industry partners in the development of their design solutions. Project documentation and presentation methods are expected to reflect a substantial sophistication of design ideas and communication.

SDES3113
Textiles Studio 4 - Textile Applications
School of Design Studies
UOC6 HPW3
Prerequisite: SDES3106

The aim of this course is to extend the students' design experience through complex projects in textile design, building on the skills and knowledge acquired from previous textile studios. Self direction is encouraged so that students develop and apply their skills within the development and articulation of a brief appropriate for the textile art/design industry. Briefs cover design for a range of industries and may include fashion, apparel, homewares, rugs, interior and exterior textile designs. Project documentation and presentation methods are expected to reflect a substantial individual sophistication of textile design ideas, techniques, execution and realisation for the diverse textiles industry.

SDES3162
Non-functional Ceramics
School of Design Studies
UOC6 HPW3

This course provides an introduction to processes and technology associated with the construction and firing of studio based work in clay. It provides the opportunity for students to explore technical and creative skills in developing and executing studio based work in clay. Students develop familiarity with key skills and materials used in translating ideas to objects. The practical component of the course engages students with ceramic processes and materials while critical/theoretical elements encourage students to deepen their understanding of contemporary ceramic practice. In particular, studio projects give prominence to ideas and processes associated with non-functional, three dimensional ceramics.

SDES3165
The Replicated Object - Jewellery Multiples
School of Design Studies
UOC6 HPW3

Students will develop an understanding of jewellery practice and explore the concepts of making multiples to produce wearable and non-wearable objects. Students will be encouraged through a range of material and process experiments to focus their making on the production of jewellery multiples and series in the studio.

SDES3166
Jewellery Design for Fashion
School of Design Studies
UOC6 HPW3

Students will develop an understanding of contemporary jewellery practice and explore the concepts of jewellery as expressed in a fashion context. This practical class will involve the design of both wearable and non-wearable body related objects. Students will be encouraged through a range experimentation in materials and processes to focus their making on the production of jewellery in the studio environment.

SDES3169
Textiles: New Technology
School of Design Studies
UOC6 HPW3

This course introduces the new technologies and processes developed by artists and industry specialists for textiles in the worlds of art, fashion, design, engineering and science. It covers recent developments in textile fabrics, materials, structures, manufacture, technologies and processes. Areas examined may include thermoplastics, smart textiles, micro electronics, molecular nanotechnology sustainability and green textiles transfer print processes, direct digital printing, new developments in man made and natural textiles properties and architectural, medical, engineering, manufacturing and sporting applications for new textiles.

SDES3170
Textiles: Nylon to Now
School of Design Studies
UOC6 HPW3

This course tracks the development of man-made 'techno' textiles for fashion, design, interior and environmental applications. Exploring fibres and fabrics from nylon in the 1950s to the present with Issey Miyake's recent APOC range, it looks specifically at the processes and techniques associated with synthetics for colouring, printing, resisting, blistering, bonding, shaping and adding textures. Recent developments to man-made fabrics and fibres have changed their character to replicate natural materials in relation to physical characteristics, drape, handle and feel. Nylon, polyester, polyamide, non wovens, microfibres, synthetic polymers, PVC and polypropylene have application for 3D forms, interior, exterior, art, design and sporting environments. Studio projects will cover various processes and techniques and may include sublistatic printing, transfer dye printing, heat transfer printing, thermoplastic shaping, latex printing, flocking and bonding.

SDES3171
Introduction to Motion Graphics Design
School of Design Studies
UOC6 HPW3

It assumes knowledge of software applications such as Photoshop and Illustrator. This course introduces and develops student knowledge of digital video and compositing applications within a work-flow of digital image design, motion graphics and information design processes. Students will also develop skills in pre-production media processes as well as the administrative mechanisms required for video, compositing, processing, and production. Students will experience hands on tuition in computer software for graphics media design as it relates to video imaging. Students will also learn to interpret, design and produce digital video using compositing applications from briefs and concepts developed in class.

SDES3172
Digital Design - Interactive Design
School of Design Studies
UOC6 HPW3

The course is an advanced investigation into interactive computing in design graphics and its application in the graphics/media industry. This course assumes an introductory level of Photoshop, illustrator, Director or Flash knowledge. The course also considers the areas of Graphic User Interface design, Information Technology, Information Design and the design processes involved in the creation of interactive media. The course expands the studentsâ ' use of CAD modelling, image manipulation, typography, digital audio, digital video and within an interactive authoring environment.

SDES3173
Advanced Computer Graphics
School of Design Studies
UOC6 HPW3

This course focuses on an advanced investigation of various 2D software tools, while developing the knowledge, skills and attitudes required to produce artwork and output specifications to industry standard across a range of media, methods and applications. Course content includes techniques of digital bitmap compositing, vector type and shape manipulation. In addition, students will investigate a range of options for digital output, which include colour correction and use of various materials. The course assumes prior intermediate skills in PhotoShop and Illustrator.

SDES3174
Digital Design - Web Design and Screen Interface
School of Design Studies
UOC6 HPW3

This course focuses on processes involved in the design of distributed content for the web in relation to, and satisfying the parameters set by, a specified brief and target audience. Course content includes critical analysis of selected web design, interface strategies, applications and usability. Students will investigate and research content, create and utilise navigational strategies, and apply hypertext mark-up language. Prior introductory level knowledge of Photoshop and Illustrator is assumed.

SDES3175
Fashion and Costume Design 2
School of Design Studies
UOC6 HPW3

This course will explore the scope of costume design in a theatrical context, building on the skills gained by students in Fashion and Costume Design I. Students will study historical and contemporary costume in theatre, film and television. Cutting, decoration and the construction of theatrical costumes will be explored in order to allow students to develop individual skills and designs from set briefs. Theatrical venues and museum collections will be investigated in order to support the practical component of the subject.

SDES3176
Digital and Pre-press Design
School of Design Studies
UOC6 HPW3

The content of this course focuses on familiarising students with the industry terminology principles and processes involved in digital pre-press, direct to press and print production, while developing the knowledge, skills and attitudes required to produce artwork and print specifications to a specified industry standard across a range of media, methods and applications.

The content includes digital pre-press techniques, direct to press techniques, paper technology and other print substrates; ink technology, printing technology; printing problems and troubleshooting; print grids, formatting and imposition; process colours and pantone colours, print resolution and dot gain; principles of planning, preparation and execution of finished artwork for print; special printing effects, writing print specifications liaison with pre-press bureaux and printers, and industry expectations and standards for quality assurance and OH&S.

SDES3177
3D CAD Object and Space
School of Design Studies
UOC6 HPW3

This course focuses on advanced investigation of various 3D software tools. It develops the knowledge, skills and attitudes required to produce models and measured drafting specifications to particular industry standards across a range of media types. Course content includes critical analysis of various Computer Aided Drawing strategies for rapid prototyping and visualisation. Students will investigate and research content and create outcomes in a number of areas, including modelling strategies, basic kinematics and various rendering techniques. The course assumes introductory level knowledge of Vectorworks, Photoshop, Illustrator and InDesign.

SDES3179
Digital Design - Introduction to Flash Design
School of Design Studies
UOC6 HPW3

This course introduces vector based interface design in the context of satisfying the parameters set by a specified brief and target audience. Students will explore and apply vector based interactive applications, research content, create and apply navigational strategies and structures, generate and produce fully functioning vector content to a introductory level of design. The content includes: critical analysis of selected Flash implementations and sites; criteria governing Flash design; critical analysis of target audience for a specified brief; research and structuring of Flash design; and research and analysis of navigational strategies. Students will be expected to have experience with Adobe Photoshop and Illustrator.

SDES3181
Designing Computer Mediated Responsive Environments
School of Design Studies
UOC6 HPW3

This course focuses on computer mediated responsive environment design in relation to, and satisfying the parameters set by, a specified brief and target audience. Course content includes critical analysis of selected interactive authoring applications and industry uses. Students will explore, create, manipulate and use various sensors and software applications to mediate a range of responses within an electronic context. In addition, they will research content, and create and produce physical computing outcomes to a specified industry standard across a range of media types. The course assumes knowledge of various software packages including Illustrator, Photoshop and Director (including Lingo).

SDES3186
Textiles: Surface Design
School of Design Studies
UOC6 HPW3

This course provides an introduction to the textile processes and techniques associated with dyed and printed textiles and explores these as a means of expressing ideas. Surface design incorporates various

techniques including dyeing, block-printing, screen printing, devori, discharge, Shibori and wax-resist, which are used in contemporary art and design practice and introduced in this course. Students will develop their own textile pieces using a combination of these techniques. Practical work is complimented by historical information, cultural references and contemporary textile art, craft and design practice.

SDES3345
Ceramics 4A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2335

This course provides the opportunity for students to pursue a self-initiated approach to art practice within a creative methodology that is exploratory, speculative and personal. At the same time, students deepen their awareness of the theoretical, historical and interdisciplinary settings of contemporary ceramic practice. Students are expected to engage with an area of research appropriate to their emerging practice and produce a body of work which evidences a development of relevant ideas and skills. Group seminars and critique develop the capacity to express the central concerns of studio work, constructive critical abilities and skill in their articulation.

SDES3346
Jewellery 4A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2336

This is a course of advanced studio practice that requires the student to initiate a jewellery design proposal; research and investigate appropriate technology, materials and audience; place the design within a conceptual framework and; construct a body of work that relates to the jewellery process.

SDES3347
Textiles 4A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES2337

This studio based course provides the opportunity for students to pursue a self initiated work program devised in consultation with lecturers. Students are expected to develop an area of research appropriate to their emerging practice and produce a body of work that demonstrates an understanding and refinement of relevant concepts with technical ability. Students extend their understanding of the theoretical, historical and interdisciplinary nature of contemporary textiles practice. Textiles 4A integrates lectures, individual and group tutorials, studio research methodologies and the presentation of seminars by each student covering the content and context of their practice, to achieve a thorough knowledge and critical awareness of contemporary textile practice and an ability to articulate the concerns of visual art textiles.

SDES3348
Ceramics 4B
School of Design Studies
UOC6 HPW3

This course provides an introduction to the basic materials and technology associated with the development and production of creative work in clay. Practical and theoretical classes focus on approaches to firing; and the chemistry, preparation and modification of clay bodies, slips and glazes. Workshop activity highlights experimentation, testing and evaluation, and the application of knowledge to studio practice. It provides the context in which students may explore personally relevant ideas and goals through an investigation of a range of materials and approaches. Theoretical information is contextualised with reference to ceramic history and to contemporary developments/usage. The course includes an introduction to specialist software designed to facilitate relevant calculations, assist in the development of ceramic formulations and provide for the storage of data.

SDES3349
Jewellery 4B
School of Design Studies
UOC6 HPW3

This is a practical class open to those students requiring skills centred in the jewellery studio. This course will focus on a thorough examination of surface as applied to jewellery and object making allowing for experimentation in a variety of specialist surface techniques, colours and coatings.

SDES3355
Ceramics 5A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES3345

Students further develop a self initiated approach to art practice within a creative methodology that is exploratory, speculative and personal. It provides for the resolution of work devised in consultation with studio staff. Students extend research relevant to their individual art practice and produce a body of work which evidences a technically accomplished/ appropriate, critically engaged approach to making.

SDES3356
Jewellery 5A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES3346

Students are required to produce a substantial project which demonstrates a refinement of the concepts and contexts central to their work and a developed areas of research relevant to their jewellery practice. The presented body of work will evidence the refinement of students' conceptual and technical capabilities.

SDES3357
Textiles 5A
School of Design Studies
UOC6 HPW3
Prerequisite: SDES3347

This studio based course requires that students produce a substantial project which demonstrates a refinement of the concepts and contexts central to their work and a developed area of research relevant to their textiles practice. The presented body of work will evidence the refinement of the student's conceptual and technical capabilities. An experimental approach to textiles practice is encouraged and may take the form of divergent or interdisciplinary works such as site specific work, 3D forms, object making, works relating to the body or design for exhibition and studio production.

Textiles 5A covers an integrated approach to studio practice through lectures, tutorials, studio research methodologies and the presentation of seminars by each student about the content and context of their practice. These are employed to achieve the synthesis of conceptual concerns and studio practice.

SDES3358
Ceramics 5B
School of Design Studies
UOC6 HPW3

This course provides the opportunity to pursue a coherent project that supports the student's emerging ceramic practice. Students are expected to engage with an area of research appropriate to their practice and develop a body of work that evidences maturation and the sophistication of relevant ideas and skills. Students may work across the range of approaches that constitute contemporary fine art contexts. Experimentation, interdisciplinary and hybrid means are supported and encouraged. Group seminars and critique develop the capacity to express the central concerns of studio work, constructive critical abilities and skill in their articulation.

SDES3359
Jewellery 5B
School of Design Studies
UOC6 HPW3

This course extends the skills and knowledge developed in the jewellery studio and increases the complexity of the studio practice within the jewellery discipline. Self-direction will be encouraged so that students develop and apply their skills within the articulation of a brief. Projects will address conceptual, material and technical understandings of jewellery and object design and require, in some instances, for students to liaise with industry partners in the development of their jewellery solutions. Project documentation and presentation methods are expected to reflect a substantial sophistication of design ideas and communication.

SDES3365
Textiles 4B
School of Design Studies
UOC6 HPW3

This studio based course provides the opportunity for students to pursue a self initiated work program devised in consultation with lecturers. Students are expected to develop an area of research appropriate to their emerging practice and produce a body of work that demonstrates an understanding and refinement of relevant concepts with technical ability. Students extend their understanding of the theoretical, historical and interdisciplinary nature of contemporary textiles practice. Textiles 4B integrates lectures, individual and group tutorials, studio research methodologies and the presentation of seminars by each student covering the content and context of their practice, to achieve a thorough knowledge and critical awareness of contemporary textile practice and an ability to articulate the concerns of visual art textiles. Textiles 4B covers demonstrations of advanced textile processes.

SDES3375
Textiles 5B
School of Design Studies
UOC6 HPW3

This studio based course requires that students produce a substantial project which demonstrates a refinement of the concepts and contexts central to their work and a developed area of research relevant to their textiles practice. The presented body of work will evidence the refinement of the student's conceptual and technical capabilities. An experimental approach to textiles practice is encouraged and may take the form of interdisciplinary works such as site specific work, 3D forms, object making, works relating to the body or design for exhibition and studio production. Textiles 5B covers an integrated approach to studio practice through lectures, tutorials, studio research methodologies and the presentation of seminars by each student about the content and context of their practice. These are employed to achieve the synthesis of conceptual concerns and studio practice.

SDES4101
Design Studio Project
School of Design Studies
UOC12 HPW6

This student-initiated project will be positioned in a real context and provide students with an experience of the multi-disciplinary nature of design. The project will extend from research and development through to the translation of students findings into realised design solutions. The project will be developed in conjunction with selected professionals and/or with a client who presents an actual design problem. The guiding philosophy of the Bachelor of Design Studies, that of an integrated approach to design must be demonstrated throughout the course with reference to more than one studio area in the finished project. The design proposals must address complex contextual issues and fully address the constraints of the brief. Students will be required to develop a recognisable design process, to incorporate costing of the final scheme, to demonstrate design management of the project and apply their skills to clear documentation and presentation of an integrated design outcome.

SDES4102
Professional Experience Program
School of Design Studies
UOC12 HPW0
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

The aim of this course is to provide students with the opportunity to experience real-life professional design situations, over an extended period. During this course, students will establish a working relationship with the profession and potential employers as well as a working knowledge of the practice of design and production.

SDES4104
Honours Project
School of Design Studies
UOC6 HPW2
Prerequisite: SAED4051.

The aim of this project is to provide the Honours candidate with the opportunity to research and document an approved design related topic. Topics that explore design's relationship to: history/theory, processess and technics, objects and prototypes, interactivity, ethics, materials and potential use, studio management, studio practice strategies, and education are examples of appropriate research areas. The Honours program in the Bachelor of Design provides a series of seminar presentations by research experts and Honours candidates to support the development of a research project comprising a research document and, where appropriate, studio outcomes. Candidates are asked to frame a research question or hypothesis in relation to an existing body of knowledge. The research process will include the application of a nominated research practice or methodology suited to the question. Analysis of the research findings based on documented evidence forms the basis for conclusions and suggestions for further research. Successful completion of the subject with a Grade of Credit (65%) and above will lead to the Award of the Bachelor of Design with Honours.

SDES5491
Professional Experience Program
School of Design Studies
UOC6 HPW0

The aim of this course is to provide students with the opportunity to experience real-fife professional design situation, over an extended period. During this program of 25 working days, students will establish a working relationship with the profession and potential employers as well as working knowledge of the practice of design and production.

SENG1031
Sofware Engineering Workshop 1
School of Computer Science and Engineering
UOC6 HPW5
Corequisite: INFS1611; Excluded: SENG1020

The Software Engineering Workshop is a series of courses that span the first three years of the Software Engineering program. The course series will provide an opportunity to work in small teams on substantial, realistic projects, covering most phases of the software production life cycle. The SE Workshop stream also provides an opportunity to apply the techniques and methods covered in other courses of the course. Under guidance from staff, the intention of this series is to enable students to learn by reflective practice. Whatever steps are taken students should become aware of what they are doing, and reflect on the consequences. This is the essence of the Personal Software Process described in the textbook by Watts Humphrey. Each course in the series will involve group project work, presentations, report writing, and documentation. This is the first course in the series and will contain: an introduction to the software process and to a number of the software engineering practices to be adopted throughout the series; the formation of the first set of small groups; a number of exercises to develop group skills.

Each group will complete a domain analysis and a requirements analysis for a project. Each group will: examine similar systems; interview users or potential users of the system; develop a requirements document; validate the requirements by prototyping. This course will form the practical component of INFS1611.

Further Information: CSE class page **www.cse.unsw.edu.au/~se1031**

SENG2010
Software Engineering Workshop 2A
School of Computer Science and Engineering
UOC3 HPW2.5
Prerequisite: SENG1020 or SENG1031; Corequisite: INFS2603, and COMP2111.

This is the third course in the series and will cover specification. During this course the groups will take a requirements document (not necessarily the same document developed by the current teams during SENG1020) and develop a logical specification document. The specification document must be developed using the modelling techniques discussed in INFS2603 and COMP2110. As part of the specification document, the groups should identify a set of acceptance tests appropriate to the functional specification This course forms the practical components of COMP2110.

Further Information: CSE class page **www.cse.unsw.edu.au/~se2010**

SENG2020
Software Engineering Workshop 2B
School of Computer Science and Engineering
UOC3 HPW2.5
Prerequisite: SENG2010

In this course, the fourth course in the series, the groups will take a specification document, such as might have been produced in SENG2010, and will produce a design document describing how the specified system will be mapped onto physical components.

Further Information: CSE class page **www.cse.unsw.edu.au/~se2020**

SENG3010
Software Engineering Workshop 3A
School of Computer Science and Engineering
UOC3 HPW2.5
Prerequisite: SENG2020

Each group will take a design document, such as might have been produced in SENG2020, and carry out the implementation and testing of the components of the system. As for all components of this series the implementation and testing will be documented.

Further Information: CSE class page **www.cse.unsw.edu.au/~se3010**

SENG3020
Software Engineering Workshop 3B
School of Computer Science and Engineering
UOC3 HPW2.5
Prerequisite: SENG3010

In the sixth and final course in the series, the groups will undertake the integration, testing, evaluation, and maintenance of a system, whose components have been produced in SENG2010.

Further Information: CSE class page **www.cse.unsw.edu.au/~se3020**

SENG4910
Thesis Part A (Software Engineering)
School of Computer Science and Engineering
UOC6 HPW7
Prerequisite: Enrolment in Software Engineering program 3648 or 3651 or 3652 or 3653.

This course represents the thesis proposal component. The proposal is assessed by a seminar given at the end of semester.

Further Information: CSE class page **www.cse.unsw.edu.au/thesis**

SENG4911
Thesis Part B (Software Engineering)
School of Computer Science and Engineering
UOC12 HPW14
Prerequisite: SENG4910.

The thesis is done in the last two semesters of the BE degree program. For full-time students, seven hours per week in the first semester and fourteen hours per week in the second semester are devoted to directed laboratory and research work on an approved course under guidance of members of the lecturing Staff of the Schools of Computer Science and Information Systems. Generally, the thesis involves the design, construction, and testing of a software application, but the thesis could be an exploration and evaluation of some aspects of a software development method. Each student is required to demonstrate the outcome of the thesis work, and present a written thesis at the end of the second semester.

Further Information: CSE class page **www.cse.unsw.edu.au/thesis**

SENG4921
Professional Issues and Ethics
School of Computer Science and Engineering
UOC6 HPW4
Prerequisite: enrolment in Software Engineering program 3648, 3651, 3652, 3653, 3749 or BSc Computer Science co-op program 3978.

This course will develop a framework on which professional and ethical issues can be developed. Topics covered will include team and meeting skills, communication skills, interpersonal skills, software quality and process, in addition to ethics. The subject will be delivered using lectures, class discussions, written assignments, reading lists, the Internet, presentations, and invited speakers.

Further Information: CSE class page **www.cse.unsw.edu.au/~se4921**

SERV1001
Fundamentals of Tourism
School of Marketing
UOC6 HPW3
Excluded: TAHM2001

An introductory course in the study of tourism. The origins and evolution of contemporary tourism will be carefully examined and students will be familiarized with the various supply and demand components of the tourism industry through the examination of competing tourism models. Topics to be covered include the historical, economic, social, cultural, psychological and marketing aspects of human travel and the tourism industry globally, with a special focus on the impacts of tourism and the nature and industrial structure of tourism in and to Australia.

SERV1100
Tourism & Hospitality Operational Studies
School of Marketing
UOC6 HPW6
Prerequisite: Enrolment in 3571 BCom (Services Marketing - Tourism & Hospitality)
Excluded: TAHM1666, TAHM1777

This course provides theoretical and practical training in food and beverage operations, hotel front office operations and interpersonal communication skills. The training takes place at an accredited hospitality and tourism training college and prepares students for the program requirement of 250 hours of industry employment.

SERV2001
Destination in Marketing
School of Marketing
UOC6 HPW3
Prerequisite: SERV1001

The success of most tourism businesses is reliant on the competitiveness of the host destination. This course examines the specialised nature of destination marketing to enhance students' understanding of the opportunities, challenges and constraints facing destination marketing organisations in an increasingly competitive tourism market place. Emphasises a strategic approach to marketing of destinations, which includes development of strategic and tactical campaigns, the management of destination demand and the development and management of destination image.

SERV2002
Services Operations Management
School of Marketing
UOC6 HPW3
Prerequisite/Corequisite: MARK2005
Excluded: TAHM3002

Successful service 'manufacture' and final delivery to customers/clients requires a series of well designed, well managed and seamless service processes, some backstage and some front stage. The intangibility of services complicates the traditional management task of planning, organizing, directing and controlling for the performance that goes into creating and delivering a service product. Building on the basic principles of operations management, the course examines the operations decisions that managers may face in managing their resources and delivering services to their customers to achieve service quality as well as efficiency goals. Key topics include: blueprinting the service experience, the new service development process, house of quality, setting KPIs, gap analysis, the physical environment, capacity management, waiting times and productivity measurement.

SERV2003
Service Industry Project
School of Marketing
UOC6 HPW2
Prerequisite: MARK2055
Corequisite: SERV2002
Excluded: TAHM2888, TAHM3888

A work experience project is a mandatory part of the degree program. This will be supplemented by lectures/seminars on a range of related, contemporary services marketing topics. It is envisaged the project topics might centre around blueprinting the services processes in order to solve a service operational problem; map and analyse the service quality processes (e.g. the gap model of service quality) of an organisation and prepare a set of recommendations for quality improvement; or mapping the key touchpoints and defining where value is created in an organisation's service processes; or perhaps analysing and reporting on a organisations employment branding processes. A key learning outcome will be students ability to put various services models, frameworks and theories into practice.

SERV3001
Managing People for Service Advantage
School of Marketing
UOC6 HPW3
Prerequisite: MARK2055
Excluded: TAHM3004

In the 21st century, most service organizations in a given industry perform their core service function equally well and hence it does not become a source of competitive advantage. Competitive advantage can however be achieved by developing a service culture and a customer-centric organisation that results in delivery of excellent customer service, be it with customers of general services (e.g., telecommunications, fitness centres, hotels, tourism, restaurants, airlines, etc) or clients of a

professional service firm (e.g., accountancy, financial planning, higher education, architecture, engineering consulting). Excellent customer service does not happen by chance. It has to be designed into the firm's service delivery systems and delivered by people and technology. Employing the service-profit chain concept as a framework, this course is about designing a service delivery strategy (built around service reliability, exceeding expectations, service recovery, and fairness) then examining the role of technology and people (e.g., service vision, service leadership, 'internal' customers, service climate and teamwork).

SERV4001
Strategic Management in Tourism & Hospitality
School of Marketing
UOC6 HPW3
Prerequisite: SERV2001
Excluded: TAHM4003

This course examines the practical application of tourism and hospitality policy and planning to the operation of major tourist and hospitality segments and key organisations within those segments. The course involves experiential learning with industry executives in workshops and seminars, debating current issues.

SERV4002
Entrepreneurship in Services
School of Marketing
UOC6 HPW3
Prerequisite: MARK2055

Service industries now account for three quarters of wealth and 90% of all new employment in developed economies and approaching that in developing countries. Yet we know little about innovation in this sector. Much of today's employment is generated through SME new service ventures. This course explores entrepreneurship (and intrapreneurship) in both large and SME firm contexts, but with a focus on intangible services. The course theme is on best practice in innovation in services and identifying a range of successful organisational responses to current technological opportunities and market imperatives. Specifically the course will focus on: what opportunities and challenges do entrepreneurs face, and how might these opportunities and threats be managed? Key topics might include: a typology of service products; entrepreneurial orientation; entrepreneurs - born or made?; intrapreneurship; industry analysis; assessment of internal resources and capabilities; customer value creation; and development of a business plan.

SERV4003
Tourism Policy and Planning
School of Marketing
UOC6 HPW3
Prerequisite: SERV4001

This capstone course integrates the knowledge developed in Fundamentals of Tourism, Tourism Law/Economics of Tourism and Destination Marketing into a course that uses government policy and planning as the conceptual framework. It examines the importance of tourism policy and planning in terms of sustainable tourism development, addressing the central role of tourism public policy making. The course analyses a range of critical factors such as carrying capacity, yield management and risk management. It focuses on sustainable tourism development to explain the links between these factors and tourism policy and planning.

SESC1001
Safety, Health and Environment
School of Safety Science
UOC6 HPW4

The course introduces students to the main issues of safety, health and environmental (SHE) science. Themes and inter-relationships are explored using scenarios based in the workplace, community and environment. SHE as an integrated concept.

Notes: Only available to students who require more than 48 UOC to complete their degree requirements.

Also offered in off-campus mode in all sessions.

SESC1580
Risk Management 1
School of Safety Science
UOC3 HPW4

Exclusions: SESC6610 and students undertaking a major or minor in the BSC (3970) in Safety Science

This course provides an introduction to risk management in aviation. Risk management is first treated generally but more detailed examples focus on safety health and environmental risks. The course covers the nature of risk and the process of managing risk.

The range of risks of relevance to aviation are identified and ranked as an introduction to qualitative risk assessment. The course then covers OHS and Major Hazards legislation and general safety issues in aviation. Statistical analysis and fault and event tree analysis are used to demonstrate examples of quantitative risk assessment. Safety, Quality and Environmental management systems are discussed with reference to ISO9000, ISO14000 and AS/NZS4804.

SESC2091
Safety, Health and Environmental Hazards
School of Safety Science
UOC6 HPW4

This course introduces students to safety health and environmental hazards, including chemical hazards, atmospheric contaminants, biohazards and psychological risks. The course also introduces epidemiology as a means of studying these hazards by examining safety, health and environmental case studies.

SESC2451
Biomechanics for Sports Scientists
School of Safety Science
UOC6 HPW5

Students study the basic principles of biomechanics and apply these to the analysis of sports. Basic mechanics (statics, kinematics and dynamics) is studied in two and three dimensions. Human movement measurement methods are introduced. The mechanics of the musculoskeletal system are studied in detail in human gait - walking, running and jumping. This will integrate students' understanding of mechanics with functional anatomy through the study of normal gait dynamics, muscle function, work and power. Aerodynamics and hydrodynamics are introduced and explained through the analysis of throwing and swimming.

SESC2580
Risk Management 2
School of Safety Science
UOC3 HPW2

This course provides an introduction to the management process with a focus on operational risk issues. The process is demonstrated in case study examples involving business and safety decisions. The second half of the course identifies problems which could lead to emergency situations then considers the planning required for different types of emergency. The course covers writing emergency procedures, emergency plans, setting up an emergency control centre, running an emergency exercise and the links with the state emergency services.

While there is an emphasis on application to the aviation industry the course is of relevance to other disciplines.

SESC2800
Fundamentals of Toxicology
School of Safety Science
UOC3 HPW2

An introduction to the underlying principles of toxicology. It provides an introduction to chemical, biochemical and cellular principles. The course is aimed at students who have not previously studied chemistry or biology.

SESC3020
Occupational Health and Safety Law 1
School of Safety Science
UOC3 HPW3

This course outlines the legal regime for the regulation of occupational health and safety in Australia. It deals with occupational health and safety legislation; relevant case law; duty of care of employers, controllers of premises and suppliers and manufacturers; risk management obligations; duty of employees. The course also covers public policy issues regarding legal reforms of occupational health and safety.

Note: Also offered in off-campus mode in S2.

SESC3030
Occupational Health and Safety Law 2
School of Safety Science
UOC3 HPW3

This course extends concepts of law introduced in SESC3020, and covers other workplace legislation and procedures, such as consultation obligations, reporting obligations, incident response and investigation, and workers compensation and rehabilitation obligations.

Assumed knowledge: SESC3020

SESC3091
Safety, Health and Environmental Practice
School of Safety Science
UOC6 HPW3

A workplace assessment based course, where students are required to report on the safety, health or environmental issues of management following visits to a number of diverse industrial sites.

Assumed knowledge: SESC3101

SESC3101
Risk Assessment and Safety Engineering
School of Safety Science
UOC6 HPW4

Risk management requirements and responsibilities in safety legislation. Methodologies of risk identification and assessment. Application of principles of risk identification, assessment and control to a range of engineering safety problems including manual materials handling, mechanical plant and equipment, pressure vessels, confined spaces, fire and explosion, noise, whole body vibration, ionising and non ionising radiation, electrical safety, workplace design and ergonomics and safety in construction.

SESC3310
Social Issues in Science and Technology
School of Safety Science
UOC3 HPW2

This course is an objective 5 course which covers social issues arising from future scientific and technological developments and the role that the professional engineer or scientist can play in influencing future directions.

The course is taught through a combination of group activities, case studies, projects and seminars, and covers four major topic areas: professional ethics, environment-related issues, safety and liability, and controls of future technology.

SESC3451
Human Movement Measurement Methods
School of Safety Science
UOC6 HPW6
Prerequisite: SESC2451.

Students study the theory and practice of human movement measurement.

The course is taught through lectures and laboratory sessions. Students learn 2D video measurement techniques and how to apply these to the study of human movement. Electromyography, force, temporo-spatial, balance and postural measurement and analysis methods are studied, as well as instrumentation data processing and analysis methods.

Methods for the study of human movement and skills, including gait, electromyography and sporting skills are covered in laboratory sessions.

SESC3541
Assessment of the Workplace Environment
School of Safety Science
UOC6 HPW4

This course is designed to give students an opportunity to learn and apply methods and techniques used to assess the workplace and the environment. The course is based on measurements in the working and external environment. Topics are selected from measurement and evaluation of noise, lighting, vibration, ventilation, air quality, thermal environment, radiation, chemical hazards, slip resistance etc. Assessments are carried out on sites in and around UNSW.

Assumed Knowledge: SESC3101

SESC3601
Safety, Health and Environmental Management Systems
School of Safety Science
UOC6 HPW4
Excluded: SESC6610.

Covers principles of safety, health and environment; the identification, assessment and control of organisational risks to work place and environment; the legal system, duty of care and occupational health and safety, workers compensation and environmental legislation, OHS and environmental management system standards; Integrated Management Systems, Safety, Health and environmental management standards; Integrated Management Systems, Safety, Health and environmental management systems auditing.

SESC3620
Occupational Disease and Injuries
School of Safety Science
UOC3 HPW3

This course deals with the ways in which work can affect the health of workers. Covers occupational diseases and injuries of skin, respiratory system, nervous system, reproductive system, the musculoskeletal system, kidneys and occupational cancer.

Assumed knowledge: ANAT2151

Note: Also offered in off-campus mode in Session 1

SESC4010
Project Research Methods
School of Safety Science
UOC3 HPW3

This course is the preparation for the fourth year project in safety science. It covers issues in research methodology, including literature searching, problem formulation, null and alternative hypotheses, qualitative and quantitative research designs, statistical inference and the analysis of quantitative data, and a research report. Students will be expected to be able to recognise and avoid common methodological problems in research.

SESC4211
Risk Management
School of Safety Science
UOC6 HPW3

This course gives an overview of Risk Management following the format of the Australian Standard in Risk Management (AS4360).

Tools and techniques applicable to each step of the risk management process are discussed, using examples applicable to the class. The same risk management process is applied to manage a wide range of business issues including health and safety, the environment, finance and project management. This course is therefore relevant as part of a wide variety of programs, and students from any program are accepted.

Students select examples for exercises to suit the industry and role in which they work (or intend to work). At the end of the course, students should be able to use risk management tools applicable to their specific interest and have an awareness of tools used in other industries and applications.

SESC4410
Ergonomics 2
School of Safety Science
UOC3 HPW3

Covers displays and controls, design of human-machine-environment systems, job design and work organisation, design of workplaces, the physical environment and an introduction to product design.

Assumed knowledge: SESC2091, SESC3101

SESC4820
Chemical Safety and Toxicology
School of Safety Science
UOC3

This course provides an outline of the toxicological, occupational hygiene and environmental aspects of chemical hazards and exposures. Atmospheric contaminants, metals, solvents, pesticides, carcinogens, hazardous wastes and dioxins are used as case studies.

Assumed knowledge: SESC2091

Note: Short Course mode in S1 (compulsory 2 day workshop plus assessable tasks completed subsequently). Also offered in off-campus mode in S1.

SESC4850
Management of Dangerous Materials
School of Safety Science
UOC3

Chemicals legislation, the dangerous goods system, the hazardous substances regulation and systems for management of hazardous wastes, and systems for management of chemicals in the workplace.

Note: Short course mode in Semester 2 (compulsory 2-day workshop plus assessable tasks completed subsequently). Also offered in off-campus mode in Semester 2.

SESC4924
Research Project
School of Safety Science
UOC24

Stage 4 undergraduate project comprising 24 units of credit (50% of Year 4 load, with the other 50% made up from Stage 4 courses).

This course provides an introduction to the research process. Students undertake a research project with supervision, which is written up as a research project report.

SLSP1000
Social Science and Policy
School of Social Science and Policy
UOC6 HPW3

Explores the nature of social science, the knowledge and information created by it, and how this is applied to real world policy problems. These applications are examined in the context of a range of policy areas drawn from health, education, environment and social policy. Investigates how policy is developed, changed, implemented and evaluated and the role social science plays in this process. Considers practical, political and ethical problems encountered by social scientists in applying their knowledge and skills to inform policy and the role social science plays in the management of social change.

SLSP1001
Research and Information Management
School of Social Science and Policy
UOC6 HPW4

Explores the processes involved in making sense of information used in the policy process and in generating new information through research. Introduces and examines a range of technologies to assess the use of information by policy making bodies both public and private, including the media. Provides skills in the use of such technologies and in the design, conduct and analysis of social research and considers the utilisation of such research in management and decision making.

SLSP1002
Introduction to Policy Analysis
School of Social Science and Policy
UOC6 HPW3

An introduction to the social, political and organisational context of policy making. Includes the governmental and legal framework within which public policy is made; organisations and policy; the role of interest groups and the media in influencing policy. Studies of key policy areas such as communications policy, environmental policy or health policy will be used to illustrate the concepts introduced in the course.

SLSP2000
Political Economy and the State
School of Social Science and Policy
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: PECO2000

An interdisciplinary overview of the making of economic policy and the institutional structure in which it occurs. Considers how theory informs and legitimates policy choices and how policies are dependent on historical, social and economic contexts. Major current policy case studies are used to evaluate policy implementation in Australia and internationally.

SLSP2001
Applied Social Research 1
School of Social Science and Policy
UOC6 HPW4
Prerequisite: 36 units of credit

Issues and problems in conducting social research in applied contexts. Research methods and the analysis of data: qualitative and quantitative research methods, techniques for the analysis of data including inferential statistics, the use of statistical data packages and methods of qualitative data analysis. Reporting research findings and ethical issues in research.

SLSP2002
Policy Analysis Case Studies
School of Social Science and Policy
UOC6 HPW3
Prerequisite: SLSP2000

Examines the role of the social scientist in policy work, exploring both theoretically and practically the policy/action relationship. Case studies in policy work are introduced in workshops to develop practical skills in dealing with policy implementation issues.

SLSP2701
The Theory and Practice of Development
School of Social Science and Policy
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: COMD2000, GLST2104, INST2400, POLS2023

The theories developed to explain the different rate and pattern of economic and social development within and between countries and regions and the policy consequences of these explanations are analysed and compared. The theories covered include explanations for different rates of development internal and external to nation states based on social, market, technological and other factors. Significant case studies of policy experience from Latin America and Asia, where a variety of economic and social policy approaches have been adopted are examined. The current status of debates about the nature of underdevelopment and its solutions is reviewed.

SLSP2820
Crime and Punishment in Historical Perspective
School of Social Science and Policy
UOC6 HPW3
Prerequisite: 36 units of credit

Examines the historical development of key institutions and practices of modern law, enforcement and punishment. Traces the evolution of crime and 'criminals', the legal code, police forces transportation versus the prison, and other components of the criminal justice system from the end of the 18th century through to the present day, and the thinking behind these developments. The lecture series provides an overview, focusing on Britain with reference to continental Europe, the United States, and Australia; tutorials explore a series of policy case studies.

SLSP3000
Social Theory and Policy Analysis
School of Social Science and Policy
UOC6 HPW3
Prerequisite: SLSP2000

Addresses the way that the application of the social sciences to policy questions involves theorising - that is, the construction and application of abstract concepts - by both observers and practitioners. The place of theory in the production of knowledge, and the way in which knowledge is reflected in the organising of social order, are subject to critical review. Tracks the development of ideas in the social sciences, including contemporary debates about modernism and post modernism, and investigates their impact on policy.

SLSP3001
Applied Social Research 2
School of Social Science and Policy
UOC6 HPW4
Prerequisite: SLSP1001, SLSP2001 or enrolment in Program 4036

Characteristics of applied social research. Planning applied research: Specifying research questions, writing research proposals. Applied research designs and their strengths and limitations: Randomised and quasi-experiments, surveys, case studies, field research & qualitative research designs. Issues in data collection: choice of method, considerations of time and cost, consultation with stakeholders, operationalisation of concepts including social measurement and scale construction. Analysis of applied research data: qualitative and quantitative techniques including qualitative data analysis, analysis of variance, correlation, multiple regression analysis, analysis of contingency tables. Use of SPSS for data analysis. Reporting and interpreting research outcomes. Ethical issues and utilisation of research findings.

SLSP3002
Social Science and Policy Project
School of Social Science and Policy
UOC6 HPW3
Prerequisite: SLSP2002, SLSP3000, SLSP3001

Students undertake a major social science research project in one of several policy areas. The project involves bringing together the research and analytical skills necessary for policy-related work and will involve students in all phases of the project. This includes preparation of a literature review and a research proposal, the conduct of research, and the writing of a report embodying the results of the research.

SLSP3911
Inquiry and Interpretation in the Social Sciences
School of Social Science and Policy
UOC6 HPW3
Prerequisite: SLSP3000, SLSP3001

Examines the conceptual foundations of the social sciences both historically and currently, to provide an understanding of the theoretical dimensions of social science research and their methodological implications.

SLSP4000
Social Science and Policy Honours (Research) Full-Time
School of Social Science and Policy
UOC24 HPW5
Prerequisite: 48 units of credit in SLSP and SLSP3911 at an average of at least 65% and permission from Head of School

Students are required to prepare a thesis of between 15,000 - 20,000 words. Participation in prescribed seminars of at least four hours duration per week is also required.

SLSP4050
Social Science and Policy Honours (Research) Part-Time
School of Social Science and Policy
UOC12 HPW3
Prerequisite: 48 units of credit in SLSP and SLSP3911 at an average of at least 65% and permission from Head of School

Students are required to prepare a thesis of between 15,000 - 20,000 words. Participation in prescribed seminars of at least four hours duration per week is also required.

SLSP4100
Policy Studies Honours (Research) Full-Time
School of Social Science and Policy
UOC24 HPW5
Prerequisite: 54 units of credit at 65% including SLSP1002, SLSP2000, SLSP2002, SLSP3000, SLSP3911 and permission from Head of School

Students are required to prepare a thesis of between 15,000 - 20,000 words. Participation in prescribed seminars of at least four hours duration per week is also required.

SLSP4150
Policy Studies Honours (Research) Part-Time
School of Social Science and Policy
UOC12 HPW3
Prerequisite: 54 units of credit at 65% including SLSP1002, SLSP2000, SLSP2002, SLSP3000, SLSP3911 and permission from Head of School

Students are required to prepare a thesis of between 15,000 - 20,000 words. Participation in prescribed seminars of at least four hours duration per week is also required.

SLSP4500
Combined Social Science and Policy Honours (Research) Full-Time
School of Social Science and Policy
UOC12 HPW2
Prerequisite: 48 units of credit in SLSP and SLSP3911 at an average of at least 65% and permission from Head of School

Students are required to complete a research and seminar program acceptable to both Social Science and Policy and the other school/ department.

SLSP4550
Combined Social Science and Policy Honours (Research) Part-Time
School of Social Science and Policy
UOC6 HPW2
Prerequisite: 48 units of credit in SLSP and SLSP3911 at an average of at least 65% and permission from Head of School

Students are required to complete a research and seminar program acceptable to both Social Science and Policy and the other school/ department.

SOCA1002
Australian Society
School of Sociology and Anthropology
UOC6 HPW3
Excluded: SOCI1232

In exploring some of the major dimensions of Australian society, this introductory course analyses the institutional patterns from a range of sociological perspectives. Topics covered include: family and intimacy, youth and identity, poverty, unemployment, the influence of the media and the global context of Australian social life.

SOCA1004
Relationships: Sociology and Everyday Life
School of Sociology and Anthropology
UOC6 HPW3
Excluded: SOCC1231, SOCI1230

Works through longstanding concerns of sociology with the qualities of self and sociality, with what it means to live in relation to others. Aims to enhance the productive tension between ways of knowing and ways of living and to teach particular skills in reading, writing and researching. Among the topics considered are ritual, passion, intellectuality, enchantment, estrangement, play, inspiration, sympathy and humility. Among the theorists are Durkheim, Sartre, Bachelard, Simmel and Buber.

SOCA1005
Australia's Media: Sociological Perspectives
School of Sociology and Anthropology
UOC6 HPW3
Excluded: SOCC1531, SOCA3900

Introduces students to theoretically informed examination and analysis of the mass media based upon sociological intellectual traditions which address the mediation of social relations, the social construction of everyday life and the formation of socially constructed and culturally inflected personal and collective identities. Explorations of newspapers, television, film and electronic communciations set in the context of patterns of ownership and control produce new understandings of culture, ideology and social processes.

SOCA1006
Introduction to Globalisation
School of Sociology and Anthropology
UOC6 HPW3
Excluded: GLST1100, INST1003

Considers how the transnational flows of people, goods, culture and capital are changing the significance of locality and national societies in shaping social life. Examines questions of belonging by looking at migration, refugees and citizenship. Looks at the emergence of global culture through a study of the emergence of global and multicultural cities, new patterns of consumption for pleasure, and the role of media and communications in globalisation. Explores the issues of global governance and examines the cultural and political responses to globalisation in anti-globalisation movements, fundamentalism and economic strategies.

SOCA2103
Globalisation and Fragmentation
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: INST2200

Examines the effects of globalisation on peoples' lives in different parts of the world. Explores the impact of transnational flows of culture, goods, technology and power and their impact on local worlds. Explores concepts such as: globalised culture, identity, frontiers, diaspora, de-territorialisation, virtual communities, the commodification of health and bodies, the formation of global multicultural cities, globalised religion, the experience of war and destablised states, risk and vulnerability, new forms of sociality, human rights as a global discourse and social futures.

SOCA2104
Technology, Work, Culture
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCI3813

An introduction to sociological debates about the relationship between technological innovation, including especially that within the field of communications, and broader aspects of social life. Particular emphasis is placed on the theoretical and practical problems which result when the celebration of technological innovation is regarded as an explanation in itself. Includes an examination of such issues as the sociology of the future (including the future forms of work and leisure), the social role of aesthetic avant-gardism, the post-industrial society and information society (or superhighway) theses, competing conceptions of social change (e.g. technological innovation vs social movements), technological convergence and communications policy, and the social and political environments of policy-making.

SOCA2106
Cities: Experiencing Sydney
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: AUST2029, SOCC2703

Focuses on experiences and representations of cities. It is concerned with how the city has become the archetypal site and sign of modernity, and with how spatiality is now central to how cities are lived and imagined. Looks at the city as the site of social transformation in the twentieth century and the tensions between order and disorder. Explores images of the city as the site of liberal and radical utopian dreams as well as the promise and disaster of cities. The changing landscapes of the city are investigated through examples such as streets, crowds, light/darkness, gardens, museums and shopping malls.

SOCA2108
Social Anthropology: Diversity, Difference, Identity
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCI2301, SOCI3709

Diversity, difference and identity have been at the core of social anthropology as a discipline since its inception. Foundations of social anthropology, its core concepts and contemporary theoretical approaches are examined using examples from Australia and the Asia-Pacific Region. Tensions between the local and the global, sexuality, belief, modes of exchange, the role of secrets, the cultural treatment of the body, work and leisure and communication focus the readings and lectures, including audio-visual material.

SOCA2110
Anthropology, Identity and the Cinema
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit

Examines a range of films from an anthropological perspective and how particular cultures are represented, paying particular attention to the privileged gaze and the hegemonic (re)construction of cultural identities. Covers various topical areas including Orientalism, nationalism and violence, feminism, hyper-masculinity, post-modern alienation and nostalgia.

SOCA2204
Anthropology Research Fieldwork
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GENT1204, GENT1205, SOCI3710

Provides training in and use of ethnographic fieldwork methods in the context of a developing country with an understanding of village vs urban life and how development organisations impact. Ethnography is a part of the methodology of both sociology and anthropology as well as other social science research. Interview techniques and technologies, cultural mapping, methods of recording field data and participatory community development research are amongst the procedures to be explored. Field visits to regional, government and non-government organisations form a part of the research to understand how such institutions impact on village life.

Note: Taught in November-December. Students must contact Grant McCall (G.Mccall@unsw.edu.au) prior to the commencement of Session Two.

SOCA2205
Society and Desire
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCC2201, WOMS2005

The subject of desire is an especially curious one because it makes us think about the nature of the human condition. The perception of difference is an erotic process through which we are forged as bodily beings whose identities are constantly shifting. Explores how our sense of self emerges in relation to others. How we divide our own bodies into alien parts that may delight or repulse us is part of a larger social process that includes how we experience the world, how we live our sex, sexuality and cultural difference. Will draw on several continental thinkers.

SOCA2206
Embodiment
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCC2501, WOMS2106

We are lived bodies inhabiting a world. Addresses a range of themes which emerge when we reflect upon ourselves in this way: I am a body, yet I have a body; my body is always in communication with a world, I am both sentient and sensible; I am both bounded and open. Consideration of such themes requires an investigation of theoretical constructs of the social and cultural formations of embodied subjectivity, the relations of consciousness and flesh, habit and inhabitation, the significance of body image, relationality and emotions. Major theorists include Merleau-Ponty, Foucault, Douglas, Turner, Bachelard and Lingis. Case studies such as reproduction, sacred and profane bodies, bodybuilding and anorexia, dissociation and disembodiment, illness, will be used to enable students to reflect upon their own embodied experience, to examine critically everyday and theoretical assumptions, and to develop skills in qualitative analysis.

SOCA3103
Professions: Disciplines, Knowledge and Power
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCI2302, SOCC2602

Professions create a culture and command a discourse which authorise their practitioners to work in fields significant often critical, in the everyday life of persons, societies and nations. Drawing on disciplines of training, practice and expertise they can exert pervasive and persistent influence on the way we live and represent ourselves. Takes up ideas and theories from Foucault, Durkheim, as well as Carol Smart, E. Freidson and other contemporary writers and applies them to current practices (and malpractices) in professional environments. As concluding assignment students can undertake a theoretically informed empirical investigation of professional practice.

Note: Offered by distance mode. Students attend a two hour introductory meeting on the commencement day. All further work is done via the internet. Students should consult the online timetable for further details.

Contact: Frances Lovejoy <f.lovejoy@unsw.edu.au>

SOCA3104
Global Migration, Global Refugees
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 12 units of credit in Level 1 Sociology and 36 units of credit overall; Excluded: SOCC2702

Considers both voluntary and involuntary migration: from business migration and family reunion to various forms of exile and refugee flows. The social consequences of migration on the host society, the country of origin, and the migrant will be examined in light of questions of human solidarity, neighbourliness and justice.

SOCA3203
Oceanic Societies: Pacific Island Living
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCI3702

Provides students with the historical and intellectual context of the study of the Pacific Islands, including the conceptual and theoretical tools needed to comprehend the more than one thousand societies and cultures there. The broad outlines of the waves of human settlers in the region are explored, followed by discussions of specific topics, in selected locales, that best represent the rich diversity of the region. Topics include suicide, art and creativity, religion and sorcery, chieftainship, relations with the environment and how islanders see themselves in their worlds.

SOCA3206
Anthropology of Celebration
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit

Presents a series of key debates in the social anthropological literature of the last decade with the common theme of understanding celebration and the crucial role of play in human culture, inspired by Huizinga's concept of "homo ludens". Festivals, carnival, religious and secular ceremonial, rites of passage in culture and individual identity, global sport, visual anthropology, food, music and dance performance are some of the celebrations examined.

SOCA3208
Colonisation and Indigenous Identity Formation
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ATSI3001, SOCC3701

Investigates the formation of contemporary Indigenous identities in the context of the ongoing colonisation of Australia. Explores the interplay between culture and identity and analyses the various historic and academic constructions of Aboriginality. The history of imposed colonial notions of Aboriginal identity and their consequences for both Aboriginal people and non-indigenous Australians are identified and examined. The use of contemporary media such as film, television, literature and art are examined as case studies in the analysis of contested identities.

SOCA3209
Indigenous Australia: Gendered Identities
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ATSI3002, AUST2012, SOCC3717

Encourages students to engage in a critical analysis of the way in which gender influences and structures the experiences of Aboriginal women and men in the past and the present. A wide range of issues involving gender roles will be covered including land, art, activism, feminism, violence, race, and literature. Particular attention will be paid to colonial constructs of gender roles within Aboriginal communities. Aboriginal women's and men's roles in subverting the colonisation of their identities will be explored.

SOCA3210
Whiteness Beyond Colour: Identity and Difference
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: ATSI3005

Whiteness is generally assumed to be the norm in classifying difference. It is also assumed to be neutral. Delves into whiteness as a mode of identification and whether it can be assumed to be the norm as well as neutral. Topics include whiteness as Other, whiteness as a non-Indigenous identity, and whiteness in coloniser societies. Explorations of whiteness as a representation of oppression and as transformation will be addressed.

SOCA3211
Development and Modernity
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit

Investigates the parameters of contemporary development and the ways they affect our lives and the lives of others. Takes a historical approach to examine how the 'development project' arose out of the decline of colonialism and the rise of the Cold War, and how this 'project' was eventually supplanted by a quite different set of processes. Covers various topical areas including population pressures, urbanisation, the world food crisis, women and the international division of labour, foreign aid and NGOs, sustainable development, and the ethics of intervention.

SOCA3212
Environment, Society and Culture
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit

Examines environmental issues from a sociological viewpoint, analysing the social causes and consequences of resource scarcity and environmental degradation, and looks at societal responses to those problems. From this perspective, environmental problems are viewed as social problems, requiring an understanding of the social conditions that produce environmental problems and affect the extent and nature of solutions to them. Topics include who defines environmental problems; economic production practices; environmental movements; the global nature of environmental problems; environmental policy; a history of human modes of production and consumption; the role of culture in environmental problems; environmental justice; and environmental sustainability.

SOCA3301
Critical Reason: Modern Sociological Theories
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 6 units of credit in Level 1 Sociology and 36 units of credit overall; Excluded: SOCI3502

On the basis of classical sociological theory, proceeds to an in-depth elaboration of some of the most significant theoretical trends (e.g. phenomenology, structuralism, psychoanalysis, critical theory) and their place in the study of society.

SOCA3407
Australian Migration Issues
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: AUST2011, GENT1209, SOCI3614

An examination of racial, ethnic and social issues surrounding migration to Australia. Topics include an ecologically sustainable population; globalisation and international migration flows; brain drain to and from Australia; multiculturalism; criteria in determining migration policy; settlement issues; skilled migrants; refugees, international aid and social justice; identity, ethnicity and community.

SOCA3409
Crime, Gender and Sexuality
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GENT1207, WOMS2007, WOMS3006

Examines social implications of: the role of law in defining the limits of gender and sexuality, regulating gender and sexual relationships, and in reinforcing particular gender and sex based interests; the intersection of criminality and sexuality (specific examples may include pornography, rape, discrimination, AIDS transmission, moral danger, prostitution, abortion, underage pregnancy). Notions of public interest, privacy and consent in matters of gender and sex. The interaction of gender and sexuality with other stratification factors such as age, class, disability, ethnicity and race in the social construction of crime.

SOCA3410
Deviance
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCA2208

Examines a variety of definitions of deviance to include both legally proscribed activities such as arson, vandalism, and assault; and socially sanctioned activities, states and phenomena such as rudeness, promiscuity, acne, obesity, stupidity, pollution and pornography. Reviews theories of how deviance is maintained or controlled. Considers the making, changing and breaking of rules in society, especially in times of social change when new forms of deviance may emerge (eg smoking, sexual harassment) or other activities gain social acceptance (eg higher education for women, ethnic diversity).

SOCA3411
Forensic Sociology: Evidence, Implication and Responsibility
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit

Explores the similarities between sociology and crime scene investigation by examining how isolated and seemingly random pieces of data are actually embedded in larger frames of social and informational significance. Considers how these larger patterns of association can provide predictive relevance and meaning. Beginning with Durkheim's foundational work on suicide, the course explores the interpretive approach called semiology, the science of reading signs. Several CSI tools, such as forensic facial reconstruction and fingerprinting, illustrate the empirical and philosophical implications of this method.

SOCA3605
Quality of Life in Australia
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCI3507

Investigates economic and social contributions to life satisfaction, quality of life and happiness over the life-cycle. Looks at friendship, leisure, income, family, employment, consumption and health, and at different values and constructions that are placed on these factors by individuals, communities, socio-economic groupings and policy makers. Connects with competing understandings of the self and its relation to legal and economic systems and examines the consequences for identity, trust, citizenship, and rights in Australian society.

SOCA3607
Sociology of Ageing
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit

Considers historical legacies in social attitudes to ageing; wider economic and political processes such as the role of the state and social policies concerned with aged care, health and pensions; media representations of ageing; implications of an ageing workforce; consumer, attitudinal and political preferences of various aged cohorts; and new family and intergenerational relationships. Of particular relevance for students with interests in public policies and services for an ageing society. Addresses the professional interests of people who work in gerontology and public health, aged care, superannuation and retirement income consulting.

SOCA3702
Social Power: Theories and Structures
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCI3504

The main aims include: to acquaint the students with some of the most significant ongoing theoretical debates on power, its forms and structures; to sensitise them to the more subtle or inconspicuous forms of power, and to provide them with the skills necessary for the conceptualisation of the everyday phenomena of power.

SOCA3703
Nationalism, Citizenship and Cultural Identity
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCI3506

Explores different forms of contemporary nationalism, its main sources, various levels of its construction, and its political employment. Investigates the resurgence of nationalism against the background of globalisation and the connected processes of dislocation and relocation. Focuses on the numerous antinomies resulting from these processes, including that between democratic citizenship and formation of collective and individual identities. Addresses some of the theoretical perspectives concerning the potential of multiculturalism for the formation of non-exclusive, open identities.

SOCA3806
Medicine, the Body and Culture
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCI3604

Presents an overview of sociological and cultural studies of the relationship between medical knowledge and practice, the experience of health and illness and contemporary society. Focuses particularly on the ways medicine affects the experience, understanding and performance of the body; the effect of medical intervention on the organisation of sexuality, illness and aging; the decentralisation of medical knowledge and the changing status of the doctor-patient relationship.

SOCA3912
Risk and Trust in Modern Societies
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit including at least 6 units of credit in Sociology at credit level; Excluded: SOCA3302, SOCI3508

Detached from local contexts, mechanisms of risk-production are increasingly impersonal. Responsibility for managing risk is assumed by the same powerful agencies that create it, while traditional structures of risk-containment (such as kinship, locality, and religion) are dissolving. This process poses questions about how people cope with risk and about new forms of social solidarity that might support social trust and confidence.

SOCA4000
Sociology Honours (Research) Full Time
School of Sociology and Anthropology
UOC24 HPW5
Prerequisite: 54 units of credit in SOCA at 70% average including 12 upper Level in the SOCA3810 - 3915 range

The Honours program consists of research and writing a thesis and coursework. The thesis is a sustained research project which produces an Honours thesis of approximately 16,000 - 20,000 words. Coursework for Honours consists of two compulsory Honours seminars and a thesis research and writing workshop.

Note: Before enrolling in the Honours program, students are required to attend an interview about their proposed research with the Honours coordinator.

SOCA4050
Socciology Honours (Research) Part Time
School of Sociology and Anthropology
UOC12 HPW3
Prerequisite: 54 units of credit in SOCA at 70% average including 12 upper Level in the SOCA3810 - 3915 range

In special circumstances, students may be permitted to enrol in an Honours program on a part-time basis. Students will thus complete their Honours program over the course of two years. This program consists of research and writing a thesis and coursework. The thesis is a sustained research project which produces an Honours thesis of approximately 16,000 - 20,000 words. Coursework for Honours consists of two compulsory honours seminars and a thesis research and writing workshop.

Note: Before enrolling in the Honours program, students are required to attend an interview about their proposed research with the Honours coordinator.

SOCA4500
Combined Sociology Honours (Research) Full-Time
School of Sociology and Anthropology
UOC12 HPW2
Prerequisite: 48 units of credit in SOCA at 70% average including 6 upper level in the SOCA3810 - 3915 range

This program, designed by the relevant units in consultation with the student, is usually a jointly supervised and jointly examined thesis, with required seminar work being divided equally between the units. In addition to seminar and thesis work, students are required to attend and contribute to regular thesis workshops.

Note: Students who have also qualified to read for a degree at Honours level in another school/department may, with the permission of both units, seek to read for a Combined Honours degree. The program, designed by the relevant units in consultation with the student, is usually arranged around a jointly supervised and jointly examined thesis, with required seminar work being divided equally between the units. In addition to seminar and thesis work, students are required to attend and contribute to regular thesis workshops.

SOCA4550
Combined Sociology Honours (Research) Part-Time
School of Sociology and Anthropology
UOC6 HPW2
Prerequisite: 48 units of credit in SOCA at 70% average including 6 upper level in the SOCA3810 - 3915 range

This program, designed by the relevant units in consultation with the student, is usually arranged around a jointly supervised and jointly examined thesis, with required seminar work being divided equally between the units. In addition to seminar and thesis work, students are required to attend and contribute to regular thesis workshops.

Note: In special circumstances, students may be permitted to enrol in a combined Honours program on a part-time basis. Students who have also qualified to read for a degree at Honours level in another school/department may, with the permission of both units, seek to read for a Combined Honours degree. The program, designed by the relevant units in consultation with the student, is usually arranged around a jointly supervised and jointly examined thesis, with required seminar work being divided equally between the units. In addition to seminar and

thesis work, students are required to attend and contribute to regular thesis workshops.

SOCW1001
Introduction to Social Work
School of Social Work
UOC6 HPW3

Provides an overview and rationale for the BSW curriculum. Students are introduced to the scope and parameters of the social work profession, the diversity of levels and contexts of intervention, the range of theory and knowledge that informs social work practice, and the code of ethics that guides professional intervention. A variety of case studies and scenarios are used to illustrate this material. To reinforce the links between conceptual knowledge and practical application, contact will be made with a range of relevant agencies.

SOCW1002
Communication and Social Work Practice
School of Social Work
UOC6 HPW3

Excluded: Students enrolled in Program 3970 (Bachelor of Science) and Program 3972 (Bachelor of Advanced Science) are not permitted to enrol in this course.

Provides an understanding of theories of communication and their application in the context of social work practice. Includes selected communication skills exercises. Provides an awareness of the ways effective communication can be used to achieve particular outcomes. Exploration of professional and personal value systems in relation to social work codes of ethics.

SOCW1003
Human Behaviour 1 (Life Stress and the Life Span)
School of Social Work
UOC6 HPW3

Excluded: Students enrolled in Program 3970 (Bachelor of Science) and Program 3972 (Bachelor of Advanced Science) are not permitted to enrol in this course.

Looks at theories of stress which have influenced the way the topic is researched and applied today. The main theoretical underpinnings are critically examined for their relevance to particular types of stress or events and applicability across the life span. The role of the individual, the nature of coping and the relative importance of biological and environmental factors are explored. Also examines the theoretical underpinnings and empirical evaluation of stress management techniques.

SOCW2001
Human Behaviour 2 (Physical and Psychological Health)
School of Social Work
UOC6 HPW3

Sustains the biopsychosocial framework of Human Behaviour 1 to examine factors which influence the maintenance of health and the development of illness. The contribution that major theories of human behaviour make to our understanding of health and illness are critically evaluated. Interdisciplinary theoretical and empirical contributions are used to examine a range of themes related to health and illness. Social factors which influence our view of health, the disorders we research and the theories we accept are examined.

SOCW2002
Society and Social Work 1
School of Social Work
UOC6 HPW3

Explores the nature of society and the interrelationship between conceptual knowledge and social work practice with the emphasis on the Australian context. Students will examine concepts, theories and key social trends related to social work.

SOCW2003
Social Work Practice: Individuals, Families & Groups 1
School of Social Work
UOC6 HPW3
Prerequisite: SOCW1001 and SOCW1002

Builds on the methods of social work practice that students were introduced to in earlier courses, namely counseling individuals and families and working with groups. Explores the referral context, assessment frameworks, contracting processes and termination as issues common to working with individuals, families and groups. Aims to equip students with skills of engagement, exploration and case management. Focuses on understanding models of group work, group development and process. Encourages critical appraisal of models of direct practice.

SOCW2004
Society and Social Work 2
School of Social Work
UOC6 HPW3

Explores further the study of social and political institutions and structures and their effect on social work. Builds on the use of theory to understand the link between policy and practice in diverse public and private arenas. Identifies crucial factors in the distribution of resources, status and power. Provides a foundation for the study of Social Policy 1 and 2.

SOCW2005
Research for Social Work
School of Social Work
UOC6 HPW3

Looks at the nature of research - in particular, research in a social context. Aims to equip students with basic skills in research design, data collection and analysis. In addition, the course presents concepts that will enable students to critically evaluate others' research. Covers information on descriptive and experimental research, and qualitative and quantitative approaches to design and analysis. Students will learn to apply basic techniques of data analysis, including inferential and descriptive statistics.

SOCW2006
Social Work Practice - Community Work
School of Social Work
UOC6 HPW3
Prerequisite: SOCW1001 and SOCW1002

Analyses and critiques models and theories of community work within the contemporary social policy and economic and political context. Skills and knowledge required for effective practice are pursued. An emphasis is placed on issues of power, powerlessness and the collective processes that empower marginalised communities.

SOCW2007
Social Work Practice - Bridge
School of Social Work
UOC3
Corequisite: SOCW2003

Through a set reading program, students are introduced to the scope and parameters of the social work profession, the diversity of levels and contexts of intervention, the range of theory and knowledge that informs social work practice, and the code of ethics that guides professional intervention.

Note: Students who enter the BSW program with advanced standing take this course.

SOCW2100
Aboriginal People and Social Work
School of Social Work
UOC6 HPW3
Prerequisite: Enrolment in program 4031 or 4035 or 4036 or 4785; Excluded: ATSI3004

Examines the history and current legacy of colonisation and government policies for Indigenous Australians and their position in contemporary Australian society. Social movements and actions relevant to Indigenous Australians' social experience will be discussed. Addresses in particular the skills social workers need to work with Indigenous clients and what role social work can play in progressing equity and social justice for Indigenous Australians.

SOCW3001
Social Work Practice - Third Year Practicum
School of Social Work
UOC12
Prerequisite: SOCW2003, SOCW2006; Corequisite: SOCW3002

Students are allocated to a social welfare agency to undertake field-based learning under the supervision of a qualified field educator. Placements occur in a range of traditional and contemporary settings and contexts, such as hospitals, local governments, state and federal government departments, as well as non-government, community based organisations. Performance is monitored and assessed by the university, in consultation

with the field educator and student. This placement begins in mid-January with a six-week full-time block period, then reduces to three days a week during Session 1.

SOCW3002
Social Work Practice: Individuals, Families & Groups 2
School of Social Work
UOC6 HPW3
Prerequisite: SOCW2003, SOCW2006

Examines direct practice within agency contexts and explores a range of models for working with individuals, families and groups. The systemic approach to understanding patterns of interaction and relationships provides an overarching framework for intervention choices applicable to individuals, families and groups. Focuses on students developing skills in group leadership and facilitating change processes with individuals and families.

SOCW3004
Social Policy 1
School of Social Work
UOC6 HPW3

Basic Sociology is assumed for this course. Understanding of historical, ideological, political and economic backgrounds to Australian social arrangements is assumed. Policy analysis frameworks are introduced along with perspectives from various policy theorists and analysts. These are applied in the detailed discussion and analyses of major policies in policy domains such as health, housing, urban and regional, finance, transport and criminal justice. Comparative policy studies are used in several of these critical analyses.

SOCW3005
Research Honours
School of Social Work
UOC6 HPW4

Offered as a pre-Honours course. Students are introduced to various forms of experimental, qualitative and survey research designs, forms of data collection and the development of measuring devices. Investigates validity and reliability concepts and correlation analysis and prediction of problems. Introduces multivariate analysis. Part of class time is allocated to working on individual project designs.

SOCW3006
Socio-Legal Practice in Social Work Settings
School of Social Work
UOC6 HPW3

Explores the legal, professional and ethical opportunities and constraints of social work practice. Includes a consideration of the tensions and dilemmas of socio-legal practice through an examination of social work interventions in selected settings. Attention is paid to legal systems, legal concepts, law making processes, and sources of legal assistance and interactions between social workers and lawyers.

SOCW3007
Research Methods 2
School of Social Work
UOC6 HPW3

Various forms of experimental, qualitative and survey research designs. Forms of data collection and the development of measuring devices. Validity and reliability concepts. Correlation analysis and prediction problems. Introduces multivariate analysis. Part of class-time is allocated to working on group assessment.

SOCW3008
Social Work Practice - Selected Studies 1
School of Social Work
UOC6 HPW3
Prerequisite: SOCW3001, SOCW3002

Students select from a range of specialised modules that build on the methods-based input of earlier practice courses. The range of topics varies from year to year, depending on staff availability and student interest.

SOCW4002
Social Work Practice in Organisations
School of Social Work
UOC6 HPW3
Prerequisite: SOCW3001, SOCW3002, SOCW3008

Provides a critical and practical examination of social work practice in organisations. Introduces organisational and management theories and considers their relevance for social work settings. Examines the tensions inherent in professionalism and contemporary ideas about management and the management of change in organisations and the importance of planning and evaluating for change. Explores strategies for effective and ethical practice in organisations are examined. Issues-based and experiential learning provides a basis for the development of organisational skills, such as skills in negotiation, teamwork, program planning, supervision and the management of information.

SOCW4003
Social Work Practice - Selected Studies 2
School of Social Work
UOC6 HPW3
Prerequisite: SOCW3001, SOCW3002, SOCW3008

Students take a second selected studies component to complement that taken in SOCW3008.

SOCW4004
Social Philosophy
School of Social Work
UOC6 HPW3

Introduces students to the basics of moral philosophy in the first part of the course and builds upon this in dealing with political philosophy in the second part. Begins with moral reasoning and moral theory and these topics introduce students to some of the central thinkers and the doctrines which have shaped modern understandings of ethics.

SOCW4005
Social Policy Honours
School of Social Work
UOC6 HPW4
Prerequisite: SOCW3005

Offered as a pre Honours course. Understanding of historical, ideological, political and economic backgrounds to Australian social arrangements is assumed. Introduces students to the social policy processes of formulation, implementation and evaluation. Processes and elements of the policy analysis framework are utilised to closely examine some social policy domains (eg social security, education, employment) as well as the impact of several policies on the patterns of welfare experienced by people within major population groupings (eg immigrants, Aboriginal and Torres Strait Islander peoples).

Students examine theories relevant to social theory, social work practice and intervention, and relate these to their research project design.

SOCW4006
Social Policy 2
School of Social Work
UOC6 HPW3

Basic Sociology is assumed for this course. Understanding of historical, ideological, political and economic backgrounds to Australian social arrangements is assumed. Introduces students to the social policy processes of formulation, implementation and evaluation. Processes and elements of the policy analysis framework are utilised to closely examine some social policy domains (eg social security, education, employment) as well as the impact of several policies on the patterns of welfare experienced by people within major population groupings (eg immigrants, Aboriginal and Torres Strait Islander peoples).

SOCW4010
Social Work Practice - Fourth Year Practicum
School of Social Work
UOC24 HPW35
Prerequisite: SOCW3001, SOCW4002, SOCW4003; Excluded: SOCW4001

Building on the first placement experience, students are placed in a different social welfare agency to develop additional competencies and further enhance those already mastered at a basic level. By the end of this placement students need to demonstrate satisfactory performance in the full range of required competencies. Students are consulted about placement allocations. The placement is undertaken as a full-time block period, beginning in mid-July and extending throughout Session 2.

SOCW4800
Honours Thesis
School of Social Work
UOC24
Prerequisite: 144 units of credit in SOCW, at an average of 70% or higher, including SOCW3005 & SOCW4005 and permission from Head of School

Students work individually on an approved thesis topic in consultation with appointed supervisors. Students are required to attend prescribed seminars. The completion of this course is the submission of an acceptable honours thesis of 12,000-15,000 words at the end of session.

SOLA1050
Introduction to Photovoltaics, Solar Energy and Computing 1
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

An overview is given of solar energy, its harnessing and its conversion into electricity via various converter technologies. In particular, an overview is given of solar cells and their applications with emphasis on visual presentations and interesting case histories. The interesting area of "solar cars" is considered in detail as an example of a high profile application of photovoltaic (PV) devices and systems that deals with state-of-the-art technology. Students will also gain experience in computer programing particularly with the C++ language. Trends in the PV industry are considered, particularly with regard to costs, industry growth and technology innovation. Insight is given into the types of jobs carried out by PV engineers including manufacturing, research, system design, system analysis and fault diagnosis, policy and analysis, marketing, quality control and testing, training/education, maintenance, electronics design and interfacing, etc. In general, one lecture each week will be given by guest lecturers who are experts from industry, end-user groups, research, government and other major areas of photovoltaics that are covered in this degree program.

SOLA1051
Introduction to Photovoltaics, Solar Energy and Computing 2
School of Photovoltaic and Renewable Energy Engineering
UOC3 HPW3

An overview is given of solar energy, its harnessing and its conversion into electricity via various converter technologies. In particular, an overview is given of solar cells and their applications with emphasis on visual presentations and interesting case histories. The interesting area of "solar cars" is considered in detail as an example of a high profile application of photovoltaic (PV) devices and systems that deals with state-of-the-art technology.Trends in the PV industry are considered, particularly with regard to costs, industry growth and technology innovation. Insight is given into the types of jobs carried out by PV engineers including manufacturing, research, system design, system analysis and fault diagnosis, policy and analysis, marketing, quality control and testing, training/education, maintenance, electronics design and interfacing, etc. In general, one lecture each week will be given by guest lecturers who are experts from industry, end-user groups, research, government and other major areas of photovoltaics that are covered in this degree program.

SOLA1055
Introduction to Renewable Energy Technologies 1
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

An overview is given of solar energy, its harnessing and its conversion into electricity via various converter technologies. In particular, an overview is given of the various renewable energy (RE) technologies and their applications with emphasis on visual presentations and interesting case histories. The interesting area of "solar cars" is considered in detail as an example of a high profile application of a Renewable Energy system that deals with state-of-the-art technology. Trends in the RE industry are considered, particularly with regard to costs, industry growth and technology innovation. Insight is given into the types of jobs carried out by RE engineers including manufacturing, research, system design, system analysis & fault diagnosis, policy & analysis, marketing, quality control & testing, training/education, maintenance, electronics design & interfacing, etc. Students will learn about the importance of computers to the RE industry and receive a basic grounding in programming and CAD packages. Many lectures will be given by guest lecturers who are experts from industry, end-user groups, research, government and other major areas of Renewable Energy that are covered in this degree program.

SOLA1056
Introduction to Renewable Energy Technologies 2
School of Photovoltaic and Renewable Energy Engineering
UOC3 HPW3

An overview is given of solar energy, its harnessing and its conversion into electricity via various converter technologies. In particular, an overview is given of the various renewable energy (RE) technologies and their applications with emphasis on visual presentations and interesting case histories. The interesting area of "solar cars" is considered in detail as an example of a high profile application of a Renewable Energy system that deals with state-of-the-art technology. Trends in the RE industry are considered, particularly with regard to costs, industry growth and technology innovation. Insight is given into the types of jobs carried out by RE engineers including manufacturing, research, system design, system analysis & fault diagnosis, policy & analysis, marketing, quality control & testing, training/education, maintenance, electronics design & interfacing, etc. Students will learn about the importance of computers to the RE industry and receive a basic grounding in programming and CAD packages. Many lectures will be given by guest lecturers who are experts from industry, end-user groups, research, government and other major areas of Renewable Energy that are covered in this degree program.

SOLA1060
Chemical Processes for Renewable Energy Systems
School of Photovoltaic and Renewable Energy Engineering
UOC3 HPW3

Introduction to the chemical processes associated with photovoltaic devices and systems with particular emphasis on the fabrication of solar cells. Revision of high school chemistry and its relevance to photovoltaic devices and correspondening systems. Revised material includes: atomic and molecular structure and bonding; chemical equilibrium; rates of reactions; ionic equilibria; metals, electrochemistry and corrosion; electrical properties of materials including metals, insulators and semiconductors. Emphasis will be placed on the application of these chemical principles to photovoltaic engineering. Examples include: junction formation through doping in semiconductors; oxidation and reduction reactions in semiconductor processing; corrosion in photovoltaic systems leading to a study of cathodic protection and life expectancy; storage of energy; and chemical handling and safety.

SOLA1172
Solar Architectural Technologies
School of Photovoltaic and Renewable Energy Engineering
UOC9 HPW6

Introduction to solar architecture principles for engineers. The use and effectiveness of electricity generation from renewable energy sources in buildings and domestic housing are considered in relation to energy efficient housing and effective solar utilisation. This course includes the material and lecture program from ARCH1172 "Architectural Technologies 2".

SOLA2020
Photovoltaic Technology and Manufacturing
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

Sufficient theory relating to the operating principles of solar cells is covered to give an appreciation of the strengths and weaknesses of the dominant commercial cell technologies. Trends in commercial cell technology and the corresponding manufacturing processes and environment are considered. The impact of various processing and device parameters on performance, yields and product reliability are studied. Insight is given into complete production processes for both screen-printed solar cells and buried contact solar cells. In-line quality control techniques are studied with laboratory classes used to give students first-hand experience in their use as well as exposing them to manufacturing processes. Students will also be given the opportunity to take control of the "virtual production line" to adjust the equipment controls and processing parameters to try and optimize performance and maximize yields, etc. In-line quality control procedures are available to the student to aid in this optimization and will prove to be particularly useful in identifying and rectifying computer generated faults associated with the production. Other laboratory work focuses on the use, measurement and analysis of encapsulated modules of cells. Modules with a range of faults are examined and techniques for fault diagnosis developed.

SOLA2051
Project in Photovoltaics and Solar Energy 1
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW5

Satisfactory performance in SOLA2051 is a prerequisite for progress to SOLA2052. Each student is required to prepare for assessment a project proposal as part of the requirements for SOLA2051.

SOLA2052
Project in Photovoltaics and Solar Energy 2
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW5

To be completed sequentially with SOLA2051. The main emphasis of this course is hands-on "projecteering", or project engineering.

A wide range of projects is made available for students or groups of students, and new projects regularly become available, giving students some degree of choice.

Examples of projects include monitoring and analysing existing installations, installing new PV, thermal solar, wind or micro-hydro generation systems, developing educational multimedia presentations, system design, modelling, developing country applications of renewable energy, biodiesel manufacturing and solar cell laboratory projects.

Each project will have a research component, a planning component, a hands-on component and a reporting component and may involve a peer-reviewed oral presentation component.

Lectures covering projecteering skills and practice are given in the early weeks, after which students work closely with their nominated project supervisor on their projects. A written project report must be submitted on each project to satisfy the requirements for SOLA2052.

SOLA2053
Sustainable & Renewable Energy Technologies
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

This course includes an introduction into issues in sustainable and renewable energy, including environmental impact, basic engineering economic analysis, energy payback time, embodied energy and the context of energy systems within a social framework. Included in the course is an overview of existing energy systems and sustainability issues with these systems. The course will examine renewable energy sources and generation systems, including an overview of wind, solar thermal, photovoltaics, hydro, geothermal design skills and creative thinking.

SOLA3010
Photovoltaics in the Built Environment
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

There is currently significant interest in reducing energy use and greenhouse gas production in buildings by designing buildings that are climate-appropriate, implementing energy efficiency measures and producing energy from renewable sources. Photovoltaics (PV) is one of the few renewable electricity generation options that can be readily used in urban areas and has no environmental impacts at the site. This course will examine the use of PV in the urban environment, with a particular focus on the intergration of PV modules into the building envelope. The design of energy efficient buildings, building thermal and lighting performance and solar access will be introduced as an appropriate context for the use of PV. A competency in the use of building energy simulation software will be developed. Technical issues associated with the use of PV in buildings and the urban environment, such as heat transfer processes, partial shading and mismatch and system siting, sizing and configuration will be investigated. Students will tackle urban design problems that require balancing architectural and human requirements with the functional constraints of PV technology. Examples of PV products for buildings and the urban environment will be studied and system performance assessment and prediction will be introduced.

SOLA3540
Applied Photovoltaics
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

The use of solar cells (photovoltaic devices) as electrical power supplies based on the direct conversion of sunlight into electricity. The emphasis is placed on applications including system design and construction, although the properties of sunlight, the operating principles of solar cells and the interaction between sunlight and the cells are also treated.

SOLA4910
Thesis Part A
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW6

SOLA4911
Thesis Part B
School of Photovoltaic and Renewable Energy Engineering
UOC12 HPW12

The Thesis Project (Parts A and B) is carried out in the last two sessions of the BE degree course for full-time students. Six hours per week in the first session, and twelve hours per week in the second session are devoted to directed laboratory and research work on an approved subject under guidance of members of the lecturing staff. Part-time students may need to attend the University full-time in their final session or attend for one further part-time session, if facilities are not available for the thesis to be done at their workplace. Typically, the thesis involves the design and construction of experimental apparatus together with practical tests. Each student is required to present a seminar as part of the requirements for SOLA4910, Thesis Part A. Satisfactory performance in subject SOLA4910 is a prerequisite for progress to subject SOLA4911. A written thesis report must be submitted on each project by the Tuesday of the 14th week of the second session of enrolment to satisfy the requirements for SOLA4911, Thesis Part B.

SOLA4912
Thesis in Renewable Energy Engineering Part A
School of Photovoltaic and Renewable Energy Engineering
UOC9 HPW8

SOLA4913
Thesis in Renewable Energy Engineering Part B
School of Photovoltaic and Renewable Energy Engineering
UOC9 HPW8

SOLA4914
Group Thesis Project Part A
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW6

SOLA4915
Group Thesis Project Part B
School of Photovoltaic and Renewable Energy Engineering
UOC12 HPW12

The Thesis Group Project is carried out in the last two sessions of the BE degree course for full-time students. Six hours per week in the first session, and twelve hours per week in the second session are devoted to directed laboratory and research work on an approved subject under guidance of members of the lecturing staff. Part-time students may need to attend the University full-time in their final session or attend for one further part-time session, if facilities are not available for the thesis to be done at work. Generally, the thesis involves the design and construction of experimental apparatus together with laboratory tests. The Group Thesis Project is for students with an NSS WAM of less than 65. Each student is required to present a seminar as part of the requirements for SOLA4914, Group Thesis Project Part A. Satisfactory performance in subject SOLA4914 is a prerequisite for progress to subject SOLA4915. A written thesis report must be submitted on each project by the Tuesday of the 14th week of the second session of enrolment to satisfy the requirements for SOLA4915 Group Thesis Project Part B.

SOLA5050
Renewable Energy Policy and International Programs
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW3

This course will review the objectives and strategies of renewable energy policies world-wide. It will examine policy drivers, including environmental impact, community service obligations and industry development, as well as policy instruments and how they are applied, including taxation, legislation, tariffs, targets and incentives. The policies and strategies will be illustrated with international case studies of renewable energy programs.

SOLA5052
Biomass
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

This course will introduce a range of biomass energy sources, including forestry, wastes and crops, as well as various technologies for their conversion into useful fuels or power. The course will cover liquid and gaseous fuels, including ethanol, however, the emphasis will be on electricity generation technologies, including combustion and gasification systems, biogas and landfill gas systems, combined heat and power production.

SOLA5056
Sustainable Energy for Developing Countries
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4
Prerequisite: Completion of 96 units of credit

This course covers many of the technical and non-technical issues reltaing to introducing photovoltaics and renewable energy systems and technology in developing countries. The course will be closely aligned with current national or international programs in developing countries, for example the IEA PVPS Task IX, PV in developing countries.

The course will cover various Recommended Practice Guides developed by industry expert groups in the areas of financing and investment mechanisms, capacity building, implementation models and quality assurance. The course will include a practical components related to design, implementation and maintenance of photovoltaic and renewable energy systems indeveloping countires and case studies thereof.

SOLA5058
Special Topic in Photovoltaics
School of Photovoltaic and Renewable Energy Engineering
UOC6 HPW4

This syllabus changes to allow presentation of a special topic of current interest particularly by visitors with recognised expertise in the topic.

SOLA5059
Industrial Elective
School of Photovoltaic and Renewable Energy Engineering
UOC6

Each Industrial Elective (6 UOC) represents one year of appropriate quality industrial experience or equivalent in a suitable field. Students must submit evidence and a written report to the satisfaction of the Head of School. Some attendance at the University for verbal reporting may also be required. A maximum of 12 UOC can be taken and the credits may be substituted for certain courses in program 3642 requirements. The substitution is not available for work done during the first year of employment if this coincides with the first year of part-time enrolment. The period of employment claimed must precede the completion of the thesis SOLA4911 or SOLA4915. An Industrial Elective cannot be claimed for work submitted for credit as SOLA4911 Thesis or SOLA4915 Group Thesis. Details of the procedure for registering and the requirements to be met can be obtained from the School of Photovoltaic and Renewable Energy Engineering.

SOLA5060
Industrial Elective
School of Photovoltaic and Renewable Energy Engineering
UOC3

Each Industrial Elective (3 units of credit) represents 6 months of appropriate quality industrial experience or equivalent in a suitable field. Students must submit evidence and a written report to the satisfaction of the Head of School. Some attendance at the University for verbal reporting may also be required. A maximum of 12 Units of Credit can be taken and the credits may be substituted for certain courses in program 3642 requirements. The substitution is not available for work done during the first year of employment if this coincides with the first year of part-time enrolment. The period of employment claimed must precede the completion of the thesis SOLA4911. An Industrial elective cannot be claimed for work submitted for credit as SOLA4911 Thesis. Details of the procedure for registering and the requirements to be met can be obtained from the School of Photovoltaic and Renewable Energy Engineering.

SOLA5061
Industrial Elective
School of Photovoltaic and Renewable Energy Engineering
UOC3

Each Industrial Elective (3 UOC) represents 6 months of appropriate quality industrial experience or equivalent in a suitable field. Students must submit evidence and a written report to the satisfaction of the Head of School. Some attendance at the University for verbal reporting may also be required. A maximum of 12 UOC can be taken and the credits may be substituted for certain courses in program 3642 requirements. The substitution is not available for work done during the first year of employment if this coincides with the first year of part-time enrolment. The period of employment claimed must precede the completion of the thesis SOLA4911 Thesis or SOLA4915 Group Thesis. An Industrial Elective cannot be claimed for work submitted for credit as SOLA4911 Thesis or SOLA4915 Group Thesis. Details of the procedure for registering and the requirements to be met can be obtained from the School of Photovoltaic and Renewable Energy Engineering.

SOMA1308
Time Based Art 1B
School of Media Arts
UOC6 HPW3

The aesthetics, practice and history of media art will be introduced and developed, with an emphasis on contemporary fine art practice. Time based art practices such as: experimental film, video art, performance, time based installation, interactive multimedia and experimental sound will be explored. Concepts and techniques of spatial and temporal montage will be introduced and elaborated through technical workshops, screenings, seminars and individual project work. Video editing software will also be introduced.

SOMA1309
Photomedia 1B - Digital Studies
School of Media Arts
UOC6 HPW3

This course introduces the student to the broad experience of working with photomedia. The course emphasises the development of a keen critical awareness in students by investigating the content and context of photographic images in contemporary visual art and culture. The questions of intent, content and context are focused toward the development of the individual's visual language. The course introduces students to the basic technical concepts of digital imaging. Using digital imaging software students learn basic scanning, resolution theory, image manipulation and output. Students are encouraged to explore, experiment and develop their ideas through the completion of set projects.

SOMA1312
Photomedia 1A - Analogue Studies
School of Media Arts
UOC6 HPW3
Prerequisite: SART1303 Introductory Studies: Photomedia & Printmaking.

This course introduces the student to the broad experience of working with photomedia. The course emphasises the development of a keen critical awareness in students by investigating the content and context of photographic images in contemporary visual art and culture. The questions of intent, content and context are focused toward the development of the individual's visual language. Students explore the possibilities of image-making processes by the acquisition of basic photographic technical skills including: 35 mm camera operation, B/W and colour processing/printing and related theory. Students are encouraged to explore, experiment and develop their ideas through the completion of set projects.

SOMA1315
Time Based Art 1A
School of Media Arts
UOC6 HPW3
Prerequisite: SART1302 Introductory Studies: Sculpture & Time Based Art.

Time based art is a cluster of units dealing with the complex multiplicity of artistic forms which use the passage of and the manipulation of time as the essential element. Time Based Art 1A introduces key concepts in time based art with specific reference to experimental film, video art and installation, sound, performance and multimedia computing. The course develops critical awareness by close study of histories of the moving image and the expressive use of technology and the human body. Concurrently the subject provides preliminary technical training in the various technologies used in the production of video, sound and performance works.

SOMA1521
Introduction to Analogue Photography
School of Media Arts
UOC6 HPW3

The aim of this course is to develop skills through the direct participation in intellectual and technical processes relevant to the field, and to create Photomedia based works of an increasingly professional standard. Students explore the possibilities of image-making processes by the acquisition of basic photographic technical skills including: overview of 35mm camera operation; B/W film types and exposure; processing and printing; print finishing and presentation. This technical knowledge is advanced by the development of the student's critical awareness of contemporary visual arts practice through the completion of set projects.

SOMA1600
Language of Digital Media
School of Media Arts
UOC6 HPW3

Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course provides an overview of theories of language and looks critically at the way these apply to popular media in the digital age. Starting with basic principles of communication and introducing theories of semiotics, students are encouraged to critically engage with the deconstruction of media as text. Lectures in this course provide an introduction to linguistic and semiotic theory, as well as newer concepts such as memetics. Media platforms are also examined in individual lectures, ranging from comics to digital games and hypertext. In tutorials the concepts introduced in lectures are examined in more detail, and assessment is undertaken through presentation involving the examination and analysis of popular media.

SOMA1602
Web Authoring
School of Media Arts
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course provides an introduction to the production of web pages and web sites. It covers basic web page composition, HTML, file directory organisation and the authoring and optimisation of media elements such as typography, images, sounds and animations through various software and processes. Examples of both simple and sophisticated web sites will be critiqued. The emphasis will be on creative utilisation, web interface design theory.

SOMA1603
Digital Video 1
School of Media Arts
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

The course is designed to explore and expand an understanding of video production methods and practice, analogue then digital. The course is comprised of: technical demonstrations and workshops, discussions and tutorials, individual and group project development, assessment and critique, proficiency on analogue and digital editing systems will be gained in the workshop, The use of camera, lighting and sound editing will also be introduced.

SOMA1604
Introduction to Digital Media
School of Media Arts
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course provides a broad introduction and foundation to video, photography and sound. It will cover aspects of video capture and editing, photographic capture and manipulation and sound capture and editing. Students will learn to use basic sound recording equipment and receive an introduction to concepts of sound layering and editing. Students will be introduced to the fundamentals of the video process associated with analogue and digital technologies. An introduction to photographic process will also be covered.

SOMA1605
Lighting
School of Media Arts
UOC6 HPW3

Lighting for the digital environment workshop is designed to explore the nature of light and expand the understanding of "light" in many of its forms. Light in relation to Digital production, issues of the consistency of light the fall of light, lighting for multiple outcomes, the measurement of light, key lighting and light ratios. Colour temperature in relationship to available light, artificial light, and studio lighting tungsten and electronic. This course will seek to establish an understanding and appreciation of the roll light plays in the image making process.

SOMA1608
Digital Composite
School of Media Arts
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This subject will introduce students to the principles, techniques and applications of digital imaging technology. The central aim will be to provide students with a clear perception and appreciation of the manner in which the various discrete components of hardware and software symbiotically interact to form an effective imaging system. Practical and creative experiences will give students the opportunity to gain basic proficiency in operating industry standard packages.

SOMA1641
Video Art
School of Media Arts
UOC6 HPW3

These courses offer students the opportunity to gain an awareness of the nature and variety of experiences included in the television area, to appreciate the specific qualities and potential of the video and electronic media and to acquire the technical, intellectual and creative skills necessary for the creation of original video work. By exploration of a theoretical overview and the development of relevant skills the student will formulate and implement an extensive study of a field of practice within the area of Video.

SOMA1651
Introductory Analogue and Digital Animation and Timing Skills
School of Media Arts
UOC6 HPW3

Analogue and Digital Animation is a general introduction to various techniques and methods involved with both linear capture of pictures onto film or hard drives and other computer animation techniques. Much time is spent developing timing skills and investigating through workshops various approaches to timing. As well through a series of projects students develop a comprehensive range of approaches to computer animation.

SOMA1661
Performance
School of Media Arts
UOC6 HPW3

The course develops a strongly eclectic approach to making contemporary performance and performance art exploring anti-narrative, physical and conceptual approaches. Issues of context, audience, spatial relationships and interactivity are addressed. Various technologies and media may also be used within the project work.

SOMA1681
Introductory Multimedia Computing
School of Media Arts
UOC6 HPW3

These courses enable students to develop concepts and techniques of multimedia production which utilise the computer to assemble sound, video, text and images in order to develop interactive media which is innovative, challenging and pertinent. By exploring a theoretical overview and gaining relevant skills the student will develop original and engaging interactive works.

SOMA1810
Introduction to Computing
School of Media Arts
UOC6 HPW3

This subject covers the basic use of Macintosh computers and the Macintosh operating system. This will include disc formatting, network server storage and printing, email set-up, the Internet, using the web as a research tool and various Web utilities including NS Student. An introduction to Microsoft Office Word, focusing on the basics of formatting and COFA style requirements; an introduction to the basics of Web authoring; an introduction to Power Point; File and document management with file formats commonly used and file types to use for cross-platform applications.

SOMA2201
Landscape Animation
School of Media Arts
UOC6 HPW3

Students will be taken through a range of workshops that develop animation skills, with particular attention being paid to stop-motion techniques. Students will work in and experience the unique Australian landscape in and around historic Broken Hill. This course draws upon the aesthetics and theories of environmental sculpture and animation. The arid landscape provides an opportunity to see the essential nature

of the environment, making underlying structures visible. Traces left on the landscape by natural and manmade events are more easily seen and rendered.

The projects are developed further using digital video editing and digital video postproduction. Students will work on various individual and group projects in the field to enhance and extend their production techniques, with each student shooting, editing, and scoring animation projects. On completion of this course, students will have an understanding of the technical and aesthetic foundations of digital video production and animation.

Cost to students is approx $480 which includes all travel, meals and accommodation. The course is run in the first week of the winter session refer to information posted by School.

SOMA2321
Photomedia 2A - Analogue Studies
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA1312 or SART1402

This is a studio based course with an emphasis on placing the student's practice in the context of art history and studio theory. The course extends the conceptual and analogue technical skills acquired in Photomedia 1A. Students are introduced to medium format camera operation and advanced B/W and colour darkroom processes. Students are required to have a basic knowledge of B/W and colour photography, 35 mm camera operation, film exposure, processing and print production. Students are directed towards an analysis and critical awareness of current visual arts practice, central to the production and advancement of their own work. Students are encouraged to explore, experiment and develop ideas through set projects.

SOMA2324
Time Based Art 2A
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA1315 or SART1402

This course introduces the conceptual understanding and technical skills underpinning practice in time based art. Screening programs and analysis of sound, the moving image and performance augment the students knowledge of the traditions and contemporary contexts of technological and non-technological art forms. Students become familiar with the processes of video production, 16 mm cinematography and editing and/or computer-based image and sound technologies. Students are directed to develop a body of work which integrates technical and conceptual approaches.

SOMA2331
Photomedia 3A - Analogue Studies
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA2321

This is an analogue studio based course with an emphasis on placing the student's practice in the context of art history and studio theory. The course extends the conceptual and analogue technical skills acquired in Photomedia 1A and 2A. Students are introduced to large format camera operation and fieldwork projects. Students are required to have knowledge of basic lighting techniques, medium format camera operation and darkroom processes. Students explore a diversity of conceptual approaches, including the relationship of audience, site and context to visual art works and artist multiples/books, in order to extend their use of visual language. This conceptual and technical knowledge is advanced by the development of the student's critical awareness through set and self-initiated projects.

SOMA2334
Time Based Art 3A
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA2324

This course furthers the conceptual understanding and technical skills underpinning practice in time based art. The course examines the traditions and contemporary contexts of art practices which developed in response to the mediums of film, television and multimedia. The course investigates the interactions between film, video, sound and computing technologies in time based art practices. Students develop a body of work exploring and integrating these technologies in art.

SOMA2341
Photomedia 2B - Digital Studies
School of Media Arts
UOC6 HPW3

This is a studio based course with an emphasis on placing the student's practice in the context of art history and studio theory. The course extends the conceptual and digital technical skills acquired in Photomedia 1B. Students are introduced to advanced digital imaging software, image manipulation techniques, high resolution scanning and output devices, vector imaging and colour space theory. Students are directed towards an analysis and critical awareness of current visual arts practice, central to the production and advancement of their own work. Students are encouraged to explore, experiment and develop ideas through set projects. The integration of new technologies within analogue practice is explored.

SOMA2344
Time Based Art 2B
School of Media Arts
UOC6 HPW3

Students will gain the conceptual and technical skills to develop soundscapes and audiovisual soundtrack work. Technically, the following elements are covered: digital sound recording, editing and mixing; sampling ; synthesis; sound design. All students will gain proficiency on the basic operation of the sound studios. Various conceptual, aesthetic and philosophical approaches to sound and sound design will be introduced through critical discussion of examples and project work.

SOMA2351
Photomedia 3B - Digital Studies
School of Media Arts
UOC6 HPW3

This is a digital studio based course with an emphasis on placing the student's practice in the context of art history and studio theory. The course extends the conceptual and digital technical skills acquired in Photomedia 1B and 2B. Students are introduced to advanced imaging software, digital image capture, advanced scanning, digital composite, image manipulation techniques and output alternatives. Students explore a diversity of conceptual approaches, including the relationship of audience, site and context to visual art works and artist multiples/books, in order to extend their use of visual language. This conceptual and technical knowledge is advanced by the development of the student's critical awareness through set and self-initiated projects. Students are encouraged to explore external print bureaus for final production of their work.

SOMA2354
Time Based Art 3B
School of Media Arts
UOC6 HPW3

Expressive and technical means for creating fine art practice in time based media will be further explored and developed through an emphasis on the development of the student's individual artistic practice. A strong focus on the presentation of work will be pursued.

SOMA2521
Introduction to Studio Lighting
School of Media Arts
UOC6 HPW3

This course introduces the student to the basic analysis and control of natural and artificial light for photography. Students are instructed how to observe the quality of natural light for photography as a basis for learning basic photographic studio lighting techniques and their creative applications. The student requires knowledge of basic B/W and colour photography; 35mm camera operation; film exposure and processing; and print production. The emphasis is on the development of new technical skills central to the production and advancement of the student's work. Projects are set which focus on the production of photographic images for contemporary visual art works.

SOMA2551
Introduction to Audio
School of Media Arts
UOC6 HPW3
Excluded: SOMA2602 and SOMA2812.
Enrolment Requirements: Must be currently enrolled in a program in the College of Fine Arts.

Students will gain the conceptual and technical skills to develop either "stand alone" audio work or audio soundtracks in relation to other mediums such as video, installation and multimedia work. Technically, the following elements are covered: digital sound recording, editing and mixing; sampling; synthesis; audiovisual sound design. All students will gain proficiency on the basic operation of the sound studios. Various conceptual, aesthetic and philosophical approaches to audio practice will be introduced through critical discussion of examples and project work.

SOMA2602
Sound Media 1
School of Media Arts
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course covers all aspects of audio production relating to art works, soundtracks for film, video, performance and multimedia computing. Students are introduced to various conceptual, stylistic, aesthetic and philosophical approaches to the use of sound within art, with attention also being paid to the relationship of sound to other art practice. A screening and listening lecture program examines various sound/music pieces, installations and soundtracks.

SOMA2606
Advanced Multimedia Authoring
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA2607 or SOMA1681.

Advanced Multimedia Authoring extends the students' experience gained in Multimedia Authoring 1 furthering the conceptual understanding, appreciation and technical skills underpinning interactive practice.

SOMA2607
Multimedia Authoring 1
School of Media Arts
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

Multimedia authoring provides the platform for students to combine the media of sound, text, images moving and still. Interactive events are planned and structured, notions of the linear and non-linear are addressed. This multimedia-authoring course utilises multiple software programs and seeks the creative development of interactive and animated media outcomes.

SOMA2608
Digital Composite 2
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA1608.

Topics to be considered include digital capture, colour theory, operation of input and output devices, image manipulation, compatibility issues relating to digital composite. The knowledge, skills and experience gained in practical and theoretical sessions will provide the understanding of the digital composite cycle. Students will apply imaging theory to optimise their digital media practice in a variety of situations across mutable media, using industry standard packages.

SOMA2609
3D Modelling and Animation 1
School of Media Arts
UOC6 HPW3

Currently enrolled in a program at College of Fine Arts.

This course is an introduction to the many operational elements within 3D. Students will be introduced to the fundamentals of 3D modelling, texturing, lighting and animation. The integration of 3D into other digital media will be explored. Emphasis is placed on establishing good working studio practices.

SOMA2610
Writing for the Digital Media
School of Media Arts
UOC6 HPW3

This subject focuses on creative writing and visual storyboarding as a means for extending the student's imaginative and conceptual approach to digital production. Classes will comprise workshops and individual and group projects covering issues of writing for both single screen and interactive works. Students will engage with issues of dialogue and voiceover texts, script and character construction, and storyboarding, mapping and visual description. The subject enriches the students comprehension of the creative process necessary to the generation of video or digital media works.

SOMA2651
Advanced Analogue and Digital Animation
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA1309 or SOMA1608 or SOMA1651 or SOMA1681 or SOMA2815.

The course seeks to develop traditional animation skills and explore their application to digital media. These basic conceptual-physical skills are placed in a context of the independent experimental producer-artist. The course is designed to develop timing skills which can be applied to various forms of animation. Allied to this is a rigorous understanding of the different forms of techniques and media. An emphasis is placed on the ability to work across different media in one major project.

SOMA2681
Advanced Multimedia Computing
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA1681.

This course enable students to develop concepts and techniques of multimedia production which utilise the computer to assemble sound, text and images in order to develop time based art which is innovative, challenging and pertinent. By exploring a theoretical overview and gaining relevant skills, the student will develop original web based interactive works.

SOMA2814
Cinematography
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA1312 or SART1402

The cinematography workshop offers students grounding in the technical operation of cameras and lighting equipment and explores related conceptual issues. Attention is focused on control of the media through an understanding of framing, lighting, and film stock. Areas of concern include camera operations, film language, exposure, lighting, camera mounts, frame speed, filters, printing and the laboratory process. Classes include demonstrations and workshops, treatments, discussions and tutorials, review and critique.

SOMA2815
Introduction to Digital Imaging
School of Media Arts
UOC6 HPW3

In this studio workshop the student is introduced to the basic concepts and future possibilities of digital imaging processes. The emphasis is on the integration of digital technologies into visual arts practices. The subject opens up for consideration a range of digital applications suitable for extending image production and visualisation. The student is introduced to the practice and methods of production of contemporary artists who utilise a variety of digital technologies in their work.

SOMA2854
Vector Graphics in Visual Arts
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA2815 or SOMA2811 or SOMA1521 or SOMA1312

In this studio workshop the student explores advanced photo-based digital imaging techniques, and is introduced to interrelated software suitable for the production of illustration, graphic based images, and artist s publications. The emphasis is on the integration of digital imaging as utilised in visual arts practices. The course advances the student s skills for image production, visualisation and presentation.

SOMA2858
Narrative and Gameplay
School of Media Arts
UOC6 HPW3

Starting from the nature of traditional narrative and story structure, this course provides intensive hands-on work in the understanding and

development of creative design documents for films, games and other interactive media. It focuses especially on the intersection of narrative, gameplay and interactivity, and how these concepts are translated into a design document. Students spend time analysing the components of different media, before developing an original design idea.

SOMA2859
Video Production Studio
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA1603.

This course provides an intensive and progressive grounding in advanced aspects of video production. The techniques are equally applicable to film.

The course covers areas of script analysis, breakdown/blocking, production management/budgeting, location sound/lighting and post production pathways. The aim is to provide a complete production experience. The course takes place in the studio context, and so students are faced with making practical choices and applying the extended suite of skills taught in the course to their production practices.

While based in narrative production, the applicability of the techniques to documentary filmmaking is also demonstrated and discussed. Students completing the course will have developed their production expertise, understanding of on set protocol and ability to complete projects with a high degree of professionalism.

SOMA3341
Photomedia 4A - Analogue Studies
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA2331

This studio based course centres upon the student's development of a self-initiated body of work that demonstrates an understanding, exploration, and refinement of the concepts central to their practice. This course will address and critically refine the knowledge students have gained in Photomedia 1A - 3A. Students will concentrate on developing a body of work that demonstrates an understanding and refinement of concepts and contexts central to their individual art practice. The works produced will be an investigation of research possibilities and this investigation is initiated by the student and undertaken with lecturer supervision. It is expected that students continue to refine and advance their analogue technical skills to a standard appropriate to the concerns in their work. Students are directed toward an analysis and critical awareness of current visual arts practices and issues. Issues of production and documentation within the contemporary visual arts and media arts industry are emphasised.

SOMA3344
Time Based Art 4A
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA2334.

This course furthers the students knowledge of the art historical contexts and inter-disciplinary skills necessary to time based art practices. Students are expected to develop an area of research relevant to their individual art practice. The students concentrate on producing a substantial body of work which demonstrates an understanding and refinement of the concepts and contexts central to their work. Specialised content extend the students technical and conceptual skills in the use of film, video, audio and multi-media computing technologies. Concurrently, the subject deepens the students critical comprehension of time based forms through study and analysis of different art works in the screening and presentation programs.

SOMA3351
Photomedia 5A - Analogue Studies
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA3341

In this course students focus on the production and resolution of a substantial body of work that demonstrates a refinement of the concepts and contexts central to their individual art practice, skills and knowledge base. The works produced represent a culmination of intensive studio research and study within the area of photomedia. The investigation is initiated by the student and undertaken with lecturer supervision. Students will concentrate on the professional resolution of projects initiated in Photomedia 4B. It is expected that students will refine their analogue technical skills to the highest standard appropriate to the concerns of their work and that the final work evidences a process of research, analysis and critical awareness. This process will require a significant knowledge of new media theory, interdisciplinary arts and contemporary photographic practice.

SOMA3354
Time Based Art 5A
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA3344

Students produce a substantial project which demonstrates an understanding and refinement of the concepts and contexts central to their work and are expected to develop an area of research relevant to their individual art practice. Students refine their technical and conceptual skills in film, video, audio or multimedia computing. Concurrently, the course supports the students critical comprehension of time based forms through study and analysis of different art works in the screening and presentation program.

SOMA3361
Photomedia 4B - Digital Studies
School of Media Arts
UOC6 HPW3

This studio based course centres upon the student's development of a self-initiated body of work that demonstrates an understanding, exploration, and refinement of the concepts and knowledge students have gained in Photomedia 1B and 3B. Students will concentrate on developing a body of work that demonstrates an understanding and critical refinement of concepts and contexts central to their individual art practice. The works produced will be an investigation of research possibilities and this investigation is initiated by the student and undertaken with lecturer supervision. It is expected that students will continue to refine and advance their digital skills to a standard appropriate to the concerns in their work. Students will be directed towards analysis and critical awareness of current visual arts practices and issues. Issues of production and documentation within the contemporary visual arts and media arts industry are emphasised.

SOMA3364
Time Based Art 4B
School of Media Arts
UOC6 HPW3

This course further develops conceptual and technical skills towards a substantial body of work in time based art. A synthesis of previously gained knowledge and experience is encouraged to increase the sophistication and depth of the individual research. Individual projects in: experimental film, video art, performance, time based installation, interactive multimedia and experimental sound will be developed to a higher technical and conceptual level.

SOMA3371
Photomedia 5B - Digital Studies
School of Media Arts
UOC6 HPW3

In this course students focus on the production and resolution of a substantial body of work that demonstrates a refinement of the concepts and contexts central to their individual art practice, skill and knowledge base. The works produced represent a culmination of intensive studio research and study within the area of photomedia. The investigation is initiated by the student and undertaken with lecturer supervision. Students will concentrate on the professional resolution of projects initiated in Photomedia 4B. It is expected that students will refine their digital technical skills to the highest standard appropriate to the concerns of their work and that the final work evidences a process of research, analysis and critical awareness. This process will require a significant knowledge of new media theory, interdisciplinary arts and contemporary photographic practice.

SOMA3374
Time Based Art 5B
School of Media Arts
UOC6 HPW3

The course investigates contemporary research practices in time based art (experimental film, video art, interactive animation, sound art, installation) focussing on studies of recent research developments. Students employ a diverse range of media technologies in the development of a body of

artwork or a major project developed from a research theme of their own choice.

SOMA3521
Advanced Analogue Photography
School of Media Arts
UOC6 HPW3

The aim of this course is to develop skills through the direct participation in intellectual and technical processes relevant to the field, and to create Photomedia based works of an increasingly professional standard. Students explore the possibilities of image-making processes by the acquisition of advanced photographic technical skills including: further techniques for B/W film, processing and printing; colour photography and printing techniques. This technical knowledge is advanced by the development of the student's critical awareness of contemporary visual arts practice through the completion of set projects.

SOMA3551
Sound Media 3
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA3615 or SOMA2837.

Sound Media 3 allows students to further develop principles, techniques and applications of sound technology and theories that have been introduced in the previous two levels of sound courses to art practice. Comprised of lectures, a screening and listening program, individual and group work, and consultation processes, the course expands upon techniques and ideas in soundscape; sound design and sound/music scores for audio/visual works; MIDI composition, synthesis and surround sound. Students will develop and complete individual projects, across those audio strands that are relevant to their practice.

SOMA3603
Digital Video 2
School of Media Arts
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

Building on the various production techniques and concepts explored within Digital Video 1, this course seeks to develop students' knowledge through specific project work, with technical concentration on further pre-production and post-production techniques and critical assessment of contemporary and historical film and video practice.

SOMA3608
Digital Composite 3
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA2608.

Digital Composite 3 will consolidate students understanding of the digital manipulation process. Students will explore the full range of imaging possibilities, utilising hi-resolution capture devices and software. This class will explore creative visualisation possibilities. Students will be encouraged to extend the notion of composite work into other digital media outcomes including; 3D texture maps and VR possibilities.

SOMA3609
3D Modelling and Animation 2
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA2609.

This course assumes prior knowledge of 3D and builds upon the skills developed in SOMA2609. This course extends the student's experience of 3D with higher-level character creation, character control and animation. Photorealism is also explored through the illustration of more advanced texture application, lighting and rendering techniques. Integration of 3D into other digital media is further developed through compositing techniques and camera control.

SOMA3610
Digital Studio
School of Media Arts
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

The digital studio course has been establish for students to consolidate their various digital media practices. This course is designed to encourage student speculation experimentation and then creative development into a mature outcome. Students are supported in their area of research, within an environment that encourages collaboration across divergent media and practice.

SOMA3611
Industry Placement
School of Media Arts
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

The Industry Placement program is seen as a critical component of the BDM. Students are placed into appropriate industry settings, ether nationally or internationally. The Industry placement program will test students ability within the contemporary Digital Media environment. Each student will have a Lecturer assigned to him or her.

SOMA3612
Professional Portfolio
School of Media Arts
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

The professional portfolio course seeks to offer students the opportunity to develop a portfolio of work at an industry standard. This course will encourage students to focus on a discreet body of work that will assist them in realising their career goals. The portfolio could be of a specific nature i.e. reflective of the student's own disciplinary strengths and interests.

SOMA3615
Sound Media 2
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA2602 or SOMA2551 or SOMA2812.

"Sound Media 2" more closely examines both audio/visual relationships and sound/music genres, while expanding upon the techniques and ideas taught in the previous semester. Both individual and group projects will be based around the sound design and sound/music score of audio/visual works created within other classes, with an option to create further "stand-alone" sound/music works. The relationship of sound to editing within time-based and interactive works will be examined. Technical knowledge of sound recording and editing will be refined, with a concentration on working between audio/visual programs such as Final Cut Pro, Flash and Dreamweaver. Further techniques such as MIDI composition and analogue synthesis will be explored. A screening and listening lecture program will examine further sound/music pieces, installations and soundtracks.

SOMA3616
Professional Practice
School of Media Arts
UOC6 HPW3
Enrolment Requirements: Currently enrolled in a program at College of Fine Arts.

This course will provide students with a range of strategies and skills that will prepare them for working in a dynamic fluid industry. Professional practice will equip students with the skills knowledge and attitudes that will assist them to develop their practice as professionals, whether in employment or self employed. Industry professionals will at times be invited to address students. Topics such as documenting work, copyright, intellectual propriety, ethics, and taxation will be addressed around the core of project management and development.

SOMA3858
Advanced Studio Lighting
School of Media Arts
UOC6 HPW3

This course introduces the student to advanced techniques in studio lighting and their creative applications. The course focuses on the use of artificial lighting techniques for studio lighting set-ups in addition to specific lighting techniques for portraiture and still life. The student is required to have knowledge of basic lighting techniques; B/W and colour photography; 35 mm camera operation; film exposure and processing; and print production. The emphasis is on the development of new technical skills central to the production and advancement of the student's work. Projects are set which focus on the production of photographic images for contemporary visual art works.

SOMA3860
Advanced Digital and Web Media
School of Media Arts
UOC6 HPW3

In this lecture and studio based course, students will explore the integration of photo-based digital imaging techniques in conjunction with web-based production and delivery. Students will learn to create their own website through a combination of basic html and web production software packages, as well as elementary animation techniques. The emphasis is on the integration of digital technologies as utilised in visual arts practices. The course advances the student's skills for image production, visualisation, interface design and presentation utilising the web as a platform for delivery.

SOMA4045
BDM Honours Studio Practice 1
School of Media Arts
UOC12 HPW3
Prerequisite: 3 years undergraduate Bachelor of Digital Media (BDM) - see BDM rules.

The Bachelor of Digital Media (BDM) Honours program is a one-year full time program, at a higher level of study, of which Honours Studio Practice 1 is the first half. In their Honours year students undertake self-nominated research into areas of Digital Media. The aim of the Honours year is to provide the Honours student with the opportunity, through critical inquiry and practice, to develop a research project that is presented at the end of the year as a project and research paper.

The Bachelor of Digital Media encourages a diverse range of media practice and recognises the potential complexity of the media. It is with this in mind that the BDM Honours program may include, where appropriate, collaborative work.

SOMA4046
BDM Honours Studio Practice 2
School of Media Arts
UOC18 HPW3
Prerequisite: SOMA4045.

The Bachelor of Digital Media (BDM) Honours program is a one-year full time program, at a higher level of study, of which Honours Studio Practice 2 is the second half. In their Honours year students undertake self-nominated research into areas of Digital Media. The aim of the Honours year is to provide the Honours student with the opportunity, through critical inquiry and practice, to develop a research project that is presented at the end of the year as a project and research paper.

The Bachelor of Digital Media encourages a diverse range of media practice and recognises the potential complexity of the media. It is with this in mind that the BDM Honours program may include, where appropriate, collaborative work.

SOMA4609
3D Modelling and Animation 3
School of Media Arts
UOC6 HPW3
Prerequisite: SOMA3609.

This is an advanced course which assumes prior knowledge of 3D and builds upon the skills developed in SOMA3609. It will take you through the production and development of a short computer generated character animation. Sophisticated character control and facial animation systems will be illustrated culminating with the completion of a major studio project in animation.

SPAN1001
Introductory Spanish 1A
Department of Spanish & Latin American Studies
UOC6 HPW6
Excluded: GENT0435, SPAN1000, SPAN1020, SPAN1021, SPAN1100

For students who have little or no knowledge of Spanish. Intended to give students a sound basis of spoken and written Spanish and to introduce them to the history and culture of Spain and Latin America. Five hours language and one hour civilisation lecture. All language teaching is in tutorial groups.

Note: All students enrolled in SPAN1001 must attend a first meeting for information and organisation of tutorial groups. See Department noticeboard for details.

SPAN1002
Introductory Spanish 1B
Department of Spanish & Latin American Studies
UOC6 HPW6
Prerequisite: SPAN1001; Excluded: SPAN1000, SPAN1020, SPAN1021, SPAN1100

Intended to give students a sound basis of spoken and written Spanish and to introduce them to the history and culture of Spain and Latin America. Five hours language and one hour civilisation lecture. All language teaching is in tutorial groups.

SPAN2003
Intermediate Spanish A
Department of Spanish & Latin American Studies
UOC6 HPW5
Prerequisite: SPAN1000 or SPAN1100 or SPAN1002; Excluded: SPAN2001

Two hours audio/visual comprehension and two hours of grammar/ reading/written expression, plus one hour of cultural studies.

SPAN2004
Intermediate Spanish B
Department of Spanish & Latin American Studies
UOC6 HPW5
Prerequisite: SPAN2001 or SPAN2003; Excluded: SPAN2002

Two hours audio/visual comprehension and two hours of grammar/ reading/written expression, plus one hour of cultural studies.

SPAN2406
Modern Spain: From Loss of Empire to European Integration
Department of Spanish & Latin American Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: EURO2411

An overview of Spain's turbulent history following loss of empire, including the Spanish Civil War and the Franco dictatorship. Most attention is given to the nation's transformation since 1975 (the death of Franco and the return to democracy) and its enthusiastic embrace of Europe. As a peripheral European nation, and one that has been driven by cultural, political and economic conflicts in the recent past, Spain may well constitute a litmus test for the viability of European unity.

SPAN2421
Special Topic in Latin American History 1
Department of Spanish & Latin American Studies
UOC6 HPW3
Prerequisite: 36 units of credit

In unusual circumstances a special topic in Latin American history may be chosen by the student, in close consultation with the lecturer, to pursue a particular area of interest. Weekly tutorials and written work.

SPAN2425
The Americas before Columbus
Department of Spanish & Latin American Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Examines the development of human societies in the Americas from their arrival to the great empires of the Aztecs and the Incas. The emphasis is on agriculturally based societies including the Olmec, Teotihuacano, Maya and Aztecs of Mesoamerica, the Chavin, Nazca, Moche and Inca of South America and the Anasazi and Mississipian mound builders of northern America.

SPAN2428
(Un)Making the Third World: History and Global Development B
Department of Spanish & Latin American Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: COMD2010, GLST2101, HIST2040, HIST2060, SPAN2424

Explores the history of dictatorship and democracy in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. In geographical terms, the focus is on Latin America with a particular focus on Argentina, Brazil, Chile, Peru, Mexico, Cuba, Guatemala and Colombia. The historical trajectories, current circumstances and future prospects of these nation-states will be examined in relation to themes such as authoritarianism, violence, terror, fear, democracy, liberty, freedom, nationalism, revolution, US hegemony, neo-liberalism and globalisation.

SPAN2429
(Un)Making the Third World: History and Global Development A
Department of Spanish & Latin American Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: COMD2020, GLST2102, HIST2061, INST2000

Explores the history of underdevelopment and development in the nineteenth and twentieth centuries from the vantage point of the early twenty-first century. Themes include: colonialism, nationalism, decolonisation and post-colonial states; the history and politics of development in the Cold War and post-Cold War era; the state and economic development; the role of international organisations such as the World Bank and the IMF; and the question of globalisation. In geographical terms, the focus is on sub-Saharan Africa, especially the Democratic Republic of the Congo; the Middle East, especially Egypt; South Asia, especially India; Southeast Asia, especially Indonesia; and Northeast Asia, especially South Korea.

SPAN2431
The United States and Changing Global Orders
Department of Spanish & Latin American Studies
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: GLST2103, HIST2510

Examines the role of the USA in the world in the context of the history of changing global orders. Drawing on diplomatic history, international history, international relations, international political economy, and social and cultural history, the main themes include: westward expansion, 'Manifest Destiny', theories of imperialism, US-Soviet rivalry, and debates about globalisation and the character and future of the contemporary global order centred on the USA.

SPAN3003
Advanced Spanish A
Department of Spanish & Latin American Studies
UOC6 HPW4
Prerequisite: SPAN2002 or SPAN2004 at credit level; Excluded: SPAN3001

Two hours grammar, one hour aural comprehension, one hour audiovisual.

SPAN3004
Advanced Spanish B
Department of Spanish & Latin American Studies
UOC6 HPW4
Prerequisite: SPAN3001 or SPAN3003; Excluded: SPAN3002

Two hours grammar, one hour aural comprehension, one hour audiovisual.

SPAN3040
Spanish Linguistics
Department of Spanish & Latin American Studies
UOC6 HPW3
Prerequisite: SPAN1020 or SPAN2004 or SPAN1021

Aims to provide students with a knowledge of the norms and structure of the Spanish language and its use. The course focuses on the areas of Spanish phonology, morphology, grammar, pragmatics and semantics. It will be very helpful for students wishing to pursue the language to translator level.

Note: The language of instruction is Spanish.

SPAN3339
Latin American Culture and Globalisation: De Macondo a McOndo
Department of Spanish & Latin American Studies
UOC6 HPW3
Prerequisite: SPAN2003

Examines the formation of new identities in Latin America resulting from the neoliberal politics and globalisation that have swept the continent since the early 1990s. This process is evaluated through the study of Latin American and Latino literary texts that reflect this change, which is best captured through the image of transformation of the mythical and exotic village Macondo of Gabriel Garcma Marquez into the postmodern global village McOndo defined by Macintosh computers, McDonalds, shopping malls, the Internet and cell phones. Examines the contradictory logic of globalisation that on the one hand "flattens" cultural differences but on the other creates real opportunities for breaking down cultural barriers and overcoming provincialism.

Note/s: The course is offered in Spanish.

SPAN3343
Topics in Latin(o) American Cinema
Department of Spanish & Latin American Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Examines key issues in Latin(o) American cinema, including the construction of gender and sexuality, questions of race and ethnicity, the representation of border issues, migration, urban life, and youth culture. Focuses on films within the cultural and social contexts of their production, and in the light of current theories of film. Shows how these films stand in strong contrast to the traditional and often stereotypical image of Latin America and Hispanics fabricated by Hollywood.

Note/s: Taught in English. Knowledge of Spanish is desirable but not required. All readings are in English and all films are subtitled.

SPAN3345
Spanish as a World Language
Department of Spanish & Latin American Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Examines the cultural contexts of the evolution of what today is called Spanish. Investigates and discusses the two themes of orthodoxy and syncretism commencing with the multicultural nature of the Iberian peninsula prior to the rise of Castellano, the dialect spoken in a small kingdom in central Spain, to be a national and a world language. Explores the spread of the language to the Americas, Africa, and Asia in the contexts of conquest, wealth accumulation, and Christianisation.

SPAN3401
Colonising the Americas: The Spanish and Portuguese Empires
Department of Spanish & Latin American Studies
UOC6 HPW3
Prerequisite: 36 units of credit

Provides an introduction to the history of the Spanish empire in the Americas from the sixteenth century to the early nineteenth century. The major trends, events and processes of the colonial era are examined, up to and including the wars of independence in the early nineteenth century. The colonial history of Brazil is also covered. Apart from a comparison of Portuguese and Spanish America, an attempt will be made to compare the rise and decline of the Spanish and Portuguese empires with the vicissitudes of English colonialism in the Americas.

SPAN3422
Special Topic in Latin American History 2
Department of Spanish & Latin American Studies
UOC6 HPW3
Prerequisite: 36 units of credit

In unusual circumstances a special topic in Latin American history may be chosen by the student, in close consultation with the lecturer, to pursue a particular area of interest. Weekly tutorials and written work.

SPAN4000
Spanish and Latin American Studies Honours Full-Time
Department of Spanish & Latin American Studies
UOC24 HPW5
Prerequisite: 54 units of credit in SPAN at an average of 70% and permission from Head of Department

Language and Literature: 2 seminars and a thesis. History: 2 seminars and a thesis.

SPAN4050
Spanish and Latin American Studies Honours Part-Time
Department of Spanish & Latin American Studies
UOC12 HPW3
Prerequisite: 54 units of credit in SPAN at an average of 70% and permission from Head of Department

Language and Literature: 2 seminars and a thesis. History: 2 seminars and a thesis.

SPAN4500
Combined Spanish and Latin American Studies Honours
Department of Spanish & Latin American Studies
UOC12 HPW2
Prerequisite: 48 units of credit in SPAN at an average of 70% and permission from the Head of Department

1. Research Project or thesis, whose course and nature have been approved by the two Schools or Departments concerned.

2. 1 or 2 seminars. Students of Language and Literature who did not complete SPAN1021/SPAN1022 in Year 1 may be required to study a language course as one of their seminars. The exact details of this program and its assessment are subject to prior consultation with and approval by the Heads of the two Schools or Departments concerned.

SPAN4550
Combined Spanish and Latin American Studies Honours
Department of Spanish & Latin American Studies
UOC6 HPW2
Prerequisite: 48 units of credit in SPAN at an average of 70% and permission from the Head of Department

1. Research Project or thesis, whose course and nature have been approved by the two Schools or Departments concerned. 2. 1 or 2 seminars. Students of Language and Literature who did not complete SPAN1021/SPAN1022 in Year 1 may be required to study a language course as one of their seminars. The exact details of this program and its assessment are subject to prior consultation with and approval by the Heads of the two Schools or Departments concerned.

TAHM9999
The Attraction of Australia: Tourism & Recreation Management
School of Marketing
UOC12

Refer to School of Marketing.

TELE1010
Introduction to Telecommunications
School of Electrical Engineering and Telecommunications
UOC3 HPW3

The lecture program for this course has three themes. The first lectures provide an introduction to the practice of telecommunications engineering. Key skills and knowledge in safety, technical communication and information gathering are discussed. Also covered are issues of what engineers do, the wider context in which engineers operate and their obligations to society. Several lectures also explore the key engineering theme of engineering systems. Many of the latter course lectures will be given by guest speakers from industry, and will introduce you to the world of telecommunications engineering. Your ability to learn from and summarise the visitors' lectures will be included in the material assessed in the examination. A number of lectures will also be given by different lecturers from the School of Electrical Engineering and Telecommunications covering basic communications theory, computing, data networks, the Internet, electronics and communications systems.

TELE3013
Telecommunication Systems 1
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: ELEC2032.

To present a general introduction to telecommunications aspects such as signal acquisition, transmission and processing in communication systems. This subject is intended for telecommunication engineering students as a necessary background, and also for electrical or computer engineering students not specialising in telecommunications as a general knowledge. Characteristics of typical communication channels. Typical signals (speech, audio, video, data) and their characteristics. Basic analogue and digital techniques. Key techniques in handling transmission system issues (modulation, coding, multiplexing. System performance and evaluation (channel noise, inters symbol interference, bit error rate). Major communication systems including telephony, radio, TV, satellite, mobile phone, optical fibre, radar and networks.

TELE3015
High Frequency Electromagnetics
School of Electrical Engineering and Telecommunications
UOC3 HPW3
Prerequisite: PHYS2939 or PHYS2949.

Maxwell equations & electromagnetic waves; polaraization & TEM waves; plane & spherical waves. Interference principles. Energy & power in waves. Group velocity dispersion & group delay. Dielectric materials & transmission; conducting materials & shielding; nonlinear interactions; anisotropic materials. Transmission lines from circuit & electromagnetic viewpoints; transmission line circuits. Metallic & dielectric waveguides; waveguide modes. Dipole, array, dish & aperture antennas. Some health & environmental considerations.

TELE3018
Data Networks 1
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: (COMP1021& ELEC1041) or (COMP1021 &COMP2021)

An overview of computer networks. Basic concepts in the physical layer: signals and data, transmission media, data encoding schemes. Issues in the data link layer: Error correction and detection, flow and error control and shared medium access schemes. Concepts in the network layer: introduction to the Internet Protocol (IP), IP addressing, classical IP subnetting technique and IP routing. Transport layer concepts: introduction to the Transport Control Protocol (TCP) and User Datagram Protocol (UDP). The operation of the different Internet applications: HTTP, DNS, FTP, SMTP and Internet multimedia streaming applications.

TELE4313
Optical Communications
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: TELE3013; Excluded: ELEC9350 and ELEC8350

Wave propagation in optical fibres. Gaussian approximation of fields in single-mode fibre, spot-size, equivalent step index fibres. Material, waveguide and intermodal dispersion. Polarisation and birefringent fibres. Ray theory in multimode fibre. Optical fibre measurement and characterisation. Launching efficiencies in fibres. Fibre-bases devices. Nonlinear and anisotropic effects.

TELE4314
Optical Communication Systems
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: TELE4313 Excluded: ELEC9355 /ELEC8355

Digital and analogue optical communication systems; fibre connections and losses; fibre-device coupling; WDM systems; optical modulation; optical components; optical networks.

TELE4323
Digital Modulation and Coding
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: TELE3013

Brief review of key concepts from signal processing, linear systems, sampling theory and source coding. Digital transmission through AWGN channels. Baseband signalling and pulse shaping. Carrier amplitude, phase and frequency modulation techniques. Spread spectrum modulation. Carrier and clock synchronisation. Channel capacity. Forward error correction coding. Applications of these techniques in typical digital communications systems.

TELE4333
Wireless Data Communication Systems
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: TELE3013; Excluded: TELE9343

Introduction to wireless technologies. First, second and third generation wireless networks. MAC technologies for wireless, packet switching, circuit switching, burst switching. Radio resource allocation and cellular systems. GSM architecture: routing and flow control protocols, mobility management. High-speed circuit-switched data (HSCSD) services. General Packet Radio Service (GPRS). Enhanced data for global evolution (EDGE) and global third generation (G3G). Wireless local area network (WLANs) - IEEE 802.11 and Hiperlan standards. Broadband wireless acess (BWA). Application of wireless services. Future wireless services and software radios.

TELE4352
Data Networks 2
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: TELE3018; Excluded: TELE9302

Design, analyse and evaluation performance. Effectiveness, cost and customer control. Personal Communication Services (PCs), Frame Relay, Asynchronous Transfer Mode (ATM), SONET/SDH and Switched Multimegabit Data Services (SMDS). Protocol modelling and verification

techniques. Asynchronous Transfer Mode (ATM). ATM LANs, multimedia communication. Analysis of protocols for data link, network and transport layers. Network design. Frame Relay. Switched Multimegabit Data Services (SMDS). Operating system views of communication.

TELE4353
Mobile and Satellite Communication Systems
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: TELE3013; Excluded: TELE9344.

Modern communication systems from a systems point of view. Cellular mobile communication systems. Propagation-loss model. The mobile fading channel. Multiple access techniques. The GSM. Digital satellite communication systems. Satellite orbits. Station keeping. Multiple access techniques. System synchronisation. DAMA. Satellite packet communication. Mobile satellite networks.

TELE4354
Network Management
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: TELE3018; Excluded: TELE9303

This course will introduce students to methods, techniques and tools for the management of telecommunication systems and networks with specific examples from Internet and the public switched telecommunication networks. It will Introduce the fundamental concepts of SNMP. Then it will examine QOS management mechanisms and mobility management in IP networks. Finally it examine the concepts of content distribution networks.

TELE4363
Telecommunications Systems 2
School of Electrical Engineering and Telecommunications
UOC6 HPW4
Prerequisite: TELE3013; Excluded: TELE9301

This course provides a fundamental coverage of important communication systems, their basic components, as well as legal and commercial aspects affecting the design and operation of these systems. This subject is intended for students who wish to major in telecommunications or to strengthen their knowledge of modern communication systems. Basic principles of guided and unguided wave propagation. Transmission aspects of voice telephony, digital networks signalling, CCITT signaling system no.7, Asymchronous Transfer Mode (ATM), Advanced Broadband Digital Transport Formats. Broadcast radio and TV systems. Cable systems. Introduction to mobile and satellite communications.

TELE4910
Thesis Part A
School of Electrical Engineering and Telecommunications
UOC3 HPW4
Prerequisite: 132 units of credit and weighted average mark of 65 & ELEC3017.

The thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for TELE4910. Thesis Part A involves a detailed literature search and reviews of the background for the thesis topic and planning the activities that will required for Part B.

TELE4911
Thesis Part B
School of Electrical Engineering and Telecommunications
UOC9 HPW10
Prerequisite: TELE4910.

The thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for TELE4910. Thesis Part B typically involves the detailed theoretical development or modelling work. A written thesis report must be submitted on the thesis topic by Tuesday of Week 14 of the session in which TELE4911 is taken.

TELE4914
Group Thesis Part A
School of Electrical Engineering and Telecommunications
UOC3 HPW4
Prerequisite: ELEC3017 and 132 units of credit.

The group thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for TELE4914. Group Thesis Part A involves a detailed literature search and reviews of the background for the thesis topic and planning the activities that will required for Group Thesis Part B.

TELE4915
Group Thesis Part B
School of Electrical Engineering and Telecommunications
UOC9 HPW10
Prerequisite: TELE4914

The group thesis (PartsA&B) is carried out in the last two sessions of the BE degree course. Under the guidance of a supervisor, directed laboratory and research work on an approved topic is carried out. Generally, the thesis involves the design and construction of experimental apparatus, software simulations or models with laboratory tests. Each student is required to present a seminar as part of the requirements for TELE4914. Thesis Part B typically involves the detailed theoretical development or modelling work. A written thesis report must be submitted on the thesis topic by Tuesday of Week 14 of the session in which TELE4915 is taken.

VISN1211
Vision Science 1
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: BIOS1201

Objectives: An understanding of the anatomy of the eye, ocular adnexa and visual system. This course also provides students with an introduction to the Learning Skills and Graduate Attributes required by optometrists.

Brief Curriculum: Introduction to the gross anatomy of the head, brain, eye and adnexa; introduction to microscopic anatomy of the components of the eye and visual system; practical demonstrations of ocular anatomy using clinically relevant examination techniques; tutorials on information literacy, communication skills, problem solving and learning skills.

VISN1231
Optics 1
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite:PHYS1211,MATH1131

Objectives: An understanding of physical and geometrical optics with an introduction to ocular refractive error.

Brief Curriculum: Physical optics: the wave nature of light, interference, diffraction, polarisation; Geometrical optics: refraction, reflection, analysis of lens systems - thin lenses, thick lenses, optical systems with multiple surfaces, magnifiers, telescopes, apertures, stops, pupils; Model eyes: standard reduced eyes, 3-surface schematic eyes; Introduction to ametropia.

VISN2111
Vision Science 2A
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: VISN1211

Objectives: An understanding of the physiology of the eye and visual system.

Brief Curriculum: Physiology of the eye including the lacrimal system, eyelids, adnexa, cornea, uvea, lens; Physiology of the visual system including the retina, retinal pigment epithelium, visual pathway, cortex; Control of eye movements; Neural and pharmacological control of the pupil; Streaming of visual information.

VISN2131
Optics and the Eye
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: VISN1231

Objectives: An understanding of the optical performance of the eye, the optics of refraction, the optics of spectacle lenses and the measurement of light and colour.

Brief Curriculum: Ametropia and its correction: refractive error, the optics of subjective refraction, accommodation, optometers; The optics of spectacles lenses: spectacle magnification, ophthalmic prisms, lens forms; Factors influencing visual performance: ocular aberrations, analysis of the retinal image, modulation transfer function, entoptic phenomena; Measurement of Light and Colour: sources of optical radiation, sunlight and daylight, detectors, principles of photometry, principles of colour measurement and specification, uniform colour scales, colour rendering, metamerism, colour atlases and order systems.

VISN2211
Vision Science 2B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: VISN2111

Objectives: An understanding of processing in the visual system.

Brief curriculum: Spatial vision: visual acuity, contrast sensitivity, aliasing, alignment thresholds; Colour vision: retinal and cortical processing, colour constancy, colour identification; Binocularity: models of depth perception, correspondence, Panum's area, horopter, stereoacuity, monocular depth perception, summation, stereopsis tests; Motion perception: models of motion perception, adaptation, directional selectivity, first and second order motion; Cognition: shape recognition, face perception, visual illusions, visual hallucinations, visual attention, visual search and pop-out.

VISN2231
Introduction to Ocular Disease
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: VISN2111

Objectives: An understanding of the basic mechanisms of disease as they relate to the eye.

Brief curriculum: Microbiology: microbial identification, bacteria, viruses, fungi, parasitic infection, prions, epidemiology of infection, infection control, common ocular infections; Immunology: cells of the immune system, normal and abnormal function; Disease processes: cell injury, adaptation, hypoxia, ischemia, inflammation, cell growth, vascular disease, atherosclerosis, neoplasia, aging, genetic abnormalities, diabetes, hypertension, intracranial disease.

VISN3111
Vision Science 3A
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: VISN1211

Objectives: An understanding of the development and aging of the visual system. The effect of disease on the visual system is briefly discussed.

Brief curriculum: Development of the visual system: embryology of the eye and brain, axon pathfinding, receptive field development, development of the visual cortex, critical periods, plasticity, reorganisation of cortical inputs; Development of vision: spatial vision, colour vision, motion perception, shape perception, binocularity; Ageing: physiology of aging, effect of age on brain function, effect of age on the visual system, effect of age on vision; Effect of disease: the effects of brain injury, retinal disease, refractive error, amblyopia and drugs on visual perception are briefly covered.

VISN3131
New Concepts in Optics
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: VISN2131

Objectives: An understanding of the new developments occurring in visual optics and ophthalmic design. Brief curriculum: Application of laser to the eye: refractive surgery, retinal surgery, scanning laser ophthalmoscopes, wavefront sensing; New developments in optical appliances: adaptive optics, holograms, light guides, diffraction optics, variable refractive index lenses, image enhancement technology.

VISN3211
Vision Science 3B
School of Optometry and Vision Science
UOC6 HPW6
Prerequisite: VISN3111

Objectives: An understanding of the new developments occurring in vision science.

Brief curriculum: A review of interesting topics in modern visual science. Topics to be discussed may include: animal vision, machine vision, retinal implants for people with visual impairment, blind sight, stem cell implantation, cures for myopia, cures for presbyopia.

A portion of this course deals with public health issues in vision: the importance of epidemiological and clinical trial research, vision loss in the developing world, preventable vision loss, eye care in Australia's indigenous communities.

VISN4003
Vision Science Honours
School of Optometry and Vision Science
UOC48 HPW2

Advanced training in selected areas of vision science, including a supervised research program that places emphasis on the use of specialised techniques relevant to the research area. A written thesis on the research is required. The Honours program includes a formal component of seminars, an essay and participation in discussion groups.

Restricted to Vision Science study plan in program 3970 BSc.

WOMS1001
Introduction to Feminism
School of English
UOC6 HPW3

Introduces students to some key areas of feminist thought and to questions of sex and gender. There will be a focus on questions of representation and on differences and conflicts within feminism.

WOMS1003
Women, Gender and World History
School of History
UOC6 HPW3
Excluded: GLST1200, HIST1020

Looks at world change from ancient times, with reference to premodern women, male-female relations, sexuality and social constructions of gender. Emphasis will be placed upon patterns of change from prehistory through to modernity but with the recognition that even 'revolutionary' change has not necessarily involved progress for women. Topics include: androcentric periodizations of history; debates about early 'matriarchies'; patriarchal controls placed upon women, their sexuality and fertility; different social constructs of feminine and masculine roles and identity; and the importance of culture and class in determining social roles, male-female relations and differences between women.

WOMS2003
A History of Sexualities
School of History
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: HIST2760

Begins with Classical Greece and establishes some important themes concerning gender, sex and culture which will be traced through the intervention of colonisation, Christianity, and the development of social sciences from the 18th century; traces the relationship between sexuality and socio-political control in the 19th and 20th centuries; investigates the shaping of sexualities through art, literature, cinema and media as well as pornography; and looks beyond the infamy of Lesbos, Mary Magdalen, the Marquis de Sade, Oscar Wilde, Margaret Mead, and Monica Lewinsky, amongst others, to uncover a rich history.

WOMS2004
Sex, Human Rights and Justice
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: AUST2025, POLS2020

Examines thought and practices of human rights in connection with questions of sex and sexual relations. Conceptions of equality, autonomy and freedom will be examined, with some reference to classic liberal expositions of justice and the rights of the person. Areas include discrimination and harassment, abortion, prostitution and sexual slavery,

pornography, sexual violence and rape. Attention will be given to both domestic and international policy in these areas.

WOMS2005
Society and Desire
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCA2205, SOCC2201

The subject of desire is an especially curious one because it makes us think about the nature of the human condition. The perception of difference is an erotic process through which we are forged as bodily beings whose identities are constantly shifting. Explores how our sense of self emerges in relation to others. How we divide our own bodies into alien parts that may delight or repulse us is part of a larger social process that includes how we experience the world, how we live our sex, sexuality and cultural difference. Will draw on several continental thinkers.

WOMS2006
Sexuality and Power: The Social Relations of Sex and the Sexes
School of Politics and International Relations
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: POLS2041, POLS3049

Introduces some of the main theories of power and of sexuality; analyses different sexualities, and issues relating to sexuality, in the context of theories of power. Topics include compulsory heterosexuality; the construction of masculinity, femininity and desire; marriage and prostitution; sexuality and work; body politics; and pornography and popular culture.

WOMS2106
Embodiment
School of Sociology and Anthropology
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCA2206, SOCC2501

We are lived bodies inhabiting a world. Addresses a range of themes which emerge when we reflect upon ourselves in this way: I am a body, yet I have a body; my body is always in communication with a world, I am both sentient and sensible; I am both bounded and open. Consideration of such themes requires an investigation of theoretical constructs of the social and cultural formations of embodied subjectivity, the relations of consciousness and flesh, habit and inhabitation, the significance of body image, relationality and emotions. Major theorists include Merleau-Ponty, Foucault, Douglas, Turner, Bachelard and Lingis. Case studies such as reproduction, sacred and profane bodies, bodybuilding and anorexia, dissociation and disembodiment, illness, will be used to enable students to reflect upon their own embodied experience, to examine critically everyday and theoretical assumptions, and to develop skills in qualitative analysis.

WOMS3006
Crime, Gender and Sexuality
Faculty of Arts and Social Sciences
UOC6 HPW3
Prerequisite: 36 units of credit; Excluded: SOCA3409, WOMS2007, GENT1207

Examines social implications of: the role of law in defining the limits of gender and sexuality, regulating gender and sexual relationships, and in reinforcing particular gender and sex based interests; the intersection of criminality and sexuality (specific examples may include pornography, rape, discrimination, AIDS transmission, moral danger, prostitution, abortion, underage pregnancy). Notions of public interest, privacy and consent in matters of gender and sex. The interaction of gender and sexuality with other stratification factors such as age, class, disability, ethnicity and race in the social construction of crime.

WOMS4500
Combined Women's and Gender Studies Honours (Research) Full-Time
School of English
UOC12 HPW2
Prerequisite: 48 units of credit, including 6 Level 1 in WOMS at credit level and permission from the Coordinator

Students are required to complete coursework nominated by the Coordinator. The Women's and Gender Studies component consists of a 2HPW seminar or reading program for one session. In addition, a thesis on an approved interdisciplinary topic, with joint supervision, must be submitted.

WOMS4550
Combined Women's and Gender Studies Honours (Research) Part-Time
School of English
UOC6 HPW2
Prerequisite: 48 units of credit, including 6 Level 1 in WOMS at credit level and permission from the Coordinator

Students are required to complete coursework nominated by the Coordinator. The Women's and Gender Studies component consists of a 2HPW seminar or reading program for one session. In addition, a thesis on an approved interdisciplinary topic, with joint supervision, must be submitted.